

THE R.C.A.F. OVERSEAS
THE FIFTH YEAR



A/M L. S. BREADNER, C.B., D.S.C.,
Air Officer Commanding-in-Chief,
R.C.A.F. Overseas,
December 1943-March 1945.

THE
R. C. A. F.
OVERSEAS
THE FIFTH YEAR

With a Foreword by

COLONEL THE HONOURABLE
COLIN GIBSON
P. C., M. C., M. P.
MINISTER OF NATIONAL DEFENCE FOR AIR

TORONTO
OXFORD UNIVERSITY PRESS
1945

OXFORD UNIVERSITY PRESS
AMEN HOUSE, TORONTO
London, Edinburgh, Glasgow, New York
Melbourne, Capetown, Bombay, Calcutta
Madras

GEOFFREY CUMBERLEGE
PUBLISHER TO THE UNIVERSITY

COPYRIGHT, CANADA, 1945

First Published, October 1945

All rights reserved. No part of
this book may be reproduced
in any form, by mimeograph
or any other means, without
permission in writing from
the publishers.

All royalties from this publication will accrue
to the R.C.A.F. Benevolent Fund.

Printed in Canada

The world will little note nor long remember
what we say here, but it can never forget what
they did here.

-ABRAHAM LINCOLN,
November 19, 1863,
Gettysburg.

PREFACE

In this, the second volume of the story of Royal Canadian Air Force squadrons overseas covering the period September 1943 to August 1944, the same limitations of space and security that imposed themselves on *The R.C.A.F. Overseas: The First Four Years*—have had to be observed. The reader will realize the impossibility of making individual mention of every member of R.C.A.F. aircrew—even if security regulations would so allow. But it is hoped that this book will be accepted as a token payment of the complete story which, of necessity, must be delayed until after the cessation of hostilities.

The narrative is essentially one of operations. It has not been possible to include mention of those senior members of the Force who, although themselves precluded by age and rank from participating in the actual operations, are nevertheless responsible for the planning and administration which make the operations possible. Nor has it been practical to include in the limits of this wartime publication the activities of the less glamorous partners in every air operation—the ground crew, without whom no sorties could have been carried out. For the moment at least their sacrifices and selfless labours in the common cause must go unsung.

The reader will note that, except in the final chapter and in the lists of honours and awards and casualties, no mention is made of those thousands of members of the R.C.A.F.

who have served or are serving in the Air Forces of our Allies. The compilation of information on these personnel is proceeding slowly, but it must be realized that squadrons on operations are primarily fighting units and as a result are interested in making rather than in writing history. To this must be added the fact that these formations are scattered throughout the world and working under varied conditions and with different Air Forces. Though in a few instances the records are readily available this does not hold good in the majority of cases; also the form in which they are found varies with every squadron. For these reasons their collation into understandable form must, of necessity, remain for a time when it can logically be assumed that all possible information is to hand. However, volumes describing these activities and other phases of the contribution of the R.C.A.F. to the cause of the United Nations are under consideration and will, it is hoped, form part of the complete history of aviation in Canada which will be produced in the years immediately following the war.

It should also be noted that the list of honours includes the names of personnel of other Air Forces who were decorated while serving with R.C.A.F. squadrons overseas. Several of these individuals are themselves Canadians, commissioned in the Royal Air Force.

Photographs are from the British Ministry of Information, the Royal Air Force and the Royal Canadian Air Force and are in every instance Crown Copyright Reserved. Except where otherwise stated the ranks given for individuals shown in the illustrations are those held on 31st August, 1944, or, in the case of personnel deceased prior to that date, on the day of their death.

The Air Historian of the Royal Canadian Air Force acknowledges the kindness of the Honourable Cyrus MacMillan, M.A., Ph.D., M.P., formerly Parliamentary Assistant to the Minister of National Defence for Air, in reviewing the manuscript.

FOREWORD

This volume of the operational activities of the Royal Canadian Air Force squadrons overseas covers a period prior to my becoming associated with the Department of National Defence for Air. Nevertheless, like all other Canadians I have an immense pride in the glorious story of skill, courage and devotion to duty of our fighting airmen all over the world.

This is a story of skill developed in the great British Commonwealth Air Training Plan which the Royal Canadian Air Force had the honour of administering during the five years of its existence. Good tuition alone cannot make a hero. The essential quality of heroism lies within our own Canadian boys who, having acquired the necessary skill, went far from home to demonstrate to friend and foe alike that a peace-loving Canadian, fighting in a good cause, is a formidable antagonist.

Even a series of historical narratives cannot recount the thousands of deeds of bravery which are a part of the daily work of our airmen, and this volume, while mentioning briefly many personnel, has not attempted to give the complete story. Every reader will realize, however, that the events narrated symbolize the whole body of courageous Canadian youth serving in the R.C.A.F.

Just as the previous volume covering the operations of the First Four Years of the war was incomplete for security reasons and because it could not cover the activities of

those of our personnel who served and are serving with the Royal Air Force—this record must also be incomplete. However, the story it tells is unsurpassed in history and is worthy of the attention of all.

I further commend this volume to the consideration of all Canadians because of its timeliness. The historians of the R.C.A.F. have not waited until the dust of years has accumulated on the records of our men—but they present the story only a few months after the heroic deeds themselves here recorded.

A handwritten signature in cursive script that reads "Colin Gibson". The signature is written in dark ink and is positioned to the right of the main text block.

*Ottawa,
March, 1945.*

CONTENTS

PREFACE	vii
FOREWORD: <i>Colin Gibson</i>	ix
GLOSSARY	xiii
I. INTRODUCTION	3
II. BOMBING OPERATIONS 1943	14
III. MEDITERRANEAN BOMBING OPERATIONS	48
IV. PREPARATIONS FOR INVASION-BOMBERS	54
V. SEA-MINING	101
VI. DAY OPERATIONS AND RECONNAISSANCE	106
VII. NIGHT FIGHTERS AND INTRUDERS	158
VIII. SPITFIRES OVER SICILY AND ITALY	186
IX. BUZZBOMBS	198
X. SUMMER BOMBING OPERATIONS	211
XI. SUMMER FIGHTER OPERATIONS	245
XII. AUGUST FIGHTER OPERATIONS	284
XIII. SUMMER NIGHT FIGHTER OPERATIONS	300
COASTAL COMMAND	315
XIV. ANTI-SUBMARINE OPERATIONS	317
XV. ANTI-SHIPPING OPERATIONS	348
XVI. THE FAR EAST	378
XVII. THE LOST LEGION	383
ORDERS, DECORATIONS AND. MEDALS	387
ROLL OF HONOUR	399
INDEX	425

GLOSSARY

AIRCRAFT TYPES

Allied

- Albacore: produced by Fairey; successor to the honoured and well-worn Swordfish or "Stringbags" of the Fleet Air Arm. A single-engined biplane, carrying a crew of two or three; used as a torpedo-spotter-reconnaissance craft.
- Auster: the smallest and lowest-powered aircraft used in operations. A light single-engine high-wing monoplane two-seater, often seen around Canadian flying clubs in pre-war days; used now for artillery observation work. Irreverently known as the "piddler".
- Beaufighter, "Beau": one of the famous line of Bristol fighters. A twin-engined midwing monoplane, carrying a crew of two, the Beau has been used with great success as a night fighter and as a convoy straffer. For shipping attacks it carried rocket-projectiles and torpedoes. The torpedo-carrier is nicknamed the Torbeau.
- Bombphoon: see Typhoon.
- Canso: see Catalina.
- Catalina, "Cat": a twin-engined high-wing monoplane flying-boat produced by Consolidated; known as the Canso in the R.C.A.F. The amphibian version is the Canso "A".
- Fortress, "Fort": a four-engined low-wing heavy bomber monoplane, manufactured by Boeing; used by the U.S.A. A.F. for long-range daylight precision bombing. (U.S.A. A.F. designation B. 17.)
- Halifax, "Hally": four-engined mid-wing monoplane heavy bomber produced by Handley Page.
- Hampden: another of the Handley Page line. A twin-engined mid-wing monoplane, characterized by a narrow deep fuselage and slender panhandle tail, the Hampden did yeoman service as a night bomber in the early months of the war. It was also used with great success for mine-laying and torpedo attacks but is now obsolete.
- Hurricane: the famous Hawker single-seater fighter and fighter-bomber; now obsolescent.
- Lancaster, "Lane": one of the finest heavy bombers of the R.A.F. A four-engined mid-wing monoplane produced by Avro. With the Hally the Lane carries the burden of the night bombing of Germany.
- Liberator, "Lib": a four-engined high-wing monoplane, designed by Consolidated, which shares with the Fort in the daylight long-range bomber offensive of the U.S.A. A.F. in Europe. (U.S.A. A.F. designation B. 24.)
- Lightning: a twin-engined single-seater fighter with distinctive twin tail booms; manufactured by Lockheed. (U.S.A. A.F. designation P. 38.)
- Marauder: a twin-engined high-wing monoplane medium bomber, designed by Martin. Distinguishing features: tricycle undercarriage; tall, prominent tail-fin. (U.S.A. A.F. designation B. 26.)
- Mitchell: a twin-engined mid-wing monoplane medium bomber manufactured by North American; named after Gen. W. E. (Billy) Mitchell. Carried out the first raid on Tokyo on April 18, 1942.

- (U.S.A. A.F. designation B. 25.)
- Mosquito, "Mossie": the all-wood de Havilland jack of all trades-fighter, bomber, night fighter and PRU. A twin-engined mid-wing monoplane carrying a crew of two.
- Mustang: a single-engined low-wing monoplane single-seater, used by the R.A.F. and R.C.A.F. for fighter-reconnaissance work. Made by North American. (U.S.A. A.F. designation P. 51.)
- Oxford: a twin-engined low-wing monoplane produced by Airspeed and used as a trainer in the R.A.F. and R.C.A.F.
- Spitfire, "Spit": from 1939 to date the major day fighter of the R.A.F. A single-engined single-seater monoplane produced by Supermarine. It has undergone numerous modifications in armament, airframe and engine, denoted by various "Marks", e.g., Spitfire VB, IX, XI, etc.
- Sunderland: a four-engined high-wing flyingboat manufactured by Short.
- Tempest: another in the Hawker series of fighters; a development of the Typhoon which it resembles closely.
- Thunderbolt: a single-engined low mid-wing monoplane single-seater fighter; produced by Republic. (U.S.A. A.F. designation P. 47.)
- Torbeau: see Beaufighter.
- Typhoon, "Tiffy": successor to the Hurricane in the Hawker series. A single-engined lowwing single-seater fighter-bomber (Bombphoon) and rocket-projectile aircraft (Rockphoon), it has been used with great effect as a dive-bomber and ground-strafer.
- Walrus: the aerial life-saver; a single-engined biplane amphibian produced by Supermarine. Used by the Air-Sea Rescue Service and by the Fleet Air Arm. Slow but sure.
- Warwick: a development of the Wellington; used largely for A/S/R or transport work.
- Wellington, "Wimpy": a twin-engined, midwing monoplane of geodetic construction, produced by Vickers. Long used as a medium bomber and mine-layer, the Wimpy has also been employed on coastal command duties.

Axis

- Arado, Ar. 96: a two-seater single-engined low-wing monoplane used by the G.A.F. for advanced training. It corresponds to the Harvard.
- Ar. 196: a two-seater single-engined lowwing floatplane.
- Blohm & Voss, BV. 138: a three-engined flying-boat, carrying a crew of five or more.
- BV. 222: a six-engined high-wing monoplane flying-boat, one of the largest aircraft produced for the G.A.F. It bears a resemblance to the Sunderland.
- Bücker, Bu. 131: a two-seater single-engined biplane used by the G.A.F. for elementary training. It corresponds to the Tiger Moth and Finch of the R.C.A.F.
- Dornier, Do. 18: a twin-engined flying-boat, the G.A.F. equivalent of the Catalina. Do. 24: a three-engined flying-boat, carrying a crew of five or six.
- Do. 217: a twin-engined mid-wing monoplane bomber, carrying a crew of four. It resembles the Do. 17 and Do. 215 but has a better performance. Variations of the model of German aircraft are generally designated by letters, e.g., Do. 217E.
- Fieseler, Storch: a three-seater single-engined high-wing monoplane used by the G.A.F. for communications work. It has a very low landing-speed.
- Focke-Wulf, FW. 189: a twin-engined low-wing monoplane, used for reconnaissance and training. Its distinguishing feature, twin tail booms extending from the engine nacelles, gives it some resemblance to the Lightning.
- FW. 190: the top-line single-seater fighter of the G.A.F. The original model had a radial engine. Another version fitted with an in-line liquid-cooled 12-cylinder V-engine is described as "long-nosed".
- FW. 200: a four-engined low-wing monoplane heavy bomber used also for long-range reconnaissance and convoy attack. The commercial version was known as the Condor and the military as the Kurier.
- Gotha, Go. 242: a high-wing twin-boom

- monoplane glider; it can carry 23 soldiers, including two pilots.
- Heinkel, He. III: a twin-engined low-wing monoplane bomber, carrying a crew of four or five.
- He. 177: a four-engined mid-wing monoplane heavy bomber, corresponding in size to the Stirling, Halifax and Lancaster. Noteworthy feature is that the engines are coupled in pairs in the nacelles so that it has the appearance of a twin-engined aircraft.
- Henschel, Hs. 123: a single-seater single-engined sesquiplane once used as a dive-bomber but now relegated to training.
- Hs. 126: a two-seater single-engined high-wing monoplane used for army co-operation work. It resembles the Lysander.
- Junkers, Ju. 34: an old single-engined low-wing all-metal monoplane used for transport work.
- Ju. 52: a three-engined low-wing monoplane used for troop-carrying, glider-towing and paratroop-dropping.
- Ju. 86P: a twin-engined low-wing monoplane designed for high altitude bombing and reconnaissance. Its crew of two are carried in a sealed pressure cabin; no armament. Can reach 40,000 feet or higher.
- Ju. 87: the famous Stuka, a single-engined low-wing monoplane dive-bomber.
- Ju. 88: a twin-engined low-wing monoplane; long the standard bomber of the G.A.F., it has also been used extensively, with special equipment, as a night fighter. It has some resemblance to the Blenheim.
- Ju. 89: military version of the Ju. 90.
- Ju. 90: a four-engined low-wing monoplane used as a troop-carrier and heavy transport.
- Ju. 188: a twin-engined low-wing monoplane bomber, replacing the Ju. 88. Crew of four.
- Ju. 290: a four-engined low-wing monoplane; a development of the Ju. 90; it is used as an aerial tug, transport and bomber; crew of four to seven.
- Messerschmitt, Me. 109: a single-seater single-engined low-wing monoplane fighter. Long the standard fighter of the G.A.F.
- Me. 110: a twin-engined low-wing monoplane, used chiefly as a night fighter, sometimes as a day fighter and bomber.
- Me. 210: a twin-engined low-wing monoplane used as a long-range fighter and bomber. Crew of two. Its blunt nose suggests a Beaufighter. Now largely superseded by the Me. 410.
- Me. 410: a re-engined Me. 210 of higher performance. High tail fin and blunt nose.
- Caudron: a twin-engined low-wing monoplane transport. Trade name Goeland.
- LeO. 45: a twin-engined low-wing monoplane bomber with twin rudders.
- Potez 630: a twin-engined low-wing monoplane designed as a fighter-bomber-reconnaissance machine.
- Yale: a two-seater single-engined low-wing monoplane with fixed undercart manufactured by North American. It was used by the R.C.A.F. for advanced training. Some had been purchased by France prior to June 1940 and fell into the hands of the Nazis when they overran that country.

TERMS AND ABBREVIATIONS

- A/C: air commodore.
- ack-ack: anti-aircraft. A term originated in the 1914-18 War but not used extensively in present war. Equivalent to flak and archie.
- A/C/M: air chief marshal.
- acoustic torpedo: one which is guided to its target by the sound waves of the target.
- A.E.A.F.: Allied Expeditionary Air Force.
- AEM: aero-engine mechanic.
- AFV: armoured fighting vehicle.
- airframe: an aircraft minus the engine.
- Aldis Lamp: a signal lamp for communication by Morse code between aircraft and the ground or ships.
- A/M: air marshal.
- ammo: ammunition.
- archie: see ack-ack.
- A.S.I.: air speed indicator.
- A/S/R: Air-Sea Rescue.
- astro: astrodome, astrograph, astro-

- navigation —pertaining to calculation of position by reference to the sun or stars. The astrodome is a perspex covered cupola on top of the fuselage where the navigator can take his sights or “shoot the stars”.
- A/V/M: air vice marshal.
- B/A: bomb aimer, sometimes called air bomber.
- bags: lots of (R.A.F. slang).
- bandit: enemy raider (aircraft).
- BCATP: British Commonwealth Air Training Plan.
- block-buster: originally 4000-lb. bomb, now used loosely for any very heavy bomb.
- Bofors: a quick-firing anti-aircraft gun; Swedish in origin.
- bogey: unidentified aircraft.
- bought it: was killed (R.A.F. slang).
- bounce: attack unawares from a higher altitude.
- brass hat: senior officer; derived from fact that officers of rank of group captain and above have gold oak leaves (or scrambled eggs) on peak of cap.
- Breda: an Italian light anti-aircraft gun.
- briefing: instructions given to aircrew before taking off on an operation.
- broolly: parachute.
- Burton, go for a: be killed (R.A.F. slang).
- Caterpillar Club: an unofficial club whose members have saved their lives by parachute descents. Name comes from the worm or caterpillar which spins the silk from which parachutes are made. Members receive a gold Caterpillar pin.
- CB'd: confined to barracks.
- chandeliers: groups of flares resembling in appearance an electric light chandelier.
- chop, get the: be killed (R.A.F. slang).
- clobbered: battered, smashed up.
- clock: dial or face of instrument.
- coned: caught in a concentration of search-light beams.
- conked: stopped; a term used more in last war than in this.
- constant speed unit: a control device to regulate the pitch of the propeller so that constant engine speed may be attained for any setting of the control.
- contact flying: flying close to the ground.
- cookies: see block-buster.
- corkscrew: take sharp action, alternately port and starboard, to avoid enemy attack.
- Cpl.: corporal.
- D.A.F.: Desert Air Force.
- DC: depth charge.
- deck: ground or sea level.
- dim view, take a: disapprove or regard unfavourably (R.A.F. slang).
- dispersal areas: widely separated areas around an airfield where aircraft are parked as a precaution against air attack.
- ditch: make a forced landing in the sea.
- diversion: an operation designed to deceive the enemy by diverting attention to a section different from that sought out by the main attack.
- do: any event, from an action in the air to a social gathering in the mess; if it involves, or just escapes, unpleasant consequences (aerial or social) it is referred to as a shaky-do.
- DR: the old method of navigating an aircraft by keeping record of the time flown and the course followed, with allowance for the wind. An improvement over navigation “by guess and by God” but rendered obsolete by modern electronics.
- duff: poor or bad (R.A.F. slang).
- e/a: enemy aircraft.
- E-boat: high-speed motor-torpedo-boat used by the enemy for attacks on our coastal shipping.
- echelon: a stepped back formation; aircraft in echelon to starboard are stepped back to the right and rear in series from the leader.
- egg: bomb.
- ETA: estimated time of arrival.
- E/V: escort vessel.
- evasive action: violent measures undertaken to shake off enemy attack.
- F/E: flight engineer.
- feather: to rotate the blades of the propeller in the same manner that a canoeist feathers his paddle; when fully feathered the edges of the blade are in line with the flight of the aircraft.
- Festung Europa: European Fortress of the Nazis.
- FFI: French Forces of the Interior.

- fire the colours: to shoot a recognition flare of the colour authorized for the day.
- fix: determination of position, obtained by radio or wireless or from observation of stars or sun.
- fixed pitch: a propeller which cannot be feathered or altered in pitch.
- F/L: flight lieutenant.
- flak: anti-aircraft fire, from Flugzeugabwehrkanone, anti-aircraft gun. Flak is classified as heavy or light according to calibre and range of the guns, and as intense, medium or negligible according to the volume of fire. Light flak (Bofors guns, flaming onions, etc.) carried up to 10,000 or 12,000 feet; heavy flak reached well above that height. The former used tracer; the latter did not.
- flak-ship: ship carrying batteries of anti-aircraft guns; used for the protection of convoys, harbours and waterways.
- flamer: vehicle destroyed in flames.
- flap: a stir, commotion or fuss; Shakespeare called it "much ado about nothing".
- flarepath: line of flares or lights marking the runway or landing place for night flying aircraft.
- flip: flight.
- F/O: flying officer.
- 48: forty-eight hours free of duty.
- FS: flight sergeant, known as "Flight".
- funk hole: slit trench or dugout for protection from bombs and shells.
- G.A.F.: German Air Force.
- gaggle: formation of aircraft.
- G/C: group captain.
- gen: information or intelligence.
- glycol: coolant for liquid-cooled engines.
- Goldfish Club: like the Caterpillar Club, an unofficial organization restricted to those who have come down in the sea (ditched or baled out) and have been rescued from their dinghies, usually by the A/S/R Service. The badge is a winged fish.
- gong: decoration.
- had it: when you've had it, you haven't. When the C.O. cancels your 48—or the other fellow walks off with your girl—you've had it. (R.A.F., slang.)
- hat trick, do the: be successful three times in succession.
- hedge-hop: just what it says; see contact flying.
- high-tail: move away at top speed (from fact that tail of an aircraft going full out is always higher than nose).
- hit the silk: take to parachute.
- HSL: high speed launch.
- immediate award: a decoration granted immediately for a specific action as distinct from a non-immediate which is for good services over a period.
- inter-com: intercommunication telephone in an aircraft linking members of the crew.
- Jagdgeschwader: literally, pursuit squadron; a fighter formation of the G.A.F.; approximate strength 93 aircraft.
- jammed: rendered unintelligible by radio interference.
- Jerry: German.
- jink: take evasive action, q.v.
- joy: night fighter jargon for successful action with enemy raiders.
- Kampfgeschwader: G.A.F. bomber formation comprising approximately 93 aircraft. There is no R.C.A.F. equivalent.
- kite: aircraft.
- LAC: leading aircraftman.
- LCT: landing craft, tank.
- leg: that part of an aircraft's route between two turning points.
- Leigh Lights: powerful searchlights mounted on aircraft, used to pick out submarines.
- live: fused; ready to explode. Bombs can be jettisoned live (to explode on contact) or safe (not to explode).
- Luftwaffe: German Air Force; literally air weapon.
- marshalled: a system whereby aircraft are arranged in order of take off, on the perimeter track at the head of the runway in use.
- marshalling yards: freight yards, where cars (wagons) are collected and trains made up.
- Mayfly: list of crews detailed for operations.
- met.: meteorological.
- mission: sortie.

mosaic: map made up of aerial photographs taken in overlapping series and pieced together so as to give a complete picture of an area.

M/S: minesweeper.

MT: mechanical transport.

MU/AG: air gunner of middle upper turret.

M/V: merchant vessel.

ops: operations.

OTU: operational training unit.

pack up: stop, cease to function (R.A.F. slang).

pancake: to land. The term is used in controlling aircraft traffic so that there can be no possible chance of misinterpretation of orders.

pathfinder, PFF: specially trained crews who precede a bomber force and mark the target. PFF is the Pathfinder Force.

perspex: shatter-proof glass-like material used in windscreen, cockpit and gun turret covers.

piece of cake: a cinch (R.A.F. slang).

pinpoint: pick out in relation to map coordinates; *i.e.*, to fix definitely the location.

pitch prop-exactors: device used for measuring the angle of attack of the propeller blade.

P/O: pilot officer.

p.o.w.: prisoner of war.

prang: crash, smash, hit or damage (R.A.F. slang).

predictor: a complicated device which by combining the height, course and speed of an aircraft predicts for a gun crew the necessary setting for their guns and fuses to make shell and aircraft meet in space.

P.R.U.: Photographic Reconnaissance Unit.

radar: electronic equipment, formerly known as RDF.

R-boat: small motor boat similar to the E-boat but slower and used for mine sweeping and defensive escort of E-boats and shipping; carries anti-aircraft armament but no torpedoes.

RDF: radio direction finding equipment, now known as radar.

rece: reconnaissance; also reconno.

recuperator: a reservoir to hold additional oil and also to maintain a constant low pressure in the hydraulic system of gun

turrets.

R/G: rear gunner.

R.M.L.: royal motor launch.

R.N.: Royal Navy. Used in the text to designate members of the Fleet Air Arm serving with R.C.A.F. squadrons.

R.P.: rocket projectiles; aircraft fitted with these weapons are referred to in the text as rocket planes.

R/T: radio telephone.

schnorkel: breathing pipe which allows a submarine to run its diesel engines and charge its batteries while submerged to periscope depth.

scramble: take off immediately on interception patrol.

scrubbed: cancelled (R.A.F. slang).

sea drogue: a canvas sleeve trailed from a dinghy to steady its course and check spinning.

second dickey: second pilot (R.A.F. slang).

Sgt.: sergeant.

shake rigid: frighten; equivalent to scare stiff (R.A.F. slang).

shoot: a combined operation in which an aircraft observes and reports on the fire of an artillery battery.

S/L: squadron leader.

smoker: a vehicle which is enveloped in smoke after an attack but is not seen to be actually in flames.

Snafu: in a mess, everything wrong; a slightly expurgated translation is-situation normal, all fogged up. (American slang.)

sniff the weather: do a weather reconnaissance.

sortie: operational flight by a single aircraft; sometimes used in text as a variant for an offensive operation by a formation.

Sperrbrecher: literally, blockade breaker; vessels of varying sizes carrying heavy anti-aircraft armament and used by the enemy for minesweeping.

sprogs: neophytes; inexperienced aircrew (R.A.F. slang).

squirts: short bursts.

stand-down: officially relieved from duty.

static line: a line one end of which is attached to the aircraft and the other to the release of a parachute, to ensure opening

- of the chute when the jumper leaves the aircraft.
- stick: bombs are ordinarily arranged so that they drop in series; a stick is several bombs dropped together or in immediate succession.
- stooge: literally idle around; make an uneventful sortie (R.A.F. slang).
- strafe: punish; used to denote low level attacks on ground.
- stuck into: met up with, became embroiled with (R.A.F. slang).
- sweep: offensive operation by a fighter formation to clear the air of hostile aircraft over a particular section of enemy country.
- tachometer: or r.p.m. counter, an instrument which records the revolutions per minute of an engine.
- Tac/R: tactical reconnaissance.
- TAT: Tactical Air Force.
- tail-end Charlie: rear gunner (R.A.F. slang).
- 10/10ths: cloud formations are expressed in fractions denoting the area of sky covered; thus 10/10ths is complete cloud cover.
- time: the military method of denoting time by a 24-hour day, rather than two 12-hour periods, is used throughout; thus 1730 hours is 5.30 p.m.
- tinfish: torpedo.
- top line: fully prepared (R.A.F. slang).
- track: an aircraft's course.
- types: personnel; individuals (R.A.F. slang).
- undercart: undercarriage.
- U/S: unserviceable.
- Vergeltungswaffe: revenge weapon; the German name for their rocket or jet bombs, V-1, V-2, etc.
- WAG: wireless air gunner.
- wave: large formations of bombers attacking the same target ordinarily attack in groups or waves.
- W/C: wing commander.
- weave: swing from side to side, either as evasive action or to enable the pilot to keep a closer watch over the sky behind; colloquial use: get weaving-start action.
- Wehrmacht: German army.
- winco: wing commander.
- winco flying: a number of fighter squadrons, comprising a wing, are led on operations by a wing commander flying. Administration of the wing is handled by the C.O., usually a group captain.
- wizard: excellent (R.A.F. slang).
- WO: warrant officer.
- W/Op: wireless operator.
- W/T: wireless telegraph.
- zero feet: ground or sea level.

THE R.C.A.F. OVERSEAS
THE FIFTH YEAR

CHAPTER I

INTRODUCTION

IN September 1943 World War II entered its fifth and most decisive year. With the dying days and nights of the old year, the Royal Canadian Air Force could look back with pardonable pride on its achievements. September 1939 had inevitably found the force handicapped as a result of the lethargy in matters of defence which had for so long gripped Canada in common with the other democracies; found it groping for a way in which to serve, and scarcely knowing how to commence. For Canada, even more than Great Britain, had been lulled into a false sense of security by the Munich Agreement, and the partial awakening caused by the German invasion of Czechoslovakia in March 1939 could not produce results before the storm broke. Thus the outbreak of war found the R.C.A.F. in an unenviable position. Admittedly it was Canadian and equally admittedly it was a Force, though a very small one, but it had appallingly little to fly with, either in men or machines. For lack of aircraft, the majority of its more senior officers had willy nilly to accept "promotion" from air-borne to chairborne duties. So it was with little more than supreme optimism and a public purse, tight drawn for so many years but now suddenly loosened to hitherto undreamed of lengths, that the R.C.A.F. faced the war. That the achievements of the first four years not only kept pace

with but actually surpassed schedule is a tribute to the unquenchable spirit of the small band of permanent officers, ably aided by the pilots of other years who took on the administrative posts, and by the bush pilots who offered their services. When faced with a task so gigantic as to cause any but the most intrepid to hesitate, the regulars proved their worth although they had been nurtured on a meagre flying allowance and their available aircraft were fit only for a museum—and not a really first-class museum.

That the British Commonwealth Air Training Plan got under way so quickly was due in no small part to the fact that, pursuant to the request for the training of Royal Air Force pilots in Canada, made by the Government of the United Kingdom in 1938, an understanding had already been reached on the best means of attempting such a task. The original suggestion had been that airfields in Canada should be set aside for the advanced training of R.A.F. pilots and that such fields should be administered and controlled completely by the R.A.F. The latter condition was quite naturally not acceptable to the Government of Canada, which presented a counter proposal to bring the training schools under the administration of the R.C.A.F. After consideration this was concurred in by the Government of the United Kingdom. By this acceptance most of the contentious points which might have arisen during the conversations in the autumn of 1939 were obviated and the stage was quickly set for the implementation of the Agreement signed in Ottawa on December 17th, 1939—an agreement which not only covered the organization and administration of the Plan but also outlined the terms of service of the personnel and included one particular clause, Article 15, which was to have far-reaching effects.

The necessity of supplying trained aircrew for yet unorganized squadrons of the R.A.F., and the decision to locate the vast commonwealth training plan in Canada, dictated the immediate role of the R.C.A.F.—that of organizing and

administering this ambitious and vital contribution to eventual victory. In such circumstances, only a token fighting force could be spared to enter the line of battle under the R.C.A.F. ensign. But the fall of France and the amazing success of the B.C.A.T.P. altered that plan long before the expiry of the war's fourth year. The original token squadron, sent overseas in February 1940 to do army cooperation work with the Canadian Army, was soon augmented by two other units and later Article 15 of the B.C.A.T.P. Agreement was invoked to allow the organization of other R.C.A.F. squadrons in the United Kingdom. Gradually the R.C.A.F. emerged as an all-round air force consisting of more than forty fighting units.

Article 15 made provision, although somewhat indefinitely, for the organization of Dominion units and formations as a means of identifying with their respective homelands graduates of the B.C.A.T.P. from each of the participating Dominions. This article was made operative for Canada by the Sinclair-Ralston agreement of January 1941, which also set the target number of Canadian squadrons to be established. It is from Article 15, invoked by this agreement, that the present overseas R.C.A.F. squadrons stem. And from the same source has come the process called Canadianization. This article gave the same privilege to all participating Dominions but assumed special importance for Canada.

The original intention of Article 15 was to man these squadrons with aircrew personnel from the Dominion concerned and gradually build up units which, though still a part of the R.A.F., would be named for the Dominion concerned in deference to their aircrew. But the ground crew would still be R.A.F. and the cost of equipment, etc., would still be a charge against the United Kingdom. In other words the Article 15 squadrons would be Canadian merely by courtesy rather than by actual new status.

This situation was not completely acceptable, since the

Government of Canada was of the opinion that to send her sons overseas and thereafter figuratively wash its hands of them was scarcely consistent with the position of the Senior Dominion. And from this decision to lend further assistance, the basis of service changed materially when Canada undertook

(a) Responsibility for pay and allowances to all R.C.A.F. personnel regardless of whether they were serving with the R.C.A.F. or R.A.F.;

(b) Responsibility not only for the initial equipment but also for the annual maintenance including aircraft, armament, etc. of all Canadian units;

(c) Responsibility for the advanced training in the U.K. and other countries of all R.C.A.F. aircrew in advanced flying and operational training units.

Thus the process of Canadianization had a basis much broader than that of any nationalism by which it might be stigmatized. It was the coming of age of the Dominion of Canada, and the final step in the achievement of the status granted by the Statute of Westminster.

Previously, members of the R.C.A.F. had been posted indiscriminately to R.A.F. units. The increasing number of Canadian graduates of the Air Training Plan now made some effort at their employment in strictly Canadian units not only desirable but virtually obligatory. In the first instance it was proposed that this segregation of Canadians should be confined to aircrew, since it was realized that ground personnel could not as yet be spared from the training units of the B.C.A.T.P. But the ultimate aim was that the R.A.F. ground crew of such units would be replaced by non-flying personnel of the R.C.A.F. at the earliest opportunity. Critics argued that the proposal was based on nationalistic rather than practical considerations, but in truth it was merely a normal process of evolution towards a state which would have existed at a much earlier date had not the R.C.A.F., at the beginning of the war, suppressed its natural

desire to take the field as a self-contained, all-round fighting force. Acquiescence in the undertaking of the immense commitments of the B.C.A.T.P. had precluded an earlier step in this direction.

The reasons for the move were far from selfish nationalism. The main objectives were fourfold: (a) To simplify administration of the ever-growing numbers of R.C.A.F. personnel overseas, especially in the matter of personnel records, pay accounts and auxiliary services; (b) to afford R.C.A.F. personnel greater opportunities of assuming positions of operational responsibility commensurate with their achievements, so as to inculcate in them the qualities of leadership and organization so necessary to the well-being of the R.C.A.F. after the war; (c) to improve *esprit-de-corps*; (d) to demonstrate, as fully as was practicable, the scope of Canadian participation in the main air effort. Only for this fourth reason might the policy of Canadianization be considered nationalistic, but even if so it was a reasonable and highly praiseworthy motive. The best assurance that could be offered that the Royal Canadian Air Force would not be forced to revert to its unhappy pre-war status was to build up an *esprit-de-corps* and an operational efficiency which would impress itself not only on the personnel of the force but also upon the people of Canada.

It must not be thought that Canadianization was simple or that it was approached without misgiving, criticism and even recrimination. The policy was far from being universally popular. It was unpopular in two quarters, the most vocal being the aircrew themselves, though not all were opposed. Opinion was about evenly divided, but the antagonists, as is the way with oppositions, were much more articulate than the protagonists. An examination of the aircrews' objections brings forth one salient fact. Through a misunderstanding of the proposal, they could see only a breaking up of existing crews and the consequent necessity of finishing operational tours with unknown, and to them at

least, untested personnel. But to persons knowing the length of time necessary to carry out such a plan this argument was specious. It was never the intention to disrupt existing crews, nor to separate friends, but merely to arrange future postings so that crews would be made up wholly of Canadians rather than of the heterogeneous mixture of the past.

The second argument advanced by the aircrew was that their close association with members of other parts of the British Commonwealth and Empire had a broadening effect on all concerned and developed a mutual understanding which would otherwise be impossible. Fear was expressed in many quarters that this desirable condition might be imperilled. This fear had considerable force and value but, as the plan has worked out, has had little basis in reality, as ever since the formation of the R.C.A.F. units their association with members of the R.A.F. has been most close. Up to the present, especially in bomber squadrons, a fair percentage of personnel has always been from the R.A.F., and representatives of the R.A.A.F., R.N.Z.A.F., and also the U.S.A.A.F. are frequently to be found serving with Canadian units.

A third criticism, also legitimate, was that the R.C.A.F. had few, if any, senior officers qualified by operational experience in the present war to assume the command of squadrons. This objection was met by the posting to squadron and flight commander posts, in the early units, of R.A.F. officers with the required proficiency. In many instances, in fact wherever possible, Canadians with several years service in the R.A.F. were chosen, a practice which was continued until a group of R.C.A.F. officers could gain sufficient operational experience to qualify them to command units. In fact this practice still carries on to a limited degree as R.A.F. officers, not even always of Canadian nationality, are from time to time posted to command R.C.A.F. units.

To implement Canadianization, a new Air Officer Commanding the R.C.A.F. in Great Britain was appointed in the person of Air Vice-Marshal (later Air Marshal) Harold Edwards, a man of outstanding personality and indefatigable energy. In years past, as Director of Personnel and later Air Member for Personnel, he had been responsible for much of the "spit and polish" of the R.C.A.F. Gus Edwards, as he was universally known, was a most suitable man to send to the United Kingdom to implement the Canadianization policy. His ambition and unswerving determination assured the success of the plan. The road, however, was long and tortuous, progress slow and labour arduous, so arduous in fact that late in 1943 Edwards, who had in the meantime been named Air Officer Commanding-in-Chief, returned to Canada and was replaced by A/M L. S. Breadner, C.B., D.S.C. With this change in command of the overseas force came also an autonomy which had never before existed. While Edwards had reported to the Minister of National Defence for Air, through the Chief of the Air Staff, Breadner reported directly to the Minister. When he assumed command overseas Breadner turned over the post of Chief of the Air Staff, which he had held for three and one-half years, to A/V/M (later A/M) Robert Leckie, C.B., D.S.O., D.S.C., D.F.C., erstwhile Air Member for Training.

If the implementing of the Government's policy of Canadianization owes much to Edwards, its consolidation and final acceptance, although somewhat apathetically by certain officers of the R.A.F., also owes much to the sagacity and diplomacy of Breadner.

Canadianization had the result of producing in the first four years of war a balanced fighting force in the R.C.A.F., which takes its full share in all the varied activities of the United Nations' air offensive. It is now a force manned both as to aircrew and groundcrew almost entirely by Canadian-born and Canadian-trained personnel. In addition to these squadrons there are thousands of trained R.C.A.F.

aircrew, all products of the B.C.A.T.P., who could not find niches in the overseas units of their own country's forces and have seen all their operational service in R.A.F. units. In September 1943 of the 40,000 R.C.A.F. personnel overseas, approximately 24,000 were serving in R.A.F. units. During the following year while the total overseas contingent of the R.C.A.F. rose to over 59,000, the number of those serving in the R.A.F. decreased slightly.

But, even if 24,000 R.C.A.F. personnel are serving in the R.A.F., it has not been a case of "out of sight, out of mind". Just as much attention has been paid to the welfare of these as has been bestowed on the personnel serving in the R.C.A.F. formations. And the task has been vastly more difficult. Standards of living in Canada differ from those in the United Kingdom. Cooking, to mention one small but most important aspect, is very different. And standards of discipline, at least insofar as they concern cleanliness of person, clothing and equipment, are equally diverse. To expect that one or two Canadians in a British unit would automatically adjust themselves to the different conditions and outlooks of their more numerous colleagues was expecting too much. We say this without entering into any discussion as to the relative merits of either standard. Thus grew up a whole series of junior inspecting officers in whose hands lay the welfare of this Lost Legion of the R.C.A.F. Working through District Headquarters, spread through every theatre of operations, they heard complaints, listened to "grouches" and, having sifted the legitimate complaints from the chronic binds, set about righting wrongs or adjusting situations. In this task they most certainly had the blessing of the R.A.F.

When, in April 1943, the Dominion assumed complete financial responsibility for all her air force personnel this network of liaison officers had to be reinforced with regional pay officers, as pay difficulties had always been a major source of irritation. Now, wherever R.C.A.F. person-

nel are serving, they are visited at regular intervals by pay officers who listen to their financial grievances and are empowered to arrange the elimination of legitimate complaints. During the year covered by this narrative, this system of local representatives was extended and reinforced until now a close and almost paternal supervision is maintained over detached members of the Force.

Canadianization, which is now an admitted success, was a far-sighted policy, which should ensure for the R.C.A.F. in post-war years a less thorny path than was its lot in the years preceding the present conflict. In short, the R.C.A.F. will emerge from this war with a tradition built up as a result of its operations, in peculiarly Canadian units, which was not possible after the last war because of the fact that aside from the achievements of one or two most outstanding pilots, the activities of the great bulk of Canadians, who formed so large a part of the R.A.F., were lost from view. The attempt to form Canadian Air Force squadrons in the First World War died in embryo due to the suddenness of the Armistice and the lack of preparedness in the minds of the Canadian government and public generally to undertake the responsibility of perpetuating what was in those days considered to be merely an improvised instrument of war. But things should be different after this war because Canadians have become thoroughly acquainted with the flying service. It is to be hoped that the coming post-war years will not be a repetition of the early twenties, when a few intrepid souls struggled to keep alive the infant force, struggled against prejudice, ignorance and, worst of all, apathy.

From an operational point of view the R.C.A.F. Overseas was and still remains a part of the R.A.F., as the A.O.C.-in-C., R.C.A.F. Overseas, exercises no tactical and little strategic control over his personnel. Thus he is, in fact, virtually only A.O.C.-in-C. of R.C.A.F. Overseas Headquarters. But his powers do include strategic control

to the extent that his units may not be diverted from one type of operation to another without his consent. Furthermore, in the year under consideration his authority has increased to such an extent that he and his staff now control postings from one unit to another of all R.C.A.F. personnel.

The R.C.A.F. Overseas has undergone important operational changes. The R.C.A.F. Group in Bomber Command, though fully organized, was, at least until the beginning of the period of this story, still suffering from growing pains. A/V/M G. E. Brookes, C.B., O.B.E., the A.O.C. for over a year, was succeeded early in 1944 by A/V/M C. M. McEwen, M.C., D.F.C., an extremely energetic officer who has already become vastly popular with his men, both in the air and on the ground. The Group, well before the end of August 1944, had really got into its stride and was putting up a magnificent effort. Several other important changes were made in the senior operational ranks of the R.C.A.F. Overseas. A notable instance of this was the appointment of A/C J. E. Fauquier, D.S.O., D.F.C., one of Canada's outstanding operational pilots, as Senior Air Staff Officer of the R.C.A.F. Group. A/C C. R. Slemon, C.B.E., who had been with the Group as S.A.S.O. ever since its organization and had greatly enhanced his reputation by his work in that position, has now been given a more senior post.

During the year the R.C.A.F. assumed control of more air stations and can now really be said to be administering its own formations. This condition has not been arrived at by accident, but has been the result of lengthy and delicate negotiations. It is invariably simpler to arrive at a basis of operation mutually agreeable to all concerned when a fully organized and completely self-contained force is introduced. This has been most notable in the super-imposing of the U.S.A.A.F. on the structure of the R.A.F. and the fact that the autonomy so long sought by the growing forces of the R.C.A.F. was ungrudgingly presented to the 8th and later also to the 9th U.S.A.A.F. But the R.C.A.F. had, and

still has, a long road to travel before achieving the same status.

This road was made more difficult by the slowness of so many Britons to realize that the equality of national status acknowledged by the Statute of Westminster is a very real consideration in the effective conduct of any co-operative undertaking. And finally it must be admitted that the fault lies also with Canadians themselves. An independently-minded race, they are first and foremost individualists and in many instances prefer to work out their own destiny rather than hew to the line set by those who have preceded them. All of this creates a situation fraught with difficulties that are delicate but can never be considered insoluble. But the story of that struggle has no place in this narrative and will be dealt with at greater length when the history of the administration of the Royal Canadian Air Force at home and abroad is written.

CHAPTER II

BOMBING OPERATIONS 1943

A HEAVY bomb raid is no haphazard affair but is rather the final act of a drama which usually began weeks or even months before. If a new objective strikes the headlines, it is not the result of chance selection. Every target is chosen by virtue of its importance to the German war effort. The germ of the expedition was probably planted by a word or two, a phrase perhaps—or it may even have been only an expressed surmise, in a report from within the bounds of Nazi-occupied Europe.

This information, sketchy though it may be, is checked and counter-checked, set alongside other information which may have been forthcoming from an entirely different source—and the seed of the raid is planted. Photographic reconnaissance pilots, who venture far over Europe in unarmed aircraft to photograph known or suspected strategic points, are sent time and again to confirm the information. Progressive photographs show any increase in activity at the suspected location. It may just be a tree of a different shade—for cameras pierce camouflage much more readily than the eye—a burned section, as was the case at Peenemunde, or any one of a thousand things-to disclose the change. And so a target is selected.

Let us suppose that some Rhineland town has appeared

in recent intelligence reports as the suspected location of a secret manufacturing plant. It is thought to be situated in what was formerly the village gymnasium or secondary school. The Canadian Group is selected to prang it.

The word is passed to the Senior Air Staff Officer, who with his operations officer, works out the over-all tactics and estimates the size of the force required. Each squadron reports, or, in the bomber's phraseology, offers the number of aircraft which can be made available complete with crews for the operation. The requirements are surveyed by the operations staff and each squadron's contribution is gauged—allowing usually an extra kite or two in each unit to cover last minute unserviceability of machine, equipment or crew.

Then usually an hour or so later the operations conference is held and such major details as weather, nature of target and proposed tactics are discussed. All squadrons have the right, and frequently avail themselves of the privilege, to object to proposed measures and offer alternatives. But finally the details are agreed upon. In the meantime, the "Mayfly" for each squadron has been issued, detailing the aircraft and crews for the operation.

As soon as the Mayfly appears, the entire squadron begins to hum with intense activity as pilots consult with AEMs, gunners check their guns and polish their perspex, and every other crew member, both air and ground, busies himself with his appointed task. Next comes the N.F.T., the night flying test, a last minute check in the air to ensure that all is well with the aircraft. Then the long caterpillars of bombs slowly thread their way from the bomb dump to the various dispersal areas and the armourers complete the intricate business of bombing up.

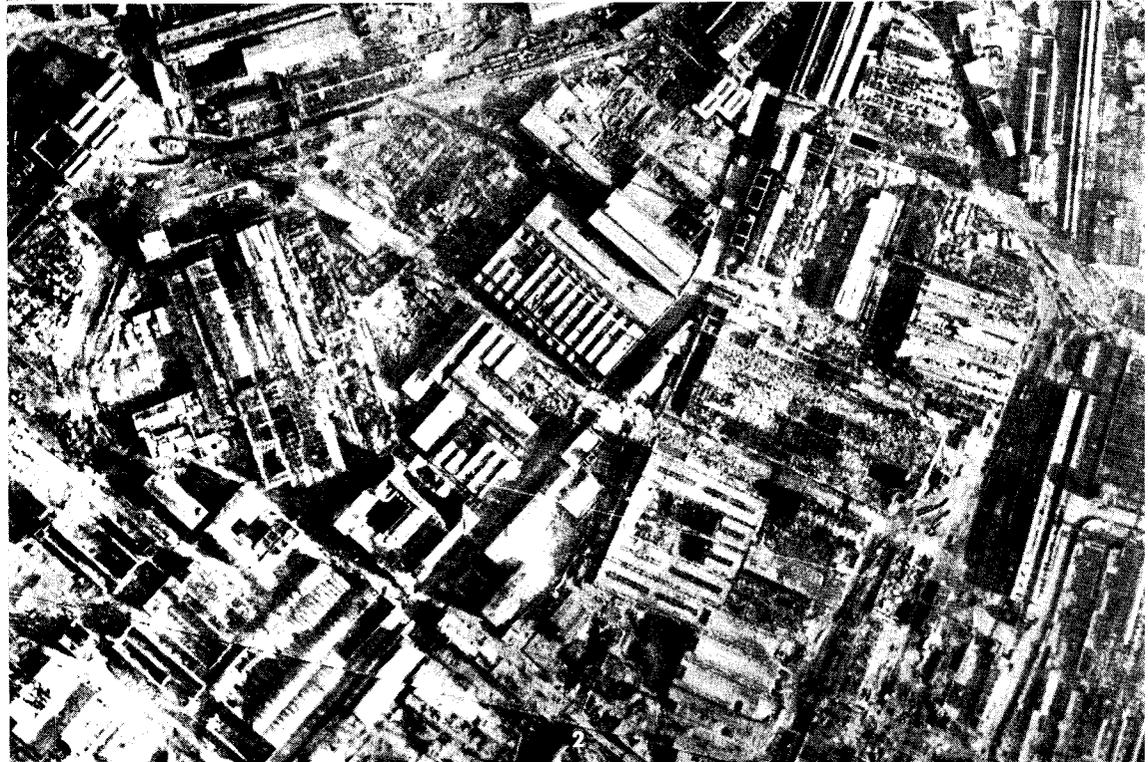
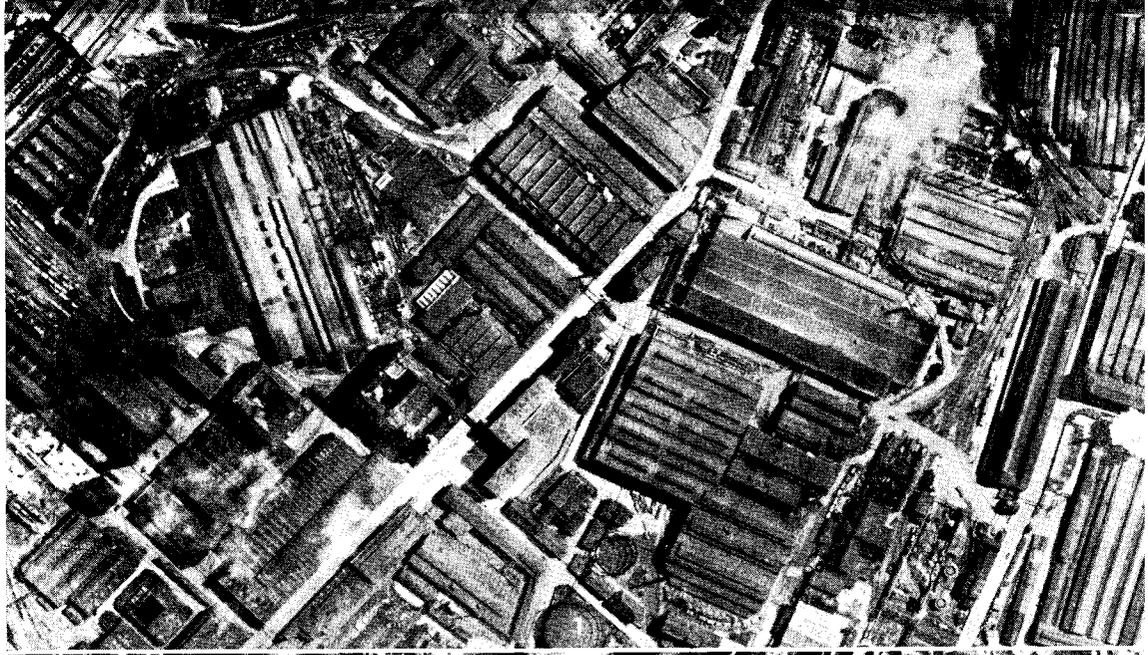
Next the briefing. If it is a long and difficult target the navigators and pilots may be called in early to work out the intricacies of their route, but the crew-briefing gives all the known gen on the raid. Detailed and standby crews assem-

ble in the briefing room and as the roll is called, each skipper answers for the presence of his men. The large map of the British Isles and Europe at the end of the hut is criss-crossed with tapes and as their eyes follow the converging lines the crews chuckle—or gasp—as they realize their target.

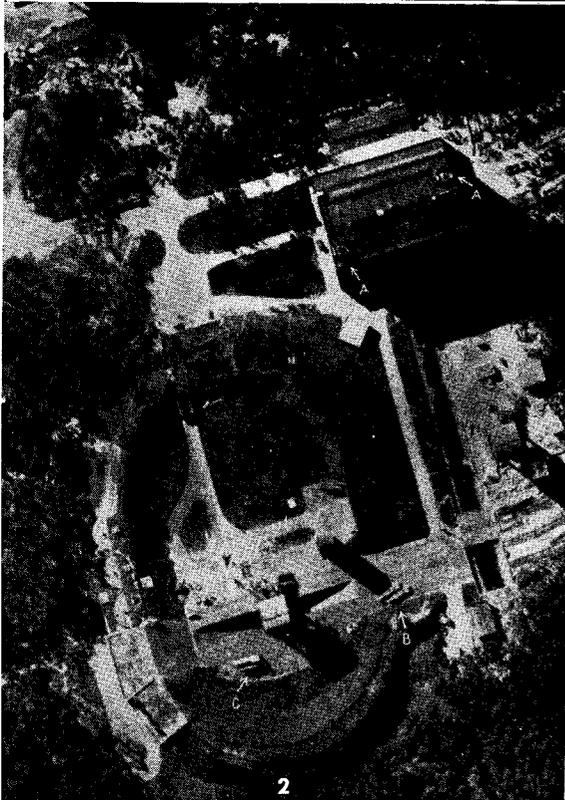
The first speaker is the squadron commander who outlines the general tactics with special reference to the height at which the aircraft will fly, the turning points, the length of time over the target and the exact details of the squadron's aiming point. Then the meteorologist takes over and outlines the weather which may be expected, including cloud formations, temperatures and other equally important details. He is followed by the intelligence officers or gentlemen who give all available information on enemy defences, including location of flak batteries and night fighter airfields along the route, together with the suspected strength at each point. In other words, they prophesy what the crews may expect to find on their trip. And it is amazing how accurate they are! After answers have been given to any questions, the crews are dismissed until their operational supper with its highly-prized egg—a real one, not one of those powdered concoctions, which may be nutritious but are seldom appetizing.

Ordinarily, on a raid involving many kites from the same field, the aircraft are marshalled some time before zero hour and taxied to the leeward end of the runway, to be parked in order of take-off. An hour or so before the time scheduled for the operation, the crew tender picks up the types and their gear and runs them out to their aircraft, usually a mile or so and if they are on a widely dispersed station even ten miles from their billets. The navigator has his bag of tricks, some of the others the flying rations—for it is a long trip and a spot of coffee or a sandwich is always acceptable in the sub-zero weather. All have their flying kit, parachute and harness.

As they await the appointed time, there is little of the



(1) Krupp's Factory, Essen, before heavy bomb raid.
(2) Same factory after the raid.



(1) A/V/M C. M. McEwen, M.C., D.F.C., of Montreal; A/C J. E. Fauquier, D.S.O., D.F.C., of Ottawa; A/C J. L. Hurley of Toronto and A/C A. D. Ross, G.C., O.B.E., of Toronto.

(2) Flying bomb (V.2) experimental station at Peenemünde.

(3) Same station after heavy bomber attack.

horseplay that might be expected of a group in their late teens and early twenties. True, there will probably be a wisecrack, but it is mild and possibly a little strained. There is no hurry, no confusion as the crew members take a last pull on their cigarettes and, at a quiet word from their skipper, climb aboard. The last-minute check begins as time ticks slowly away. One by one the engines bark and finally after a last run-up, settle into a throttled hum.

As the minutes drag by the tension increases and the little group standing by the flying-control truck with its checker-board body move about restlessly, talking for no known reason in muted voices scarcely to be heard over the hum of the Merlins. Never did time go so slowly, until finally in the gathering dusk the Aldis lamp winks its green light and the pilot of the first Lanc revs up his engines, releases the brake and with a slight start that soon changes to a steady crawl taxis into position at the head of the runway. Inside the black monster each member of the crew again does his own particular check-up rapidly, almost subconsciously—and the green light winks again.

Slowly, ponderously the huge machine starts to roll, gathering speed as it passes the control car where the onlookers silently, a little grimly hold up two fingers in a V for Victory—or with their thumb and forefinger make the well known O.K. sign. The crew answer as the speed increases. The kite bumps once or twice—and finally is airborne. No sooner are the wheels retracted and the aircraft clear of the runway than those next in line take off in rapid succession.

The apparently disembodied navigation lights sail serenely in the still night sky as the pilots gain their height and approach the rendezvous. And the onlookers silently take themselves back to the mess, wondering what is in store for the kids. The scene is being duplicated on many an airfield as squadron after squadron gets its kites airborne and away into the darkness.

Height gained, the kites, bunched rather than in any regular formation, set course for their objective. And steadily the great bombers with their load of death plod on. The enemy coast is coming up and the silence, which only a crew member can understand, a silence amid the steady din of the engines, is broken. The navigator's "Dutch Coast coming up" is heard, and all brace themselves, for long before this the enemy's predictors have probably picked up the aircraft.

Suddenly a long finger of light stabs at the blackness, wavers and stabs again, then roves from corner to corner of the sky in search of the marauders. Finally it catches a Lanc and the pilot jinks in an endeavour to escape as 'With a clump the first burst of flak is heard, fortunately far away. The next one is closer—then closer still—and again all is silence in the aircraft, as the pilot seeks to confuse the battery's aim.

Another searchlight catches a wing tip or the tail—loses it—is back again—and all the lights in the neighbourhood hold the luckless Lanc in a cone until in desperation the pilot, trying everything in his bag of tricks, breaks away and ploughs on into the night, again mercifully dark.

The target is coming up. The pathfinders, experts who precede the main waves, have marked the target area with vari-coloured indicators. The searchlights surrounding the objective are filling the sky with their long white fingers trying to pick out the bombers. The clear blue master searchlight points, the others follow; again the kite is coned just as it is ready to begin the straight and level bombing run. The pilot jinks and finally escapes the lights and the tons of flak thrown up. Heavy flak, this time, with its awful c-l-u-m-p and death-dealing power as differentiated from the flaming onions and other beautiful expressions of anti-aircraft hate known as light flak, which are less deadly though still much more than vaguely lethal.

The first kite is over—its bombs fall in their flat arc—the

first of the stick is a little short—the second and third are bang on the markers—the fourth is a little over. The incendiaries hurtle down and dot the dark landscape with their small magnesium fires. A crimson rosebud comes to full bloom as each bomb falls. The incendiaries catch, the flames spread—the raid is on.

Bombs away, bomb doors closed—and now to get the hell out of here. At the turning point of the homeward journey, the kites veer quickly round and try to steal home without disturbing the flak batteries, but suddenly a shrill “Fighter!” breaks the silence—and the excitement really starts. Evasive action begins and all guns start chattering as the swiftly moving battle is waged. Ping, ping, as machine-gun bursts pierce the fuselage or the wings. If the crew are unlucky they cop a cannon shell and fire breaks out. As the pilot throws the four-engined monster around, crew members work madly to put out the fire while the gunners still engage the night fighter. If they are extremely lucky they turn the cannon-spitting Jerry into a ball of flame that hurtles to earth; if less so they are able to evade and lose the fighter. If their luck is out they’ve had it—and one more Lanc does not come home.

But with the enemy coast passed, the fighters evaded, the searchlights doused, the flak batteries left behind, thoughts turn to home—to breakfast and bed. Then probably to their dates for that night, though even the most beautiful girls arouse little interest after five hours of hell on earth. The only thing the tired crew ask is—bed.

One by one they arrive over base, and after identifying themselves are given permission to pancake if the runway is clear. Otherwise they circle until their turn comes—or perhaps if weather over the base is bad or one of their number has messed up the runway with a bad landing they are diverted and another weary hour must be spent before they can land. But, if they are lucky, they land at their home base.

The aircrew truck picks them up and takes them to the de-briefing room where, while waiting their turn with the intelligence officers, coffee or cocoa, biscuits and cigarettes are passed around as they loll in complete exhaustion. The boys who took the air six hours earlier are nowhere to be seen—their place has been taken by old, disillusioned, dirty men with lack-lustre eyes and heavy hands. One or two drowse, even fall asleep; the rest talk quietly—or just sit.

Their turn comes and they drag themselves with leaden feet to the intelligence officer's table, where more coffee and cigarettes revive them until they can tell their story of weather, flak, route, fighters, searchlights and details of all that they have seen and done. As the quiet voice of the gen king probes their minds, the squadron commander, if he wasn't on the raid, the station commander and perhaps a visiting brass hat, bring coffee, light up their cigarettes and listen in on the interrogation.

But at last it is all over, their operational breakfast with its shell egg is eaten, that last cigarette butted, and they pile into the tender again on their way to billets and—BED.

September

September is always a busy month for the bomber boys and 1943 was no exception. The Canadian squadrons did not contribute aircraft to all Bomber Command's efforts but on eight nights they took off as a considerable part of a major expedition.

In gastronomic circles it is usually considered that R is the important letter in September, but to the planners of September raids the important letter was not R but M, at least in the choice of targets. On five of the eight large efforts in which the R.C.A.F. was involved the target was an M—Mannheim (twice), Munich, Montlucon and Modane. It took two trips to Hanover and one to Bochum to break the monotony. In addition, the R.C.A.F. made small contributions to two raids on other French targets, to one attack

on Berlin and one on Brunswick.

The first raid on Mannheim was on the 5th after the majority of squadrons had enjoyed a four day stand-down, following the teeming activity of the last days of August. The crews had profited by their lay-off, and it was a full-out crowd that took off for Mannheim under excellent weather conditions.

A light ground haze lying over the great German manufacturing city partially obscured the aiming point to the first wave, but was totally ineffective against the later arrivals. For them the river and buildings, illuminated by the fiercely burning city, stood out in stark detail. Searchlights, with which the district is so well-endowed, at first co-operated with the ubiquitous night fighters, but were soon reduced to such chaos that the few still functioning merely waved about ineffectually. After being attacked by an FW. 190 near the target, Sgt. G. A. Bassett, rear gunner in the Ghost Squadron kite skippered by FS H. L. Pattinson, destroyed the Jerry. Bassett, who was later commissioned, was awarded the D.F.C. at the end of his tour of operations.

Huge block-busters were dropped on the aiming point and even the few that fell outside the target area did their share of damage in the densely populated town so that in no time it was completely covered with a carpet of flames. Explosion after explosion, some red, some orange and even one brilliant blue, hurled smoke many thousands of feet into the air. This raid, in the opinion of a veteran of 17 trips, was the best he had ever seen. Long after the bombers had turned homeward, even from 150 miles away, the raging testimony of their efficiency could be seen. Another grand prang—the second wizard do on Mannheim in three weeks! Photographs taken two days later showed huge fires still burning and over 300 acres of the city devastated. One veteran Lion Squadron skipper, P/O W. Biggs, D.F.M., and his crew were lost on this trip. An original member of his squadron, Biggs had rendered outstanding service and won his gong as an N.C.O.

But outstanding success cannot always be the lot of the bombers, and the sortie against Munich on the 6th was an example. Flying over almost solid banks of clouds, the huge air armada pressed on to its objective where vertical visibility was no better and, as a result, only fleeting glimpses of the aiming point could be obtained. The early arrivals scattered their sticks all over hell's half-acre and it was only toward the end of the raid that fires really began to take hold. Gradually the fires merged, and the attack culminated in one enormous explosion.

Munich is never an easy target, and in very truth a bomber's life is not a happy one when he essays a sortie against the Cradle of the Crooked Cross. This raid was no exception. Undeterred by the comparative ineffectiveness of the searchlights with which Munich is ringed, night fighters in hundreds sought out their prey with the aid of aerial flare paths and chandeliers even before the invaders arrived at the target area. They harassed our kites before bombing, while over the target, and for miles on the home-ward journey.

But if the whole attack improved as it went along and finally became a flaming success, the same cannot be claimed for all the Canadian units which took part. In the life of every squadron there comes a time when nothing is right-kites cannot be started; guns go u/s; turrets refuse to turn; bomb doors fail to open; and any one or more of a million things which can interfere with the efficiency of a unit all start to happen at once. This situation is the bugbear of every commanding officer and, regardless of how careful and efficient all personnel concerned may be, the time comes and everybody can only work like hell and pray that it won't last long. For the natural result is a plethora of early returns and, what is even more distressing, too many missing aircraft. While the number of missing and E.R. aircraft in the R.C.A.F. units that night was neither over the calculated strategic limit, nor in fact even approached it, it

was higher than the general average in Bomber Command. As such it caused much concern to senior officers and reasonable fury to the crews themselves.

Another "M" target was the next objective. A pleasant evening's journey over France, a chance to roll up the hours and get credit for another trip, one more step towards the end of the tour, and that much closer to Canada and leave. In fact the jaunt to the Dunlop Tyre Factory at Montlucon was really a piece of cake.

Under conditions of good visibility, bright moonlight, little or no cloud and only very moderate defences, the successive waves of bombers took advantage of well-placed markers and grouped their sticks carefully in the target area. The result was all that could be desired. Because of the strict injunction against damaging the buildings surrounding any target in France, precision bombing was necessary and precision methods were employed. Despite the importance of the Dunlop works to the Nazi war effort, the possibility of its being attacked seems not to have occurred to the Hun, for it was absolutely undefended either by searchlights or by night fighters.

Wave after wave swept in, sighted the target in the brilliant moonlight and let go their sticks with deadly accuracy. One or two fell slightly outside the target area but the streets and buildings of the town itself were untouched, as could be seen in the light from the burning factory, the complete stock of which is believed to have been destroyed. In addition the railway shops were hit and the contents of many rail wagons completely destroyed. From one huge explosion, and many only slightly smaller, bright red flames rose to a great height from the centre of the factory and the resultant smoke formed itself into a symmetrical column over two and a half miles high. Fires were still burning 24 hours later when our bombers returned from Modane.

The losses in this raid were extremely light but W/C D.

W. M. Smith, D.F.C., a Canadian in the R.A.F. serving as the commanding officer of the Ghost Squadron, was one of the missing. Lost with him were F/L E. B. Mason, squadron navigation leader, F/L J. M. Forman, gunnery leader, and WO J. M. Nelmes, another experienced gunner. The winco is now a prisoner of war. Forman, Mason and Nelmes evaded capture and have been repatriated to Canada.

On the 16th the "M" motif recurred when a major effort was directed against the Modane entrance to the Mont Cenis tunnel to Italy. As a respite from the congested airways of Happy Valley, with their disconcertingly accurate light and heavy flak, and the thronging night fighters in their hundreds, this little expedition was doubly welcome. To the veterans it came as a relief from the Reich and to the sprogs as a chance to get operational experience in preparation for coming forays against Germany.

If the target was easy, the route was far from ideal and heavy icing caused an inordinately high percentage of early returns. Target conditions, however, were excellent, and the crews were able to pick out the railway station and marshalling yards in the brilliant moonlight. When they left, the eastern end of the station was a twisted and smoking mass of steel and burning wood.

An attack on Hanover broke the symmetry of the "M" pattern, which was resumed on the 23rd when a good-sized force took off for Mannheim in excellent weather that continued until our kites were safely back at base. Mannheim lends itself particularly well to a saturation raid, as it is easy to pinpoint in relation to the bend in the river and if by any chance some of the sticks undershoot there are equally important targets on the other side of the Rhine. But on this night there was little under— or overshooting and soon the whole centre of the city was a mass of flames through which explosions burst continually. One explosion which threw flames hundreds of feet in the air was deep blue in colour. The I. G. Farben Works suffered considerable dam-

age as did the main dock area at the junction of the Rhine and the Neckar. With this raid Mannheim was so thoroughly blasted that it needed only occasional attention to keep it that way. This result was achieved despite a moderate but well-directed flak barrage which met the first waves of bombers even as high as 25,000 feet. The barrage continued until hundreds of night fighters were able to climb to attack the invaders. Many combats ensued, from which claims were entered for two Jerries destroyed.

Of one of the combats, involving an aircraft from the Thunderbird Squadron piloted by F/L L. N. McCaig with WO E. S. Hawkes as rear gunner, the squadron record book had this to report:

Immediately after bombs were gone a Ju. 88 came in to attack from below and astern. Both gunners opened fire and the enemy aircraft broke off the engagement. A second Ju. 88 came in and again the gunners opened fire at about 600 yards. The Ju. 88 came on and opened fire at about 500 yards. The gunners observed strikes and pieces fell from the Ju. 88 which was claimed as destroyed. However, the Lancaster had also suffered great damage. The hydraulics were shot up-port fin and rudder shot off-rear turret damaged—one port wing damaged—two petrol tanks holed—port elevator damaged—inter-com and radio transmitter damaged and the D.R. compass ruined. Both M/U and rear gunners received wounds, one in the thigh and the other in the calf, but both continued firing until the e/a was destroyed. The pilot by superb airmanship managed to keep control of his aircraft and set course for the long journey home. Due to the damage the aircraft flew nose heavy and great strength was needed to maintain altitude. The pilot made a crash landing where medical help was secured for the injured crew members.

McCaig and Hawkes were both awarded the D.F.C. for the night's work.

The three non-pattern raids of the month were on Hanover on the 22nd and 27th, and Bochum on the 29th.

In the first raid on Hanover, the early waves, having

followed a route covered by 8/10ths cloud, found the area almost clear, but despite this the early sticks were badly scattered. Later waves corrected, however, and soon the target was burning merrily under one flaming cloak, visible to our crews for 250 miles after they had left the target. Railway facilities were seriously affected, the normal freight lines being put completely out of action.

As usual Hanover was well defended by some 200 searchlights, with moderate flak up to 19,000 feet. After the flak batteries had been bombed into silence, night fighters were extremely aggressive and many combats took place.

Sgts. A. Buchan, A. V. H. Haggins and W. J. Mayo, survivors of a Leaside Squadron Wimpy piloted by Sgt. R. M. Barlow, which was forced to ditch, had this to say:

Everything went fine on the way in over enemy territory. The target was located and bombed. After leaving the target area the fuel gauges were checked and found satisfactory. About halfway between the target and the Dutch coast the gauges were again checked. This reading showed starboard nil, port 40 gals. It was then we had a feeling we might run short of petrol. On crossing the Frisian Islands both engines cut and the nacelle tanks were turned on. We carried on for half an hour and then the skipper gave orders to prepare for ditching. This was carried out and the bomb containers were jettisoned. All this time the pilot was running as economically as possible, losing height gradually. Ten minutes after a fix was given by the navigator the starboard motor cut and the pilot ordered the crew to take up ditching stations. This was done and the pilot began a running commentary. At 1500 feet the flotation bags were opened. The pilot's commentary was kept up until the aircraft hit the water. It was really a marvellous landing and the pilot's last words were "Best of luck, boys".

On hitting the water the aircraft started to fill immediately. The navigator pulled the dinghy release and we started to abandon the aircraft. The plane filled so quickly that it was impossible to get any of the equipment out. The navigator and bomb aimer were the first to reach the dinghy and then the air gunner was spotted swimming towards it. He was assisted into the dinghy by the navigator and by this time only the tail of the aircraft was visible. We shouted and blew our whistles but there was no reply. It was very dark and the sea was fairly rough. After half an hour we gave up hope of seeing the other two members of the crew, and prepared ourselves the best we could for the long cold

night which lay ahead of us. The night was spent in baling and trying to keep ourselves awake. At 0900 an Anson was sighted at about 2,000 feet by the navigator. Two cartridges were shot off but the Anson continued on its way, apparently missing sight of the dinghy. At approximately 0945 a Wellington was sighted. Once again cartridges were shot off and he spotted us. He circled, flashed his downward identification light and then continued on in ever enlarging circles until we lost sight of him. Our morale picked up considerably and we figured that it was then only a matter of time before we would be rescued. Then, at 1115, we sighted a Stirling; cartridges were shot off and he also spotted us. He flew away in the direction he had come, circled, and then came back indicating that he was directing a boat to us. From the other direction we then saw two boats approaching us. By this time the sea was quite rough and choppy. R.M.L. 553 came within 100 yards and circled until it was in a favourable position approximately 15 yards from the dinghy. The skipper, Lieut. Pratner, shouted that two ropes were coming. One rope was fastened to the dinghy and the other was used to haul the three of us aboard, one at a time. As soon as we got aboard we were given a good rub down and put to bed. Hot soup and some good strong rum were brought almost immediately. For the rest of the trip into port we slept like tops. Just before coming into dock we were all given dry naval clothing, and were able to walk around the boat. On getting into dock we awaited the arrival of the M.O. Shortly afterwards we were taken to the naval base hospital, where we were given a check over. After a very good meal we hopped into bed and had a really restful night. The naval authorities were very good to us. There seemed to be nothing that was too much trouble.

After a re-check the next morning by the M.O., we were called into the Admiral's office where we had a very pleasant chat for about half an hour. That afternoon we were taken over to M.L. 553 to pick up our clothing but as it was still slightly damp Lieut. Pratner refused to let us have it. He had his second-in-command show us over the whole boat, after which he entertained us in a first class manner until our clothes were thoroughly dry. After changing we found it had started to rain so the officers insisted that we wear their raincoats to the hospital. The next morning we were taken to Air naval stores and outfitted with necessities. About 0930 an Air Force car arrived to take us back to our station.

Five nights later when another expedition against Hanover was undertaken, severe icing conditions caused many of our bombers to return early. But those who were able to pass the icing region found excellent weather with

good visibility over the target and the raid was even more successful than that on the 22nd. Markers were well-placed and visual pinpoints on Steinhuder Meer also contributed to the success of the raid. Fires spread and gradually became a carpet through which a pillar of smoke rose nearly four miles in the air.

Night fighters were not inordinately active at first as a diversionary raid on Brunswick drew off the defenders and delayed their arrival at the main target. Despite the night fighters' late arrival, many combats took place along the aerial flarepaths placed by the enemy to point out the bombers' route. Several Jerry aircraft were destroyed.

F/Os B. A. St. Louis and J. C. Lowther, P/Os S. H. Long, J. D. Trippe and S. J. Slade, WO W. E. Goldspink and FS G. S. Read made up one veteran crew that were lost on this raid. P/O S. K. Atkinson of the Leaside Squadron, a veteran of 25 raids, was at the controls of another kite which did not return, and in which another old timer, Sgt. W. A. Grant, was lost.

The Canadians' last big sortie of the month was against Bochum, an important coal mining and steel centre ten miles east of Essen. After flying over heavy clouds to the enemy coast, our aircraft found gradually improving conditions until only a thin industrial haze hung over the target and the aiming point stood out as if in daylight.

Though for the most part well concentrated, there was a considerable amount of scattered bombing which only added to the Bochumites' confusion. Several very large fires and at least three monster explosions were seen by the attackers. As far away as Texel, the glow from the burning town could still be seen, which was some consolation to those unfortunate captains who had got off track and were forced to dodge the flak barrage of the heavily fortified area. Sixteen hours later the fires were still burning.

W/C R. S. Turnbull, A.F.C., D.F.M. took over command of the Lion Squadron from W/C D. H. Burnside,

D.F.C. during the month. W/C J. E. Fauquier, D.F.C. was awarded the D.S.O. for his work against Peenemunde in August, and on the 20th was promoted to group captain.

October

The lengthening nights of October found the R.C.A.F. participating in only three major efforts by Bomber Command, on the 3rd and 22nd when Kassel was the target and on the 8th when Hanover bore the brunt. In all three Canada's Group had a most important part as it also had in the smaller expedition against Frankfurt on the 4th. The R.C.A.F. also contributed a few aircraft on the 1st to Hagen, the 2nd to Munich, the 7th to Stuttgart, the 18th to Hanover, the 10th to Leipzig and the 22nd to Frankfurt.

In the first raid on Kassel a total of 1,500 tons of high explosives and incendiaries was dropped by the bombers who, after encountering considerable cloud en route, found only a slight ground haze over the target area. Some crews were able to pinpoint their objective and all were able to verify the accuracy of their aiming by the large fires which broke out over the whole area and by the pillar of dense smoke which rose to over 10,000 feet. Smoke was still pouring from the city the following day and was quite noticeable drifting 20 or 30 miles away. The success of the evening was augmented by the inefficiency of the Jerry searchlights and the comparatively few night fighters that came up to annoy the attackers. Some of our kites had encounters, however, during which several crew members were wounded.

One aircraft of the Lion Squadron was attacked over the Zuider Zee, and the rear turret shot to pieces. The gunner, P/O R. G. Findlay, and the wireless operator, P/O G. T. Rogerson, were both killed. With his controls mostly shot away and the kite almost unmanageable, the pilot, F/L G. J. Laird, assisted by the flight engineer, Sgt. W. H. Cardy, who had been blinded in the left eye, brought the crippled

Halifax back almost to base before it had to be abandoned. An immediate award of the D.F.C. was made to Laird and of the C.G.M. to Cardy.

Bomber Command's second visit to Kassel was 19 days later when, on the 22nd, a slightly larger force took on the job. For a variety of reasons the casualties on this expedition were considerably heavier than on the 3rd, with 42 aircraft missing of which 12 were Canadian.

Weather conditions along the route were extremely bad with 10/10ths cloud up to 20,000 feet which, however, cleared 40 miles from the target. Severe icing was encountered all along the route causing an inordinate number of early returns. Ground defences were extremely active, co-operating closely with a horde of night fighters. Employing their new technique by which aerial flarepaths indicate the track of the bombers, swarms of defenders were soon busy in a more or less futile effort to turn back the invaders. Numerous combats ensued during which our crews claimed seven enemy aircraft destroyed. Sgts. P. Stuart and A. C. Yule were mid-upper gunner and flight engineer, respectively, of an aircraft of the Ghost Squadron which, shortly after leaving the target, was hit by machine-gun fire from an enemy fighter. The rear gunner was wounded. Using his guns effectively, Stuart drove off the attacker. Then another attack developed and, despite the failure of his oxygen supply, he continued firing. By means of skilful evasive direction another fighter was also eluded, after which Stuart left his station to extinguish a fire in the rear turret. Yule, who had been wounded in both arms and the hip when going to the assistance of the rear gunner, insisted on fulfilling his engineering duties until the aircraft reached base. In circumstances fraught with great danger these airmen displayed courage, determination and devotion to duty of a high order. Both were awarded the D.F.M. for their gallantry.

W/C G. A. McMurdy, commanding officer of the Moose Squadron, was one of those missing on this raid.

F/L R. K. Shields, the squadron bombing leader who was a member of the crew, is a prisoner of war. Only two weeks previously McMurdy had taken over the squadron from W/C M. M. Fleming, D.S.O., O.F.C.; he was succeeded by W/C W. P. Pleasance, formerly a flight commander in the Iroquois Squadron.

Despite all the Nazi efforts that night our kites ploughed on and soon the whole area was carpeted with flames, from the centre of which sprouted three or four extremely large blazes. Because of the accuracy of the pathfinders and the precision of the bomb aimers, the effort can quite safely be categorized as an excellent and well-concentrated prang. These two attacks on Kassel were among the most successful since the bombing of the Reich began. Out of a total built-up area of 960 acres, 615 had been devastated including the whole, of the 300 congested acres in the centre of the town on which industrial workers had their homes. The three most important factories had been badly damaged, one of them, including the majority of its satellite buildings, being completely destroyed.

The second major raid and the heaviest of the month was against Hanover on the 8th when the R.C.A.F. sent out their largest force since early June. A very large percentage of aircraft despatched attacked the targets, with the Canadians showing a slightly greater proportion than the average for the complete raid. Six of our aircraft fell victims to the chopper.

Thirty or more searchlights operated independently around the target but defences generally were much heavier against a diversionary attack which was made on Bremen. There, an aerial flarepath was laid in anticipation of a heavy raid with the result that, at least for the early part of the affair at Hanover, the bombers arrived and left with clock-like precision and little or no attention from defending fighters. However, as the true situation became evident the night fighters scurried from Bremen to intercept the at-

tackers and several combats took place.

One aircraft from the Leaside Squadron had an interesting evening and the rear gunner, WO R. K. Saunders, reported as follows:

We were on our bombing run when I sighted a Ju. 88 making a turn to attack at approximately 700 yards on the starboard quarter. I took a sight and fired a five second burst at approximately 600 yards range. The enemy returned the fire which went well below our own aircraft, and then broke off, at about 500 yards, to the port beam down. The attack was so short that there was no time to take evasive action before the enemy broke away.

After releasing our 4,000 pound bomb, we were just turning on to our new course when I sighted a twin-engine aircraft about 500 yards below us, travelling in the opposite direction. When approximately 900 yards from us, the e/a turned into fine starboard quarter and climbed to our height of 18,500 feet. Since it was then silhouetted against the target fires I was able to identify it as a Ju. 88. I warned the pilot to be ready to take immediate evasive action. As the enemy closed in I took a sight and when the range was about 600 yards I fired a burst and at the same time gave the pilot "Corkscrew starboard".

The first burst, fired while our aircraft was still steady, enabled me to get my sights correctly positioned on the attacker and hold them there through the whole of the attack.

The pilot, Flt.O. W. C. Fisher (U.S.A.A.F.), took violent evasive action and the e/a opened fire a few seconds later but its tracer went wide. We continued to corkscrew and the enemy attempted to follow. As it closed in I continued to fire. When the enemy was about 250 yards away, I saw the outer tip of its port wing break off and the port engine burst into flames. The e/a then dropped its wing and dived towards the port quarter at an angle of about 70 degrees, leaving a trail of thick brown smoke in its wake. Upon striking the ground the e/a blew up.

When another kite piloted by FS A. L. Olsson of the Thunderbirds was attacked south of Osnabruck by a Ju. 88 defensive bursts by the rear gunner, FS K. M. Pulham, blew up the attacker. All crew members saw the explosion.

The ground haze which lay over the target area made assessment difficult but the majority of crews reported a good concentration of bombing inside the target indicators, though late arrivals showed a tendency to scatter slightly. Several explosions occurred, one of which was particularly large and was followed by a heavy pillar of thick black

smoke. This raid is one example of a case where returning crews greatly underestimated their effectiveness, and is also an instance of just how much can be accomplished by a really successful concentrated attack. In the built-up area 2,500 acres were completely devastated and scarcely a building in the centre of the city remained intact. Despite the fact that Hanover had been raided many times and a total of 9,500 tons dropped the effects of this raid were more serious than all the others combined.

S/L M. Schneider, a veteran pilot, was lost on this raid with his crew composed of F/L R. T. Botkin, F/Os F. W. Bilson and J. G. Taylor, P/O C. A. Farnum, FS J. A. Hucker and Sgt. J. J. Connolly. Farnum is known to be a prisoner of war.

Ten days later a smaller raid in which only three of our squadrons participated was carried out on Hanover. A very high percentage of our aircraft attacked the primary with smaller losses than usual. Cloud conditions over the target were unfavourable so that accurate assessment was difficult but one large explosion was reported as having been visible from aircraft attacking Duisburg 140 miles away. Once again night fighters, operating with searchlights and using flares, were active though few combats were reported. Later reports show that the raid fell most heavily on the industrial outskirts of the city and, as a result, Hanover may be written off as a serious producer of war material.

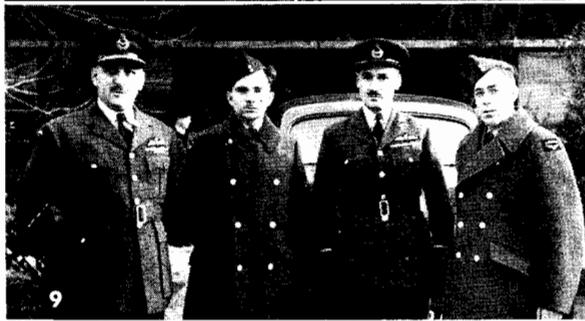
F/O G. J. South, a veteran pilot, won his D.F.C. on this raid when his aircraft was coned by searchlights and hit by flak. When hit, the aircraft went into a vertical dive and the loss of altitude disrupted the timed run. South exercised excellent judgment in retaining his flares to avoid leading the attack astray. Although wounded in the left arm, he refused first-aid treatment and carried on to the aiming point and dropped his bombs. After leaving the area, South's injuries were treated and he continued to pilot the aircraft which was later attacked by an enemy fighter. After an ex-

change of fire, the enemy aircraft was driven off. F/O South succeeded in landing his aircraft safely.

Two nights later when an attack of about the same size had Leipzig as its objective only two R.C.A.F. squadrons operated, under thoroughly bad weather conditions which included very severe icing and electrical storms. Bombing results were nothing to boast about on this, the first attack of the war on one of Germany's chief commercial and manufacturing cities. Fortunately, losses were extremely low. One experienced crew captained by P/O K. R. Wood, an Australian, was among those which did not return. Other members were F/O J. N. R. Redpath, WO O. O. Johnson, FSs W. H. Hedley and E. C. Brunet and Sgts. E. W. Bundy and J. H. Lovelock. Johnson has been reported to be a prisoner.

On the 7th the same squadrons had had a part in a disappointing raid on Stuttgart. Weather was unfavourable throughout and bombing was scattered and inconclusive but again losses were extremely small possibly because of the inefficiency of the defences, which were limited to inaccurate flak. Stuttgart seemed to have a charmed life as despite frequent raids it had suffered practically no extensive devastation.

The only other raid in which R.C.A.F. units were involved in force during October had been against Frankfurt on the 4th following a daylight attack by U.S.A.A.F. Fortresses. The route was covered by 10/10ths cloud to within 40 miles of the target which stood out clear and distinct. In all, 11,000 tons of H.E. and incendiaries rained down and started many large fires. As the raid progressed these fires merged into one blanket of seething flame that covered the entire east end of the town, including Offenbach and Ober-rad. Huge pillars of black smoke rose to a great height, especially from the East Harbour where the majority of the quayside buildings were either destroyed or badly damaged. For 200 miles on the return journey the tired crews were cheered by the glow of the fires. Other crews taking



(1) F/O E. M. Aldred of Regina. (2) FS J. Mangione, D.F.M., of Ottawa. (3) S/L G. B. Ellwood, D.F.C., of Portage la Prairie. (4) P/O C. A. Selfe, D.F.M., of Vancouver. (5) F/O A. C. Sondergaard, D.F.C., of Ponoka, Alta.; F/O T. Doubassoff of New York. (6) S/L A. V. Reilander of Regina. (7) F/O T. H. Donnelly, D.F.M., of Toronto. (8) F/O P. E. Marchildon of Owen Sound. (9) A/V/M C. M. McEwen; Cpl. M. Marquet, G.M., of Meadow Lake, Sask.; A/C A. D. Ross; LAC M. M. McKenzie, B.E.M., of Tecumseh, Ont. (10 and 12) Debriefing bomber crews. (11) F/L L. N. McCaig, D.F.C., of Ormstown, P.Q.; FS E. S. Hawkes of Leamington; Sgt. G. R. Ketcher (R.A.F.).



(1) THUNDERBIRD SQUADRON TYPES—Sgt. R. S. Goodenough (R.A.F.); FS L. H. Sims (R.A.F.), Sgt. D. L. Brewer and F/O R. E. Luke (R.A.F.). (2) F/O W. R. Shellington, D.F.M.; F/L J. D. Watts, D.F.M.; F/L M. Roach, D.F.C., D.F.M.; F/O L. G. MacDonald; P/O G. Y. Lebel, D.F.C. (3) P/O J. A. R. Tremblay, F/O J. Jankun, F/O G. H. Daymond. *Kneeling*—F/O J. A. R. Coulombe, D.F.C. (4) F/O E. E. Kirk, Sgt. C. Robertson; Sgt. D. R. McEvoy, D.F.M.; F/O F. Hagen.
 (5) Aachen, Germany, May 1944.

part in a simultaneous diversionary raid on Ludwigshafen reported that, after all our bombers had left, the conflagration in Frankfurt assumed even more spectacular proportions as explosions continued and burning debris ignited new fires.

Defences at Frankfurt were unusually ineffective, with numerous searchlights waving aimlessly, flak feeble and poorly directed, and what night fighters were in evidence showing little or no offensive spirit. Five R.C.A.F. aircraft were missing.

During the month, W/C J. A. D. B. Richer replaced W/C J. M. W. St. Pierre as C.O. of the Alouette Squadron and S/L P. G. Powell, D.F.C., gunnery leader of the Vancouver Squadron was awarded the D.S.O.

November

November was a particularly active month for Bomber Command with ten major raids, in which large numbers of Canadian kites participated. Four of these on the 18th, 22nd, 23rd and 26th were directed against Berlin in the opening phase of a series which was to continue for two and a half months. On these raids, together with another on December 2nd, approximately 2,500 aircraft took part and dropped over 8,600 tons on the heart of Nazidom. Despite variable weather conditions, extremely active defences by both flak and numberless night fighters, losses in the five raids were only about four per cent. of the aircraft despatched, a particularly notable feat for such a distant target.

Other objectives during the month were Cologne and Dusseldorf on the 3rd, Modane on the 10th, Cannes on the 11th, Mannheim on the 17th, Leverkusen on the 19th and Frankfurt on the 25th. Diversionary raids were also staged against Mannheim-Ludwigshafen on the 18th and Stuttgart on the 26th to distract the attention of Jerry night fighters from the main efforts against Berlin. R.C.A.F. contributions to the major raids on Cologne, Modane and Mannheim

(17th) were small. A veteran crew composed of Lt. J. M. K. Pederson (U.S.A.A.F.), FSs R. H. Larson (pilot) and R. Mutch and Sgts. J. B. Errington, E. F. Uren, J. P. Dube and T. Thomson was lost on the Mannheim raid. FS G. J. Partridge, on his first operation as second dickey, was also lost. In a moderately successful attack on Stuttgart W/C A. C. Mair, who had recently taken over command of the Goose Squadron from W/C W. D. S. Ferris, D.F.C., went for a Burton. He was succeeded by W/C D. S. Jacobs, D.F.C. An award of the D.F.C. to Mair was announced in December.

The R.C.A.F.'s contribution to the Berlin raid on the 18th was small as most of our strength was pointed towards the diversionary raid on Mannheim. The Berlin attack was carried out using blind bombing tactics through 10/10ths cloud at about 12,000 feet. Unfortunately the markers were badly scattered and, though several very heavy explosions were seen, an accurate assessment could not be made. Generally speaking, the results were probably spread over the whole city rather than in one particular section. There were no R.C.A.F. losses.

Four nights later a very strong foray, of approximately twice the size of that of the 18th, set out for Berlin. This time the Canadian Group contributed a heavy percentage. Again it was a blind attack though occasional glimpses were had of the objective through gaps in the almost solid carpet of cumulus clouds which had covered the route all the way from the Dutch Coast. As on the previous occasion, the night fighters were busy elsewhere but flak batteries put up a terrific barrage. Despite icing along the route, a very high percentage of the aircraft pressed home an attack which produced a number of large explosions and one particularly great one, that lit up the clouds for miles around and shot up a pillar of flame and smoke to 15,000 feet. The accurate grouping of the sky markers and the smoke and flame which burst through gaps in the clouds clearly showed this to have been a good effort despite difficult

bombing conditions. The concensus of opinion was that Berlin had been well and truly pranged.

The experiences of a Goose Squadron Lanc piloted by F/O W. B. Stewart, with P/O G. E. Mallory, F/O W. C. Burns, FS R. D. Ochsner, Sgts. J. Bray, R. H. Rolph and N. Varley as crew, were reported as follows:

On the homeward journey, both gunners reported e/a and ordered evasive action. When avoiding a third enemy attack by a corkscrew the aircraft went into what could have been a high speed stall since A.S.I. indicated 210. The aircraft then spun to the starboard side with all four engines cut and dived from 18,000 to 13,000 feet when it recovered from the spin to the starboard and immediately went into another to port. Pull out from this spin was made at 8,000 feet in 10/10ths clouds. On recovery the aircraft continued to lose height down to 5,000 feet. At that altitude, control was maintained providing no violent corrections were made. The WAG was ordered to obtain a fix when 20 miles from the enemy coast, but he was unable to do so, and the enemy coast was crossed on DR at 4/5,000 feet. Navigator did a fine job. Height was again gradually lost and the English coast was crossed at 2,500 feet. The crew were then ordered to be prepared to bale out as the captain did not think he would be able to land safely. After a further examination of position, it was decided that with extra careful handling the aircraft could be landed, and so it was done.

The following night saw another attack on Berlin, slightly smaller than that on the 18th, in which the Canadian squadrons had a small part. Weather and visibility over the target were somewhat better than on the previous nights and with well-concentrated bombing, the fires and explosions, interspersed among those still burning from the previous night, were gratifyingly large. Smoke billowed up to 12,000 feet and the glow of fires was visible for 150 miles. Defences consisted of quite intense light and moderate heavy flak and hordes of night fighters which darted among the bombers in search of prey. The cloud formations hindered the searchlight batteries but numerous strings of fighter flares both on the route and over the aiming point were in evidence. F/Ls H. K. Lefroy, C. W. Cole, D.F.C.,

and R. A. Gardiner, D.F.C., F/O W. J. Lawrence, P/O P. J. Scott, and FSs J. G. O'Dell and J. G. S. Kavanaugh, members of a veteran crew were lost on this raid.

On the 26th the fourth attack on Berlin, and the last of the month to which the Canadians contributed, was made. When the bombers arrived fires from the earlier attacks were still burning. These, combined with carefully dropped markers and well concentrated bombing, soon produced a conflagration in the centre of the target. Defences generally were strengthened, especially search—lights and light flak, while heavy flak was moderate to intense. In the early stages there was little fighter interference over the target, though on the homeward journey Jerries were very active over Frankfurt.

FS P. W. Dennis and Sgt. J. H. L. Quesnel, pilot and rear gunners of an aircraft of the Leaside Squadron, were awarded the D.F.M. for this raid. The citations read in part:

FS Dennis has completed numerous sorties and has displayed great skill, determination and devotion to duty. One night in November, 1943, he piloted an aircraft detailed to attack Berlin. Whilst over the target area his aircraft was attacked on three occasions by enemy fighters. Nevertheless, he skilfully evaded the enemy aircraft and successfully attacked the target, afterwards flying his badly damaged aircraft to base.

As rear gunner, Sgt. Quesnel has taken part in several sorties and has proved himself to be a cool and reliable member of aircraft crew. During a sortie one night in October 1943, his aircraft was attacked by enemy fighters. In the engagement Sgt. Quesnel fought with great resolution and destroyed one of the attackers.

On another occasion in November 1943, his aircraft was attacked three times by enemy fighters. His turret was rendered unserviceable but he coolly directed his pilot's combat manoeuvres and the attackers were evaded.

The R.C.A.F. squadrons' contribution to the diversionary raids, which coincided with the Berlin attacks on the 18th and 26th, was much larger than their participation in the major forays. On the 18th they formed 25 per cent. of the raid on their old friend Mannheim-Ludwigshafen,

where the first waves were able to pinpoint their objectives and verify the accuracy of their bombing.

Weather on the route was only fair and many aircraft experienced icing in varying degrees. Despite somewhat scattered markers and a general ground haze bombing was effective and in one place four square miles were covered by a solid carpet of fire. Many kites attacked an alternative target when weather conditions made them late over the twin cities of the Rhine.

On the diversion to Stuttgart on the 26th, P/O H. W. Mitchell, skippering a Bison Squadron kite, won his D.F.C. when one engine went u/s over 100 miles before he reached the target. Continuing on three engines, he pressed home the attack despite very heavy fire from ground defences. His bombs gone, he turned homeward and, nursing along his three engines, finally arrived at base.

On the 19th the R.C.A.F. again formed a fairly large part of a medium-sized foray against Leverkusen which was carried out over 10/10ths cloud along most of the route and over the target. Assisted only slightly by scattered markers the attack was not a great success though the glow of fires in the target was visible for 60 to 70 miles after our kites had left the aiming point. Moderate flak was in evidence but the effectiveness of defending searchlights was nullified by the clouds.

Six nights later the Canadians formed a larger part of a moderately strong raid against Frankfurt. Again icing was prevalent and both route and target areas were obscured by thick cloud cover, which in some instances extended up to 20,000 feet. The target indicators were scattered and, although some fires and one very large explosion were observed, the concensus of opinion was that the attack was abortive. R.C.A.F. losses were moderately heavy.

In contrast, one of the most successful raids of the month was that on the 3rd against Dusseldorf, Germany's third largest inland port, when a major force with a large

number of Canadian aircraft was despatched. The regular autumn cloud cover was not as heavy as usual and over the target visibility was excellent. As a result many kites were able to pinpoint, which, coupled with accurate placing of markers, very slight night fighter defence, ineffective searchlights and only moderate flak, produced an excellent result. Several large explosions were noted and smoke rose to a height of two miles from fires which were visible from the Dutch coast.

Considering the very heavy damage previously inflicted, the results of this raid were extremely good. Over 25 per cent. of that part of the business and residential sections which had previously escaped annihilation was seriously affected. In addition, certain factories, which had been of sufficient importance to warrant rebuilding after earlier blitzing, were again flattened. Following this raid devastation in Dusseldorf was on so vast a scale that the city need no longer be considered as a first class target for further heavy forays for some time to come.

On the night of the 11th the Canadian Group contributed to a small force of heavies which set off in bright moonlight for the French Riviera. The marshalling yards at Cannes, an important link in the Nazi line of supply to Italy, were the specific objective. Under a completely clear sky over a well-chosen and difficulty-free route the R.C.A.F. Lancs and Hallies swept along, dropped their eggs, and returned safely. Only very slight defences, limited to light flak, were encountered throughout the journey.

The good weather conditions continued over the target and the beautiful Cote d'Azur was clearly visible in the moonlight. This, combined with accurate placing of the target markers, set the stage for a perfect attack. The bomb aimers rose to the occasion. One by one they dropped their eggs in rapid succession on the pinpointed target. Many explosions, several of them quite large, cheered the crews on their homeward flight.

December

In the last month of 1943 the onslaught on Berlin was continued with four of the six major raids having the capital city as their objective, on the 2nd, 16th, 23rd (when the R.C.A.F. Group did not participate) and 29th. A raid on Leipzig was carried out on the 3rd, and on the 10th Frankfurt and Mannheim were visited. It should be noted that on the last raid on Berlin, the R.C.A.F. Group despatched the largest number of aircraft in their year's history, with virtually every squadron represented. Weather conditions were just about what might be expected of December with the targets on three occasions completely obscured, while for one period of 13 days all operations had to be scrubbed. But if the weather limited operations, when the heavies did take off the results with one exception were eminently satisfactory, due without a doubt to the uniformly high standard of the work of the pathfinders, on whose accuracy the value of present-day bombing so largely depends. If for any reason the P.F.F. are off the beam on a raid, the chances are 20 to 1 that the foray will be entered in the debit column, and perforce charged to experience.

On the month's first effort the weatherman was kind as clouds decreased along the route until only thin low stratus, which later gave way to ground haze and smoke, partially obscured the aiming point in the Nazi capital. Some icing was encountered on the well-marked route, but losses and early returns were not unduly heavy. The generally good visibility favoured our crews so that, when the kites left, ten square miles of Berlin were in flames after an extremely concentrated attack. The raid produced a number of large explosions from which smoke rose to over 12,000 feet and the glare was clearly visible at a distance of 200 miles.

The moderate R.C.A.F. representation encountered strong defences by both light and heavy flak, the latter being notably intense, while a wide belt of searchlights completely surrounded the city. Night fighters, while in evi-

dence, were only moderately aggressive and seemed to confine their efforts to bedevilling one or two of the crews, who got rather more than their fair share of such attention. This is borne out by the raid report of WO J. A. R.

Coulombe, pilot of an aircraft from the Thunderbird Squadron:

While over the target this aircraft was coned by 50-70 searchlights from 2024 to 2029 hours during which time we were attacked five times by e/a and damaged by flak. The MU/AG first sighted a Ju. 88 on the port quarter down at 400 yards range and gave combat manoeuvre corkscrew port. The fighter immediately broke off his attack. No exchange of fire by either aircraft. The second attack developed from starboard quarter down and MU/AG saw e/a at 400 yards, so gave combat manoeuvre corkscrew starboard. Again fighter immediately discontinued his attack and broke off at port beam down. No exchange of fire. The third attack came from the port quarter down at 400 yards range. Again MU/AG gave combat manoeuvre corkscrew port and e/a broke off his attack to starboard beam down. Fourth attack developed from starboard quarter down at 400 yards range and MU/AG once again gave combat manoeuvre corkscrew starboard and again the fighter discontinued his attack and broke away port beam down. The fifth and last attack developed from port quarter down at 200 yards and MU/AG gave combat manoeuvre again corkscrew port and at the same time opened fire. E/a came in to 60 yards range and broke away to port beam above giving MU/AG a sitting target. Tracer appeared to enter belly of e/a; sparks and tracer were seen to ricochet off fighter which dived steeply and was lost to view. During this attack our aircraft sustained damage to port inner engine and the R/T was rendered u/s. The rear gunner was completely blinded by the blue master and other searchlights throughout these five attacks. During all these attacks an Me. 109 was sitting off at 1,000 yards dropping white fighter flares. Just as the Ju. 88 opened fire on his last attack an FW. 190 was seen by the pilot and engineer off on the port bow up at 400 yards coming in for an attack. The cannon fire from the 88 caused the FW. to break off his attack to the port beam and down at 100 yards range. He was not seen again. The MU/AG claims this Ju. 88 as a probable. The port tire, port outer tank and hydraulic system were damaged.

Coulombe, who has since been commissioned, was awarded the D.F.C. for his part in this action.

A fortnight later the same squadrons attempted to prang

Berlin through complete cloud cover. The eggs dropped by the Lancs and Hallies sent a column of smoke up through the clouds to 8,000 feet. There was some night fighter activity and in the combats one Jerry was destroyed and another claimed as a probable by R.C.A.F. gunners. This raid was marred, however, by the loss of F/O W. J. Maitland, D.F.M., who was just starting his second tour of operations with the Goose Squadron. As a sergeant during his first tour, Maitland had done yeoman service and won his gong.

It was not until the 29th, in the closing days of the year, that the R.C.A.F. again participated in a raid on Berlin. On this occasion, a greatly augmented force took off and found the same conditions of blind attack as had characterized the mid-month operation. But whereas on the 16th the bombing had been concentrated at first and deteriorated later, accurate work throughout this raid produced infinitely better results. The customary 10/10ths cloud covered both the route and the target area but the excellent grouping of sky markers by the pathfinders and the reflection of numerous fires seen through the clouds made a better target than is ordinarily the case under such conditions. There were several noteworthy explosions and smoke rose three miles in the air so that when the weary crews turned homeward a glowing reflection of their work lighted their way for over 200 miles. The success of the raid was confirmed by the Berlin radio which described the damage as tremendous.

Flak defences were more intense than usual, but there was a noticeable absence of night fighters. However, the mere absence of night fighters doesn't make a bomb raid a piece of cake as the following excerpt from the Lion Squadron record book will show:

P/O R. C. Deegan, making his 15th operational trip, by his exceptional skill and untiring efforts was responsible for bringing back a badly crippled bomber and perhaps saving the life of all the crew. His aircraft was a little better than half way to the target and flying at about 18,000 ft. when the port outer engine failed and went completely u/s.

Difficulty was encountered in maintaining height, so the bomb load was jettisoned safe and course set for base. Ten minutes later the rear gunner, FS P. A. Dubois, warned the pilot that night fighters were dropping flares. They continued to do so for the better part of an hour, until the Zuider Zee was reached. At that point a night fighter finally succeeded in picking up the Halifax and attacked from starboard and below. The rear gunner gave evasive action as soon as e/a closed to within 1,000 yards, and after the manoeuvre the Jerry was lost to view. Soon after, the starboard inner engine went completely unserviceable and the pilot was faced with the task of reaching home on two engines. This further reduced height, and as a result all bomb containers and loose equipment were jettisoned over the Dutch coast. During the confusion which followed, the trailing aerial was cut off by the bomb doors, making it impossible for the W/Op, FS J. A. Smith, to obtain fixes and send out messages. In an attempt to repair the set, he did a masterful job in erecting a spare aerial. Shortly after leaving the Dutch coast the port inner was on the verge of packing up, and all the way across the North Sea at 5,000 ft. the pilot nursed two engines along, while the aircraft laboured and crawled through the air at 110 m.p.h., almost stalling speed. But the pilot's perseverance and perspiration were rewarded when an aerodrome appeared below soon after crossing the English coast. P/O Deegan immediately dove straight in for the runway, and just as he touched down the port engine faded completely necessitating a one engine landing, which was as smooth as if he had all four engines available. P/O Deegan in expressing his appreciation to the remainder of the crew lauded the work and co-operation of everyone concerned, and particularly praised the work of the Wireless Operator and the Flight Engineer, Sgt. J. C. Corbiell.

The first raid on a target other than Berlin was on the 3rd when Leipzig was the objective for a more successful attack than the initial mission in October. In Leipzig are located the largest railway station in Europe and three huge marshalling yards, each capable of handling several thousand railway wagons a day. For these reasons the city is of particular importance as one of the main junctions on the supply route to the Eastern front. It also has extensive aircraft factories though these are mainly situated outside the city proper and do not constitute a compact group of targets. The R.C.A.F. Bomber Group made a sizable contribution to the major force that set out. Led by the pathfinders

who were right on the beam that night, the bombers ploughed along above the clouds, until on arrival at their destination they could discern through gaps a concentration of flares that was reported by many crews to have been the best they had ever seen. This concentration was maintained throughout the attack and, despite noteworthy night fighter activity and moderate heavy flak, the attack progressed according to schedule. Searchlights were ineffective and only meagre light flak was sent up. All of which, when combined, provided the basis for a satisfactory prang. Soon a large area was carpeted with merging flame from which great quantities of smoke billowed. Many large explosions lit up the sky for seconds and the reflection of the fires was visible for 200 miles as the crews took their weary way home.

The next day at noon a P.R.U. aircraft took pictures of the city and found the whole centre of the town burning, with clouds of smoke still rising to a height of four miles. Most of the old town, the centre of the city's civic life, was laid waste. Industrial damage was also particularly heavy, including the destruction of the huge buildings of the Leipzig World's Fair used during the war by the Junkers Co. For years the German boast had been that one of these buildings had "the largest unsupported roof in the world". Now the statement became literally true, but scarcely in the sense of the original claim. Three hundred and seventy five acres of densely populated tenements were also reduced to rubble. Fires got completely out of control and assistance had to be asked from Berlin. In view of all this it is no wonder that Leipzig was relegated to the status of a second-class target. Our losses for the attack were no heavier than average, though two crews under veteran pilots, P/Os S. R. Kelso and F. W. Hingston of the Bison Squadron, did not return.

P/O R. K. Metheral of the Moose Squadron was awarded a D.F.C. for his courage on this and other occa-

sions. The citation reads:

This officer has completed many sorties and has set a fine example of skill, courage and devotion to duty. His determination to complete his missions successfully has always been evident. This was well illustrated on a recent occasion when detailed to attack Leipzig. On the outward journey, with the target many miles distant, one of the bomber's engines failed. Although some height was lost P/O Metheral went on to make a successful attack and afterwards returned safely to base.

The month's fifth major effort was to Frankfurt on the 20th when a large force set out under weather conditions of only 6/10ths cloud. A really good effort by the pathfinders would have assured a perfect attack, but even the best, which the P.F.F. undoubtedly are, have their off-nights and this raid was one of them. The majority of the regular bombers saw few if any route markers and the target indicators were badly scattered. Consequently the eggs were laid over a wide area by the first waves. But in the later stages the precision became greater and large fires were observed, with one sizable area in the centre of the town completely carpeted. One terrific explosion, which lit the sky for several seconds, was seen by nearly all crews. In this raid stores of food and other commodities suffered severely. Extensive damage was also inflicted on railway property, the courts of justice and customs house, in addition to a considerable amount of destruction of residential and business property generally.

Though heavy flak was only moderate, night fighters were out in force and several combats took place. Searchlights were also most active and a great belt was thrown up from Mannheim through Mainz to Frankfurt. Hundreds of night fighter flares were, also used by the defenders. On the whole the raid may be described as a good effort which might easily have been better. Among those lost were two crews under the experienced captaincy of P/O L. K. Brager and F/O R. J. Lacerte. Lacerte was taken prisoner.

Here at the year's end—albeit only half way through the scheduled series—may be a good time to evaluate the damage suffered by the German capital to date. This damage was especially important not only for its dislocating effect upon Nazi economy but also from the psychological viewpoint because the invulnerability of Berlin had always been stressed by German propagandists. We need not rely on our reconnaissance photographs alone for proof of Bomber Command's success against Berlin but have only to hearken, to the frenzied bleats of Goebbels' minions.

The greatest devastation extended over an area of eight square miles from the east side of the central district to Charlottenburg on the north-west and to Wilmersdorf on the south-west. In all, 2,800 acres or one-fifth of the fully-built-up area had been obliterated. The havoc was wreaked not only on industrial and commercial buildings, public utilities and transportation services which bore the brunt of the attack, but also on more than 200 state or public buildings. In addition approximately one-half the hutted barracks of the military academy and the artillery school suffered severely.

During the month W/C A. N. Martin replaced W/C J. P. McCarthy, D.F.C., in command of the Tiger Squadron.

CHAPTER III

MEDITERRANEAN BOMBING OPERATIONS

A CANADIAN medium bomber wing commanded by G/C C. R. Dunlap, which had been based in North Africa as part of the Desert Air Force for some months before this narrative opens, continued to operate for five weeks before being returned to the United Kingdom in October. The Snowy Owl, Tiger and Alouette Squadrons all equipped with Wellingtons made up the wing and throughout their tropical service established an enviable record which drew forth unstinted praise from their Commanding General, Lt. Gen. Carl Spaatz, U.S.A.A.F.

During the months spent in North Africa, the squadrons were extremely active and the last five weeks were no exception. Not only were they busily engaged in their regular bombing activities but they were used extensively for the dissemination of leaflets in the propaganda war to persuade the Italians to cease fighting. From south to north, from Sicily to the Alps they fared dropping their persuasive missives throughout the kingdom. In view of the number of places over which these leaflets were showered and the fact that the sorties became more or less routine, no attempt has been made in this story to trace the history of their dropping.

But the wing's bombing efforts made up one of the most concentrated series of attacks ever undertaken by a

small force. From end to end of Italy they ranged, and it was seldom that a squadron got a stand-down! They were eternally on call and night after night the Wimples ranged through the dark Mediterranean sky in a sustained attack which had no little part in the final capitulation of Italy. Targets were many and varied and included airfields, roads, troop concentrations and all the hundred and one tactical targets which spring up virtually over night in the path of an advancing army. Several objectives were attacked more than once, notably Formia five times, Battipaglia thrice, and Viterbo twice. With the exception of three forays, undertaken by the wing on October 3rd, 4th and 5th, all raids were night operations.

Evaluation of the success of the raids made by the R.C.A.F. wing in the assault on Sicily and Italy is difficult as they were almost all carried out as part of a comprehensive strategy involving the bombing of the same target by different forces within the space of a few hours. Suffice to say, that the air offensive throughout the campaign was most successful and none contributed more than the Canadians. And the schedule of operations carried out during the last five weeks of their participation in the Mediterranean theatre was particularly exacting. To maintain the necessary standard of serviceability and to produce the maximum effect from the somewhat limited resources at the disposal of the Commander-in-Chief required the co-ordinated effort of all concerned. That this was achieved is attested to by the fact that the Italians demanded an armistice and the stubbornly fighting Nazis were driven up the peninsula foot by foot, almost inch by inch. Slowly but inexorably the pressure was applied and the Huns forced to retire until at the time of writing they hold but a small portion of the kingdom.

The story of the wing for the last month of their operations, terminating in the attack on Grosseto landing ground on October 5th, is the story of the army in the invasion of

Southern Italy. Following the conquest of Sicily the armies wasted little time in carrying out preparations for an advance on the mainland. In this, as in Sicily and the majority of other recent operations, the forces were grouped by adaptability rather than by nationality. Thus we have U.S.A.A.F., R.A.F. and R.C.A.F. aircraft working together against the same targets.

The softening-up process against Italy began with land-based artillery fire across the Strait of Messina, aided by naval bombardment and bombing expeditions by the combined air forces right up to the landing on the morning of September 3rd. The plans which had been formulated for the air forces in the landing on Sicily were equally applicable to that on the mainland and may be summarized as follows:

(1) The neutralization of enemy air forces by air bombardment.

(2) Attacks on enemy communications and movements to prevent reinforcements and supplies reaching the assault areas.

(3) The provision of air protection over the assault convoys, the assaults themselves and subsequent operations.

(4) The assistance of operations by air attacks.

In the first two of these the R.C.A.F. medium bomber wing was directly interested and in the fourth to a slight extent, even if the original purpose of a medium bomber is leagues removed from contact flying.

September opened for the R.C.A.F. with a moderately successful attack on the marshalling yards at Aversa, a short distance north of Naples. Bombing was scattered. The night of the 3rd the Wimpies dropped their bomb loads on Capodichino, an airfield near Naples, in a renewal of the earlier blitz on landing grounds. The attack was successful and after the bombers withdrew the field was cratered and hangars damaged.

The night of the 4th the Canadian Wellingtons followed

up an abortive day attack by Lightnings on a satellite of Grazzanize airfield, a fighter base in the Naples area. The Lightnings had been unable to find the target and bombed an alternative so it was especially important that the night work be accurate. As is so often the case when necessity drives, the bomb aimers came through and the airfield got a thorough pasting in the course of which an ammunition dump exploded. A second attack by Lightnings the following day completed the destruction.

It was two nights before the R.C.A.F. ventured out again and then they put up a good effort against the marshalling yards at Battipaglia, during which they dropped many sticks bang on the yards and left the place cloaked in smoke and flame. The success at Battipaglia was repeated the following night at Viterbo airfield where, despite the fact that the flares were too low, many hits were registered. The combined results of this and an earlier and very successful daylight attack by Americans, were most heartening as hangars and administration buildings were reduced to flame and rubble. On the night of the 8th the Canadian effort was divided and five targets, Battipaglia, Bastia, Gaeta, Forio and Livorno were attacked. Battipaglia was the main R.C.A.F. target and flame-pierced smoke from accurate bombing soon covered the marshalling yards. Inconsiderable forces of the R.C.A.F. joined the other raids.

Formia was the Canadian wing's main target on the night of the 10th, after a 24-hour lull following the signing of the armistice with Italy. Very accurately placed bombs fell on the well-illuminated target in the first Canadian assault on the Nazis alone in Italy. A bomber base at Frosinone was pasted the following night when a good-sized force attacked in two waves. Despite the fact that the flares were late and the Nazis threw a smoke screen over the field, dispersed aircraft were successfully bombed and burst into flames.

The following four nights saw communications leading

to the beachhead attacked. Roads around Castel Nuovo, Pompeii, Battipaglia-Eboli and Torre Annunziata were the targets in the order named. The Canadian assaults were part of a larger pattern which included heavy and medium bombers and fighter-bombers, all of which took their turn in preventing reinforcements being rushed up to make even more tenuous the Allies' hold upon their Salerno beachhead.

September 16th and 17th saw a change of target for the Canadians with attacks on Cisterna and Cerveteri airfields, fighter bases for the *Luftwaffe*. In both instances the raids were eminently successful with Cisterna reported as a mass of fire and many hangars hit at Cerveteri, many dispersed aircraft burning on the ground and the administration buildings enveloped in a blaze that was visible for 50 miles.

It was Viterbo, a bomber base, that copped it next when on the 18th the Wimpies followed up a day attack by For-tresses with a well-planned and ably-directed blasting.

After a four day rest, attacks on enemy communications, which had in the meantime been harassed by other units of the D.A.F., were resumed by the R.C.A.F., when the northern approaches to Benevento, including a railway bridge, were the objectives. Results were uniformly good, but the bridge, though damaged severely, was not completely destroyed.

The Wimpies added their share to several attacks on Bastia, the chief evacuation port in Corsica, when on the night of the 21st they dropped 125 tons on shipping in the harbour. The following night they were back at Formia and when they withdrew, the roads, already badly blocked, were well-nigh impassable.

The next night the marshalling yards and San Giusto airfield at Pisa were the targets with the R.C.A.F. concentrating on the landing ground, the mainland terminus of the air evacuation of Corsica. Both objectives were well plastered. The Livorno bottleneck was taken on during the

night of the 24th in an effort to stem the tide of escapees. Shipping in the harbour was successfully attacked.

Formia was again the target when after a welcome five day stand-down the Canadians, by the light of accurately-placed flares, laid stick after stick bang on the cross-roads to disrupt further the sorely tried Axis communications. Two nights later they were back at Formia to give it another pounding. Civitavecchia, an important rail junction, was blasted on the 3rd when the through line down the west coast to Rome was blocked. Formia was again the target on the night of the 4th when all railway lines were blocked and virtually all road traffic stopped.

On the night of the 5th the R.C.A.F. Wimpies made their last Mediterranean attack when they turned their attention to Grosseto landing ground, on which, it had been reported, fighter aircraft were being concentrated. Many hits were scored on dispersed kites with an even dozen left blazing away merrily as the bombers withdrew. In addition hangars, administration buildings and oil stores received direct hits. It was a fitting end to a period of intense activity during which the R.C.A.F. squadrons had distinguished themselves, not only by the accuracy of their bombing but also by their ability to maintain a concentrated attack throughout a long period.

Shortly afterwards the three squadrons were on their way back to the United Kingdom to rejoin the R.C.A.F. heavy bomber Group.

CHAPTER IV

PREPARATIONS FOR INVASION-BOMBERS

JANUARY 1st, 1944, marked the opening of the second year of operations of the R.C.A.F. Bomber Group, a component of Bomber Command. The twelve months had seen a notable development in the operational efficiency of the squadrons so that with the opening days of the New Year, members of the Group could look forward in quiet confidence to a period of increasing responsibility. In the year to come, the Group, its growing pains past and forgotten, was to come into its own as one of the most efficient fighting units in all the United Nations Air Forces.

Our Lancasters, almost without exception, found complete cloud cover from base to target and back when they attacked Berlin on New Year's night. For the most part they stooged along between cloud layers and as a result were little bothered by searchlights except when the clouds cleared momentarily to allow the Cologne-Kassel-Frankfurt band to break through. Night fighters were not particularly in evidence and flak was never troublesome, yet the raid was far from being an outstanding success.

The target area was completely covered, the tops of the clouds varying from 10 to 18,000, and many of our kites found a further heavy layer above that. Furthermore the pathfinders were having an off night and their work was erratic and scattered. As a result the host of bombers, aver-

aging 12 per minute over the target, returned to their various bases with little concrete knowledge as to whether the hundreds of tons dropped had really achieved the desired result, but quite convinced in their own minds that the raid, considered as saturation bombing, had been largely abortive. Nevertheless, such a weight of bombs dropped on a city like Berlin must have done very considerable damage and the effort therefore was not entirely in vain. F/O T. H. Donnelly, D.F.M., on his second tour of operations, was lost on this raid with his crew, F/O A. J. Salaba, FS W. L. J. Clarke and Sgts. B. S. J. West, R. E. Watts, R. Zimmer and L. G. R. Miller. F/O A. P. Campbell and his crew, P/Os T. D. Gavin and D. N. Thompson, FSs J. B. Dunne and B. Cameron and Sgts. J. Redhead and D. J. Leslie, were also among the missing. Leslie and Thompson have since been reported to be prisoners of war.

An inconclusive raid, such as this, always brings the same result—a return to the same target on the earliest possible occasion. As luck would have it, the return occurred on the following night, when a slightly smaller force of Lancs, leavened with a few Halifaxes, set out again for the capital of Hitler's Third Reich. And again the target area was completely obscured by cloud.

In addition to the cloud conditions, which completely blanketed the route and the aiming point, a considerable number of crews reported icing and frost on the perspex while others ran into an electrical storm. To make matters worse enemy night fighters were out in droves on both the outward and homeward journeys and on the latter were aided by a flarepath from the target to Amsterdam. Many combats ensued and several claims were made. But all the "destroyeds" are not achieved without damage to our own machines as the following report from P/O J. A. McIntosh, a skipper of the Leaside Squadron, whose gunners were Sgts. L. Bandle and A. F. DeDauw, will show. McIntosh was awarded the D.F.C. for this action:

Take-off was delayed 37 minutes while we had the rear turret repaired. By giving the kite the works going out and by taking one short-cut we were able to bomb two minutes later than our scheduled time.

Twenty minutes before we reached the target the A.S.I. and altimeter went u/s, height then about 21,000 ft. I continued climbing and bombed from at least 23,000 ft.

I had just turned for home and had gone about two minutes when the rear gunner yelled "fighter". I was already weaving but really got going then. Just as he gave the warning I felt cannon shells hitting the kite like sledge hammers and saw other tracers hitting the wings and passing by the cockpit. The first few shells did most of the damage. The control column slammed forward when a shell hit the elevator, putting the aircraft into a vertical dive. All this happened inside five seconds as the gunners had hit the fighter and shot him down before he could finish us off.

We were going straight down and by getting both feet on the instrument panel with one arm around the control column and the other hand on the elevator trim I managed, by giving it everything I had, to force the kite out of the dive at about 10,000 feet. I was heading in what I figured was the right direction so I began calling up the crew to see if they were all O.K. When the kite first went into the dive it threw the crew about badly as well as scattering their equipment from one end to the other.

The bomb aimer answered O.K., the flight engineer was beside me with his chute on and mine in his hand. I'd given the order to prepare to abandon aircraft when my controls were knocked out of my hands. The navigator reported O.K. and also the WAG. The rear gunner reported O.K. but there was no response from the mid-upper gunner, so I detailed the WAG to go back and see if he was all right.

When he plugged in he reported the M/U was O.K. but he had become entangled in wires and a foot had got stuck in the shotaway flare chute. He also reported the fuselage full of holes and the floor covered with oil.

Having found the crew were all O.K. I detailed them to ascertain the damage. The rear gunner reported cannon holes in his turret making it unserviceable, the M/U reported his turret also u/s, his hydraulics shot away and many large holes in his part of the fuselage. The WAG reported his wireless set still O.K. but most of his equipment lost; the navigator's equipment was scattered all over the floor but he managed to approximate a course for me. The F/E reported the instruments to the starboard outer u/s except the tachometer. The B/A reported the bomb doors hanging open so I detailed the F/E to try pumping them up. This failed so we knew the hydraulics were gone. Both then tried reaching

the bomb doors from the bomb aimer's compartment but were unable to pull them up.

My compasses were u/s, the rudder controls had jammed and I could get very little response from the elevators. It required both arms around the control column to hold height. The navigator was unable to fix his position so attempted astro despite the instability of the aircraft. His fix put him fairly well on track but with a very low ground speed so I figured there must be more than the bomb doors dragging.

We were now far behind the rest of the bombers and our only chance was to stay in the cloud tops despite the severe icing which was encountered. There were fighter flares dropping around us and the flak positions en route were bursting their stuff at our height but because of the cloud cover the fighters were unable to pick us up.

Despite my being unable to hold the aircraft level my navigator took further astro fixes and kept me on track and away from the defended areas. I was having all I could do to hold the control column up but didn't want to tie it back in case we were attacked again. We had been losing a lot of fuel from the starboard inner tank but by the nay's calculations we should be able to make a base in the U.K.

They ceased dropping flares when we crossed the enemy coast just south of Amsterdam. We continued out to sea about 70 miles when I let down through the cloud, experiencing very severe icing in doing so, but the ice melted when we broke cloud. The aircraft was now becoming very sluggish and only with difficulty was I able to hold any height so the crew were detailed to throw out all our unnecessary equipment and chop out everything possible. This lightened the aircraft and made it a bit easier to control. I then had the crew prepare for ditching while the WAG identified and prepared an S.O.S. message just in case.

We still had plenty of fuel even though we had lost 300-400 gallons, and the navigator was taking me straight for We were losing height but I figured we could still make it. We were at about 400 ft. crossing the coast so I had the WAG fire the colours, and to make sure called up on R/T and told them we were coming in. I used all the runway and felt the aircraft down on our one good wheel. It touched down smoothly and rolled along till about 30 m.p.h. and then settled over on what was left of the starboard wheel, did a half ground loop and stopped. I ordered the crew out immediately with fire extinguishers in case we caught fire, but nothing happened.

Both starboard nacelles were gone; the hydraulics were gone; two large tears were in the starboard mainplane near the dinghy stowage; the dinghy was hanging out; the starboard fuel jettisonsac was hanging out; the tailplane was riddled with cannon and machine-gun fire; the fuselage had five cannon holes through it, three of the shells having

burst inside near the navigator and one had gone right through the rear turret and up the fuselage. There were hundreds of holes in the kite. Every prop blade had at least one hole in it, and one was split right down. The starboard outer oil tank had been riddled and the starboard tire blown off. The guns, ammunition and oxygen equipment had been thrown out.

I then got the story of the attack from the gunners. The fighter, an Me. 110, had attacked from above and from the starboard rear. His first shells raked us from end to end but his last passed under and to port. The gunners both opened fire at the same time as the Jerry and scored hits in his port engine, setting it on fire, and spraying the cockpit. The last they saw of him he was spinning down, burning fiercely. They had definitely got him as the F/E also corroborated the story. The whole attack lasted about five seconds.

P/O T. B. Spink of the same squadron also had an encounter and he too won his gong:

We were attacked by a Focke-Wulf Kurier. The attack took place on our way in to the target. The e/a opened fire from ahead, slightly to starboard and about 300 yds. above. I immediately made a diving turn to starboard and the attack was broken off. A second attack to port was attempted by the e/a after we resumed our original course. This attack was not carried out as I immediately took evasive action. About 15 minutes later when certain we had lost the e/a the crew were detailed to examine the aircraft for damage. The navigator reported his oxygen had been cut off The engineer reported a bullet through the instrument panel which damaged the oxygen regulator causing a leakage which he estimated would cause total loss of oxygen in approximately three quarters of an hour. The bomb aimer reported the electrical bomb release u/s and the M/U and rear gunners several holes through the rear of the fuselage and tail. By this time the navigator estimated we were one hour from the target. Having arranged with the WAG to release our 4,000 lb. bomb manually over the target and to collect all the oxygen bottles and bring them to the navigator I decided to carry on and hope our oxygen supply would last until reaching the target.

The navigator then made a splendid job of navigating to the target although we were flying through 10/10ths cloud in freezing conditions with static lightning flashing on the windscreen. When approximately five minutes from our target the oxygen supply gave out completely but we managed to carry on at 20,000 to complete our detail except for dropping the incendiaries which would have had to be dropped individually. This I felt could not be done under the circumstances. Imme-

diately after leaving the target area we descended to 16,000 ft. and managed to stay there until reaching the enemy coast although every member of the crew was severely affected by the lack of oxygen. Having crossed the enemy coast we let down to 6,000, which height was maintained until crossing our own coast. Due to the condition of the weather and strain caused from flying without oxygen I found it necessary to land before reaching our own base.

The pathfinders, apparently in an endeavour to make up for their holiday effort, were punctual and dropped their target indicators and sky markers in a better-than-average concentration. Ground markers were unobserved owing to cloud conditions and sky markers were the objective of a considerable volume of light flak. Heavy flak in barrage form was moderate.

Though exact assessment of the damage was impossible late arrivals reported red glows on the clouds, with two main concentrations of destruction—one in the east and one in the west end of the capital. Our percentage of loss was somewhat heavier than usual but not to a degree sufficient to cause alarm. F/L J. A. Allen, a veteran pilot of the Leaside Squadron, on the eighth trip of his second tour, was skipper of one of the missing crews. F/O D. J. Elliott, WOs A. W. Robinson (pilot) and T. F. Nolan, FSs G. R. Evans, J. D. Clarke and J. Anderson, and Sgt. W. J. Blakely made up another veteran crew that did not return.

Berlin Onslaught Continues

Weather conditions and the necessity of directing attention to two other targets precluded a return to the onslaught on Berlin until the night of the 10th when the month's largest effort (more than twice the size of that on the 2nd) again got the German capital in their bombsights. The Canadian contribution both in number and ratio of aircraft was very much higher than on other recent raids. Our percentage of losses was appreciably smaller, though one veteran, P/O R. S. Thompson, a bomb aimer of the Lion Squadron, making his 25th trip, was lost with P/O N. E. Cook's crew. Eight

other R.C.A.F. aircraft were missing.

As is so usual in the winter both the route and the target area were completely hidden by clouds. Very few night fighters were in evidence, but one or two of our kites suffered severely at the hands of flak batteries. Cloud tops over the target varied from 10 to 15,000 feet. Horizontal visibility was good especially in the earlier stages until columns of smoke began rising up and up to 18,000 feet. The pathfinders scattered their markers slightly at first, but soon settled down and achieved an extremely accurate and concentrated pattern for the main waves. The consensus of opinion of the crews, who reported a reflection visible for 75 to 100 miles on the homeward journey, was that the German capital had suffered a major disaster. This fact was borne out by the series of explosions, some very large, that occurred.

Exactly one week later Bomber Command again sought out Berlin with a slightly smaller but still a major force, composed mainly of Lancasters. The route was partially obscured by clouds which increased in density, so that the target, except for one or two breaks, was soon completely covered. However, route marking was exceptionally good. Hindered only by intense flak in the Rhineland and occasional more or less ineffective searchlights, the bombers ploughed on to their destination.

Over the target the pathfinders again excelled themselves and dropped an excellent pattern of sky markers. Widespread fires were observed through fleeting cloud-breaks and several explosions were noticed, while the glow was visible for 150 miles after leaving the target.

Anti-aircraft fire was moderate with the light flak seeming to concentrate on the sky markers. Considerable night fighter activity was reported both over the target and on the way home but searchlights in and around Berlin were unable to pierce the clouds. All in all this was an excellent effort as was testified to by Mosquitos, who were over Ber-

lin an hour after the departure of the heavies.

The diary of the Goose Squadron contains this account of one combat:

Lancaster S-Sugar piloted by WO2 J. D. Harvey encountered an e/a identified by the rear gunner FS S. E. Campbell as an Me. 110.

The e/a was first sighted below and slightly to port, range 600 yds., commencing to attack; Campbell instructed the pilot to turn port towards dark side of sky. . . . The fighter appeared to be trying to position himself to fire rockets. The rear gunner opened fire at 300 yds. with long bursts of approximately 300 rounds. He observed his tracer entering the e/a's starboard wing, hitting the engine and knocking off one of the rockets. The fighter broke off down to port, and the rear gunner instructed the pilot to climb starboard, do a banking search, then resume course. The R/G again sighted the e/a right below at a range of 300 yds. and opened fire with another long burst of 300 rounds, his tracer entering rear of fighter's cockpit. A large blue flash appeared in the cockpit, and every light came on. The Me. started to weave, going over to port quarter down and back again underneath bomber and commencing to attack with all his lights still on. The R/G again opened fire with another long burst of 300 rounds, his tracer entering fighter's cockpit; the Me. caught fire, rolled over and went down out of control, disappearing beneath the clouds with flames completely enveloping fuselage. This was seen by the R/G, M/U and WAG. Then a glow appeared beneath the cloud, which was assumed to be the fighter hitting the ground.

While overall losses in this raid were moderate, the R.C.A.F. suffered severely when several experienced crews, notably those under the leadership of S/L C. W. Smith, D.F.C., F/Ls E. E. Kearl and S. R. W. Laine, D.F.C., of the Goose Squadron and F/Ls M. C. Wilson, T. R. Shaw and A. T. Martens of the Thunderbirds, were among those reported missing. Wilson is now a prisoner.

The following night, the 28th, saw another great force, with a very large R.C.A.F. contingent, back at Berlin for the 13th time in the series which had begun in November. This particular raid was preceded by a light attack by Mosquitos.

When the heavies set out they found broken clouds over

the North Sea and severe icing conditions up to 20,000 feet in the Denmark area. However, as they proceeded the weather improved until in the target area there was from 8 to 10/10ths thin layer cloud through which ground markers and the effects of bombing could be easily discerned. Little opposition was offered on the outward trip but the Danish defences were active on the homeward journey.

Despite continued efforts of the ground defences to shoot down the sky markers, the pathfinders maintained a continuous pattern for the various waves of bombers. Just east of the target area several crews noted bags of searchlights but owing to the clouds these were largely ineffective.

So centralized was the attack that huge fires broke out, interspersed with particularly violent explosions, one of which was very prolonged. Many lesser blasts kept up an almost continuous glare in the eyes of the jubilant crews as far as the Baltic coast. Flak was somewhat heavier than on the previous night and consisted of moderate to intense heavy, accurately predicted at first, which later gave way to a barrage of heavy and light flak. In the target area and on the homeward journey as far as the Danish coast fighter flares were much in evidence and encounters were fairly frequent, though no claims for destroyed Jerries were entered.

All of which when added to accurate bombing by successive waves sums up to "the best yet", "the best of eight", "really wizard" and "a first-class do", which were among the descriptive phrases used by crews. But "wizard does" are not accomplished without loss and this was no exception. S/Ls J. Hockey and L. Linnell of the Bluenose and FS F. H. Palmer of the Moose Squadron were veteran pilots who went for a Burton on this raid, while FS J. T. Coriveau of the Iroquois Squadron, another seasoned skipper, was forced to ditch in the North Sea. He and three other members of his crew were rescued. Hockey is known to be

a prisoner.

F/O J. M. Gray, a pilot of the Porcupine Squadron, won his D.F.C. on this raid. A portion of the official citation reads:

Soon after crossing the enemy coast the aircraft was hit by shrapnel. One of the tanks was damaged, causing a loss of petrol. Despite this, F/O Gray flew on to the target and bombed it. During the return flight the wireless apparatus and some navigational equipment became unserviceable. The enemy coast was crossed, but some time later the petrol supply became exhausted. Coolly and skilfully F/O Gray brought the aircraft down on to the rough sea. Not one of his crew was hurt and all got safely aboard the dinghy.

Two nights later the heavies, mainly Lancs, again set out for Berlin on a raid which brought the total of bombs dropped on that city in 14 starts to almost 24,000 tons. Throughout most of the route and over the target the customary complete cloud cover was found but the way was well marked and horizontal visibility was good. The path chosen was free of trouble so that little difficulty was experienced.

The attack was extremely concentrated and during the 18 minutes the main force was over the target area a continuous stream of well-placed markers was maintained. Assessment of results was more difficult than usual due to the density of the cloud formations, the blinding brilliance of the moonlight and the illumination provided by countless flares. However, later waves returned to base with stories of a monster explosion and a most reassuring glow visible for 150 miles. The whole target area was ringed with fires and there was every indication of a successful attack.

The operations record book of one squadron has this to say about the part played in the raid by F/O D. E. Biden and his crew:

Aircraft was damaged by flak at 2146 hours and the F/E, Sgt. Wilkinson, was slightly wounded in right arm. Port wing was also damaged. Aircraft was attacked three times by an Me. 110 on the way back

from target. The e/a was first sighted at 400 yards, heading astern below, immediately after direct hit by flak, causing fire in aircraft, thus no evasive action was taken. E/a closed to a range of 150 yards before breaking to port quarter down. The R/G fired 100 rounds. The port outer engine was hit making the rear turret u/s. The second attack came from port quarter up. Evasive action taken was a corkscrew to port. The M/U fired at 150 yards, approximately 150 rounds. The e/a fired a three-second burst making the hydraulic system in mid-upper turret u/s. The third attack came from the starboard quarter up. Evasive action taken was a corkscrew to starboard. E/a fired a three-second burst. Both AGs saw tracers enter the e/a. Extensive damage was done to our aircraft. Members of the crew injured were F/O H. R. Farb, WO A. L. Weaver and Sgt. E. A. Wilkinson. Aircraft landed with wheels up owing to u/s undercarriage.

Biden and Farb were both awarded the D.F.C.

A veteran crew made up of F/O J. R. A. Laberge, WO G. R. Buchanan, FSs A. Bonikowsky (pilot), G. M. O'Neil and J. M. A. Charest and Sgts. S. Einarsson and F. S. Cole was lost. Laberge, Buchanan, Bonikowsky and Cole are prisoners of war.

Though Berlin provided the motif for the month's bombing there were certain non-pattern efforts. The first of these was on the 5th to Stettin when a medium-sized force sallied forth against Germany's largest Baltic port and important industrial centre. Stettin is noted chiefly for its extensive shipyards which build and fit-out submarines, minesweepers, naval escort vessels and tank landing craft. The route chosen was good, the defences not bothersome, the visibility excellent and the marking accurate, so that despite a certain amount of icing and an occasional electrical storm, a pleasant time was had by all.

Weather continued good over the target area, with only a few broken clouds, and incoming crews were able to pick out Dammscher See and the dock area in the bright moonlight. The panorama of warehouses, factories and streets stood out in stark relief against a light covering of snow. The pathfinders arrived punctually and immediately a profuse cascade of well-placed markers began to fall on

the aiming point, and continued with satisfactory regularity throughout the attack. Not to be outdone by their leaders, and scarcely disturbed by moderate flak and a few ineffective searchlights, the crews dropped their sticks with care and precision.

Soon the incendiaries took hold and whole blocks were burning fiercely. Two pillars of smoke, one almost five miles high, arose from the blazing inferno. Explosions shot up amid the flaming ruins, and buildings were seen to topple in the macabre light. When the last of the bombers departed the whole town was hidden under a flaming carpet, the reflection of which could be seen for over 200 miles. Later reports indicated very extensive damage in the main railway station and to industries on the south bank of the river.

Even under these almost ideal conditions, crews had their difficulties, as witness the following extract from the raid report of 2nd Lt. N. R. Humphrey, U.S.A.A.F., who was doing a tour of operations with the Goose Squadron:

Severe icing conditions were encountered at 14,000 ft., necessitating jettisoning the front guns, smoke floats, oxygen bottles and ammunition to maintain height. The constant speed unit on the port inner ran away; it was kept under control in fixed pitch until 0435 hours when feathering action was taken. Immediately we began to lose height, and continued down to 14,000. It was then decided to jettison the incends. After bombing, a climb to 15,000 was made. Severe icing conditions were again encountered after entering a cloud. The aircraft began to lose height and sank to 13,000 ft. All movable articles were jettisoned. After this was done, —the pilot managed to keep the aircraft under control and brought it back to base safely. On landing, it was found that there was still some ice left on the feathered prop.

Brunswick Visited

It was not until the 14th that Bomber Command got another major effort airborne. This was against Brunswick and contained a small representation of the R.C.A.F. Group. Unusual weather conditions for January found the

North Sea cloud-free. More seasonable weather set in between the coast and the target and the bombers' objective was, as usual, obscured by cloud. Assessment was made doubly difficult by the presence of markers which are believed to have been placed by the enemy for our confusion, but reassuring fires were seen through occasional gaps in the clouds. It has since been learned that very extensive damage was done to the south marshalling yards and to the plant of Wilkerwerke, which produces boilers, pipes and benzine tanks.

Defences over the city were only moderate but there was an enormous amount of fighter activity over Hanover. Combats were many and in at least four instances conclusive. A note in the diary of the Thunderbird Squadron describes a combat between an FW. 190 and the aircraft piloted by F/L T. R. Shaw, with Sgt. D. L. Huband as mid-upper gunner. This crew went missing a fortnight later over Berlin.

Aircraft was attacked by an unidentified single-engine fighter. The M/U opened fire at 200 yards range and the e/a broke away and was not seen again. A second attack was delivered by an unidentified twin-engined fighter. Successful evasive action was taken and this e/a also broke away. Shortly after leaving the target area a third attack was delivered by an FW. 190. The M/U opened fire at 150 yards and the e/a was seen to go through the cloud in a ball of fire. This e/a is claimed as destroyed.

S/L W. W. Strachan of the Leaside Squadron was awarded a D.F.C. for the night's work:

While making our bombing run we were attacked by an Me. 109, which made two attacks but did not open fire as we took immediate evasive action. As we left the target a fighter flare exploded just off the starboard wing. I immediately dived to port, but resumed course when no a/a was seen.

Approximately ten minutes after bombing we were attacked by a four-engined aircraft with square wing tips. According to the two gunners he opened up with everything he had, attacking from the port quarter, slightly below and almost dead astern. I went into a steep dive to



(1) W/C W. F. M. Newson, D.F.C., and FS A. W. (Tony) Tinmouth, D.F.M., of Montreal; Sgt. W. J. Walton of Toronto. (2) F/O J. A. McIntosh, D.F.C.; Sgts. L. Bandle of Toronto and A. F. DeDauw of Tilbury, Ont. (3) FS P. W. Dennis, D.F.M., of Fort William and Sgt. H. J. L. Quesnel, D.F.M., of Port Credit, Ont. (4) Sgt. R. E. Qualle, D.F.M., of Beverly, Sask., and FS A. R. Clibbery, D.F.M. (5) Railroad yards at Vaires, France, after attack in March 1944.



(1) F/O T. B. Spink, D.F.C., of Vancouver. (2) F/O J. A. McIntosh, D.F.C., of Revelstoke, B.C. (3) FS O. M. Brown, D.F.M., of Ottawa. (4) S/L W. M. Stephen, D.S.O., of Kingston. (5) S/L (Padre) H. N. Taylor visits with aircrew. *Left to right*—F/O W. E. P. Soeder of Saskatoon, S/L Taylor, WO J. Corbally of Toronto, F/O J. Moffatt of Castleton, Ont., and S/L G. J. Laird, D.F.C., of Toronto. (6) *After a raid*: P/O O. R. Collins of Glenora, Man., P/O M. H. MacLeod of Cape Breton and WO N. H. Jones of Deschenes, P.Q. (7) Mannheim, Germany.

port on the gunner's direction. While in the dive two streams of tracer went slipping by my port side, just below the port inner engine. I stayed in the dive but changed the turn to starboard. In the meantime the *e/a* broke off the attack and veered away. When next reported he was 2 or 3,000 feet above and some distance off the starboard quarter. We resumed course and lost sight of him.

On checking damage to the aircraft, the R/G reported a large hole in the port rudder, the M/U reported two holes in the perspex of his turret, the F/E reported numerous holes in both sides of fuselage aft of the mid-upper turret. The aircraft kept swinging to the left but I was able to hold it straight and level by means of rudder and aileron trim.

On landing it was found that the port tire was flat, causing aircraft to swing off runway. By use of port outer engine and brakes I kept *a/c* heading fairly straight and finally stopped at an angle of 90° to runway.

It was also found that the port rudder was almost entirely shot away; the port elevator was holed in a number of places as was the fuselage and the starboard fin. Further inspection revealed the following damage: a few holes in the port flap, holes in the port nacelle, one port propeller blade nicked and another holed, a hole about one foot long and two or three inches wide just to left of camera, and some damage to port carburettor cock control line.

Laine of the Goose Squadron, who was lost over Berlin later in the month, was also awarded the D.F.C.:

This officer has taken part in very many sorties, including ten against the German capital. He is a skilful and resolute captain whose fine fighting qualities have impressed all. On a recent occasion whilst over Brunswick his aircraft was hit and caught fire. Coolly and skilfully F/L Laine overcame a difficult situation and then pressed home his attack with great determination. His great skill and resolution in trying circumstances contributed largely to the success of the sortie.

Among the kites lost on this raid was one from the Leaside Squadron piloted by P/O A. D. Rae with F/O G. V. Holmes, WO D. T. Lyng, FS E. F. Howe, Sgt. C. F. Tarr, WO W. H. Hoppus and Sgt. K. E. Evans, the majority of whom had done 19 raids or more. F/L G. H. Rainville, D.F.M., air gunner on an aircraft from the same squadron piloted by F/L C. V. Wales, which did not return, had completed 12 trips on his second tour. He and Wales are both prisoners. F/Os G. R. Drimmie, R. B. Jarvie and J. F. Gil-

bey, FS R. F. Peterson and Sgts. J. J. Waddell, D. F. Smith and E. A. Lane made up another experienced crew that was missing after this raid.

Those returning crews who were unlucky enough to stray off track were treated to the uncannily accurate pyro-technical display which it is always the pride of the Texel batteries to send up after unwary skippers.

The other off-pattern effort of the month was a heavy raid against Magdeburg on the 21st when the Canadians were well represented. Magdeburg, the capital of Saxony, is one of the foremost traffic and railway centres in Central Germany. The marshalling yards in Rothensee are capable of handling 3,000 wagons in 24 hours while those in Buckau are even larger and can handle 3,800. The city is also the seat of extensive heavy and general engineering works, two explosives factories and an important synthetic oil plant.

Weather conditions were just the reverse of those during the Brunswick raid. The North Sea was completely blanketed but overland the cover lessened until over the target visibility was very good, the clouds varying from a to 8/10ths, so that many crews were able to pinpoint the Elbe. The pathfinders were not particularly successful in placing the markers in the early stages, though an improvement was noted later. Nazi defences were active, and the route from the target to the coast and back was lined with night fighter flares. It is therefore no surprise to find that there were many combats. In fact, many crews remarked that it was almost as if Jerry had anticipated the route.

For their part in one of these engagements FS A. R. Clibbery and Sgt. R. E. Qualle of the Lion Squadron were both awarded the D.F.M.

While over the target area coned in searchlights and surrounded by fighter flares, his (Clibbery's) aircraft was raked by cannon and machine-gun fire from an enemy fighter, destroying the intercommunication system, the supply of oxygen, shooting away all flying instruments

and setting the aircraft on fire in the flight engineer's position. Despite this attack, the captain completed his bombing run, and under very difficult weather conditions flew his aircraft home, and made a safe landing.

In this action the enemy fighter in question was destroyed by Sgt. R. E. Qualle, the mid-upper gunner, under very trying conditions. The fighter had shot away one of his guns, and had penetrated the turret perspex by machine-gun fire. Even though Sgt. Qualle was dazed by searchlights, and cut by flying perspex, he brought his guns to bear, and downed the Hun.

Flak, too, was intense on the coast and one of our kites, skippered by S/L E. C. Hamber of the Moose Squadron, was holed in 85 places. P/O J. B. Mill of the Goose Squadron, on his 18th raid, was one of the experienced skippers lost. He has since been reported as a prisoner of war. A very experienced crew from the Lion Squadron, captained by S/L D. M. Arnot, D.F.C., was also lost on this raid. Crew members were: F/O W. V. Thom and P/Os L. W. Jones, R. Dawson, L. S. Gray, R. O. Nickerson and R. Rondelet. All had done at least 10 raids while Arnot had 23 and Gray 28 to his credit. Thom is known to be a prisoner.

The first waves of bombers found the markers scattered to the south of the target but as the attack progressed the concentration improved. Several large explosions occurred and substantial fires that sent smoke three miles in the air were visible for 150 miles. Main damage was done to Krupp Grusonwerk in Buckau, manufacturers of medium tanks, and to another large engineering works. It is no exaggeration to say that Magdeburg had it.

These three raids on Stettin, Brunswick and Magdeburg had a most serious dislocating effect upon the Reich industrial economy since the total loss in the three cities has been estimated at 117,000 man-months.

Martin, C.O. of the Tiger Squadron who did not return from a raid during the month, was succeeded by W/C J. D. Blane. W/C R. J. Lane, D.S.O., D.F.C., took over command of the Vancouver Squadron from Fauquier.

February

The early part of February was unsuitable for major efforts though seaminging and small-scale bombing raids were as usual carried out. The 15th, however, brought weather in which the heavies could operate in force and a very large contingent, the largest to date, visited Berlin for the 15th time in the series on which more than 8,300 aircraft had been despatched. A diversionary raid against Frankfurt on the same night had a few R.C.A.F. kites along.

The route chosen elicited the approval of most crews, although one or two reported much-strengthened night fighter forces assisted by bags of flares over Denmark. A few combats ensued in which little damage was done to our kites who gave as good as they got. There was some bad flak and a small amount of icing but to most of the bombers it was merely a quiet flip over complete cloud cover. The cloak of cloud lying over the land continued all the way to the target where the tips rose to between 15 and 17,000 feet. Flak in a wide barrage form was tremendous around the aiming point, but the effectiveness of the searchlights was minimized by the heavy clouds.

Aided by expert target marking the successive waves pressed home a most concentrated attack and soon pillars of smoke were rising three to four miles. Though the attack had developed rapidly and had all the earmarks of a good do, exact assessment of the results was extremely difficult. Our losses on this raid were much below average, though two experienced crews skippered by S/L A. V. Reilander of the Tigers and S/L F. Carter of the Bluenoses were among those who did not return.

An aircraft of the Iroquois Squadron skippered by FS A. W. Timmouth, with FS A. L. Richardson and Sgts. L. E. Todero, V. England, A. C. Crowell, W. J. Walton and B. G. Warren, ran into trouble when they met a Ju. 88:

Everything going O.K. until attacked by a Ju. 88. E/a gave one burst and-starboard wheel flat; all wireless equipment rendered u/s; rear

turret u/s; starboard flap shot away; starboard fin and rudder damaged; no intercom; engineer injured in thigh by a piece of shell. Rear gunner's hands, ears and feet blistered from freezing. Half of the trip was done without intercom. Crew co-operation perfect and everything went well, despite two occasions when it was necessary to corkscrew. Rear gunner was without oxygen and had no electrical power for over an hour.

And despite all this they continued on the way, dropped their bombs on the target, and got back safely. Tinmouth and Walton were both awarded the D.F.M.

Weather conditions continued duff and on only five other nights of the month were major expeditions possible. Route weather conditions on a raid to Leipzig on the 19th were far from ideal as thick mist lay over the almost unbroken cloud encountered over the continent. As a result the heavies were favoured with the quietest outgoing trip in many starts and, except for the fact that the wind forecast was at variance with actual conditions, nothing untoward occurred. Unpredicted winds, which brought a large number of kites early on the target and forced them to orbit until the appointed time, were against them on the return journey and shortage of petrol forced many down at diversion stations in the U.K.

Because so many kites were circling the target when the flares were dropped, the attack developed quickly in the face of slight to moderate flak and ineffective searchlights but very active night fighter defence. Although well concentrated, the attack was nevertheless extremely costly and many experienced crews were posted missing.

In view of the night fighter activity it is not surprising that several combats ensued, of which one at least was notable. F/O W. V. Blake, skippering a Halifax of the Ghost Squadron, was attacked eleven times. In the first four attacks Blake's kite was considerably damaged, but despite an unserviceable intercom and other difficulties the attack was pressed home. WO J. T. Houston, the rear gunner, had

been wounded in the first attacks but carried on at his post and, when the night fighters again appeared on the homeward journey, he continued to direct evasive action by light signals so that Blake was able to bring his crippled machine back to base. For their outstanding devotion to duty Blake and Houston were both awarded the D.F.C. In April this crew crashed in Sweden during a mining sortie. Houston, who was commissioned in the meantime, has since been reported safe.

The Moose Squadron aircraft piloted by F/O A. J. Byford was also badly shot up before reaching the target, but the attack was pressed home. He was again attacked by a night fighter while homeward bound, but despite the damage landed safely at base. Sgt. N. C. Fraser, rear gunner on Byford's kite, won his D.F.M. for this show. The official citation follows:

He was rear gunner in an aircraft which was attacked by an enemy fighter. His accurate return fire and skilful directions contributed largely to the successful conclusion of the engagement although as a result of the combat his rear turret and guns had been rendered useless. Sgt. Fraser remained at his post after leaving the target. His aircraft was again attacked by an enemy fighter but once more through his skilful directions his captain was able to evade the attacker.

Byford was awarded the D.F.C. for the night's work and general excellence throughout his tour of operations.

The operations record book of the Lion Squadron carries the following tribute to one of their pilots:

As the result of this raid one of our aircraft failed to return. P/O D. O. Olsvik was flying B, and carrying as second pilot the captain of a recently arrived crew, FS C. G. Burke. The loss of Olsvik was a sad blow to the squadron. During the 25 sorties he had already completed with the Lions he had proved himself to be one of the most capable pilots on the squadron. He loved his work, and had an urgent desire to transfer to the PFF. There is no doubt that he was an inspiration to all crews, and his quiet demeanour and simplicity certainly will be missed by his fellow aircrew members.

On the following night Bomber Command's offensive continued when a large force including a fair-sized contingent of Canadians set out for Stuttgart in southern Germany. For a change the weather was good, the route marking effective and defences weak, so that the crews arrived at their objective fresh and ready for anything. Their luck held and the majority were able to pinpoint the railway station and marshalling yards in the target area and verify their location by frequent glimpses of the Neckar. The raid developed quickly despite an overshoot by the pathfinders that was noticed and corrected. Hundreds of bombs were seen to burst and intense fires start up all around the aiming point which was well-covered with incendiaries. One bomb aimer of the Lion Squadron was able to follow the course of a block-buster dropped by a nearby aircraft. He actually saw it demolish several buildings and hurl a wall bodily into the air. Reports received from reconnaissance aircraft testified to the effectiveness of the operation.

It was four days before the heavies ventured out in force again on the 24th, when, in clear weather and assisted by very effective route marking, they sallied forth against Schweinfurt. It was a good trip notwithstanding considerable defence activity, especially around Frankfurt. Despite a slight haze, the crews picked out the winding River Main and saw large buildings silhouetted in fires which had been started by bombers of the U.S.A.A.F. during a visit the previous afternoon.

Our aircraft continued the good work of the U.S.A.A.F. and, despite a moderate heavy flak barrage at 23,000 feet, soon had the whole area ablaze. Smoke pillars rose six miles in the air. Crews were most enthusiastic and one pilot remarked: "If there is anything left down there, not on fire, I should be damned well surprised," while another noted that "The sky was lit up like the first of July. The target area was as bright as daylight."

Losses were below the accepted ratio and considering

the outstanding success of the expedition were very small. Among the missing R.C.A.F. aircraft was one from the Goose Squadron skippered by P/O H. Sherlock and with the following veterans: F/O J. G. Hillman, P/O H. N. Cunliffe, FS R. S. Nurse and Sgts. A. J. Emerson, W. Walker and H. G. Basten.

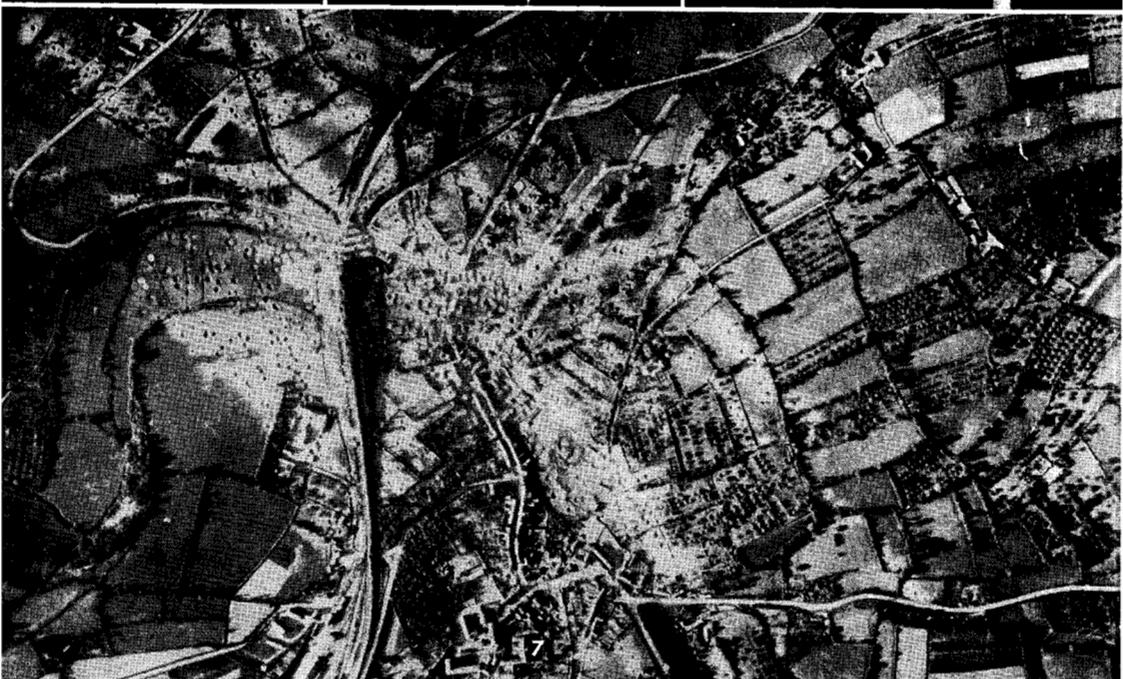
The following night, the 25th, produced the final major effort of the month when a large force, including many R.C.A.F. kites, was sent out against Augsburg the home of the great M.A.N. diesel engine factory, another target which had received the attention of the U.S.A.A.F. earlier in the day. The Yanks on their departure had left well-seated fires which were visible to our men for many miles before they arrived at the target. In this case the precision bombing for which the Yanks are so justly famous had been as exact as ever. Bags of smoke, which in some cases rose to three or four miles, covered the target area. Even without this assistance, our bombers would have had little difficulty in finding their objective due to the cloudless sky, good route marking, and the clearly discernible river.

Jerry offered little or no opposition to the oncoming waves. Few fighters came up to meet our kites and so the work of destruction, started by the Americans, was continued until, when our aircraft turned homeward, the whole target area was a raging inferno, broken from time to time by large explosions. This perfect co-ordination of effort by the U.S.A.A.F. and Bomber Command had achieved a notable success. Augsburg, for the moment at least, ceased to figure largely in the war economy of the Third Reich with the M.A.N. works a complete shambles, twenty other identified concerns totally wrecked and very heavy damage done to the electrical transformer station.

FS A. B. Cable, rear gunner on a Tiger Squadron kite skippered by P/O R. A. Basson, won his D.F.M. on this raid when:



(1) F/L J. A. Anderson of Winnipeg (Portrait by F/L R. S. Hyndman). (2) F/L L. M. Linnell of Weyburn, Sask. (3) Sgt. W. S. Tyler of Corpus Christi, Texas. (4) FS C. Gillanders of Vancouver. (5) Part of the crew of Moose Squadron Lancaster "D-Dog": F/O R. V. J. Daly, P/O N. C. Fraser and F/L A. J. P. Byford, D.F.C., all of Ottawa. (6) FS R. E. Budd of Hamilton. (7) Frankfurt, October 1943.



(1) F/L K. E. Johnston of Peterborough; F/L J. Atkins, D.F.C., of Montreal; (2) A Halifax ground crew. (3) F/L C. E. J. Murphy of Belleville. (4) P/O J. J. B. G. Lapierre, D.F.C., of Verdun, P.Q.; S/L R. G. Campbell, D.F.C., of Camrose, Alta. (5) FS H. McNab and Sgt. J. Paul, both of Montreal. (6) S/L H. R. Coleman (Padre) of St. John, N.B.; F/L Ron Anderson of Moncton; FS W. E. Betts of Lindsay. (7) Coutances, France—just after D-Day.

On the outward flight the aircraft was intercepted by a fighter. As the enemy aircraft came into close range, FS Cable delivered a short burst of fire following which all his guns but one became jammed. Nevertheless, FS Cable fired his remaining gun with great effect, hitting the enemy aircraft with a stream of bullets. The attacker caught fire and fell to the ground where it exploded. FS Cable's determination and vigilance on this occasion was typical of what he has shown throughout his tour.

Baxter Richer, commanding the Alouette Squadron, was awarded the D.F.C. during the month.

March

The beginning of the spring offensive was the dominant feature of March, and Bomber Command operated in varying strength on every night save one. In addition there were only eight days on which some representative of the Command did not make a daylight sortie into enemy territory. It can readily be understood that no one group could contribute aircraft to every one of these expeditions but the R.C.A.F. Group had a part in seventeen operations.

An effort such as this tests to the full the capabilities of a formation and the fact that the Canadians were able to maintain a consistently high percentage of successful sorties throughout the gruelling period demonstrated that the heart-breaking days of heavy casualties and too-frequent early returns which had been the lot of one or two of the squadrons had come to an end. The operational efficiency of the group was maintained at a uniformly high level and one unit chalked up 164 sorties during the month without the loss of a single kite due to enemy action.

These intensive operations were directed against many different targets and on more than one night the R.C.A.F. Group despatched aircraft to two objectives, notably on the 15th when Stuttgart and Amiens were raided, and on the 26th when Courtrai and Essen were bombed. They attacked Germany seven times and the occupied countries no less than ten, in the opening rounds of a continuous offensive

against communications which was to culminate three months later in the great D-Day when Allied forces, four years almost to a day after the withdrawal from France, returned in force and the last act in the drama of *Festung Europa* began.

On March 1st a good-sized force set out for Stuttgart over high-banked clouds, that persisted over the target where blind-bombing tactics had to be used. To accentuate the difficulties, the majority of the markers were soon lost to view in the clouds and the stream of target indicators, though profuse at times, was not continuous, with the result that Stuttgart in all probability escaped the direst consequences and, once again, like a salamander emerged from the flame bath with only superficial damage. That the raid was not completely abortive was testified to by the fact that the German press the following day spoke of it as a "terror raid" which did extensive damage, particularly in the residential section.

F/O A. G. Plummer, skipping a Snowy Owl kite, won his D.F.C. on this raid for an exploit officially described as follows:

When some 200 miles from the target one engine failed and the aircraft lost much height. Although he knew that he would arrive at the target after the main bomber force, F/O Plummer flew on to Stuttgart and pressed home a successful attack. His determination to complete his allotted task in the face of much difficulty set an excellent example.

The early waves of a much larger force which revisited the Wurttemberg capital two weeks later found a thinly-clouded route that gradually built up to 7/10ths over the target. Later arrivals found the clouds clearing, and some were even able to pinpoint the Neckar as they approached, while others got visuals of the town in the light of photo flashes and bomb bursts.

Unfortunately the pathfinders were held up and after a late arrival scattered their markers hither and yon causing

the attack to open slowly. Despite this a good carpet of incendiaries was laid. Good fires, especially in two sections of the town, and several moderate explosions lighted the homeward journey.

The results of this raid included severe damage to factories producing spark plugs, fuel injection pumps, and general aircraft accessories. Also damaged, though less seriously, was an aero engine works. In all, 44 identified industrial plants suffered damage, with a total estimated loss of 2,500,000 man-days. Despite the fact that this was the most successful of all raids on Stuttgart it is equally sure that the city was continuing its charmed existence as one of the least-blitzed of Bomber Command's recurring targets.

Enemy opposition was persistent throughout, though generally speaking the flak was inaccurate. Around Amiens the searchlight belt was extremely active and several of our machines were coned. Fighter flares were much in evidence on the approach to the target and enemy aircraft were numerous, especially on the outward journey. Though losses on this attack were extremely light, F/L A. B. Fyfe, a veteran of many sorties, was the skipper of one missing crew composed of F/L D. B. Quayle, F/Os K. A. Cole and W. S. Edwards, P/O J. H. Dempsey, WO H. H. Searles and Sgt. B. E. Galbraith. Quayle and Edwards have since been announced as having been taken prisoner.

The official citation for the award of the D.F.C. to WO D. F. Robertson and F/O N. M. Sharer, pilot and mid-upper gunner of a Thunderbird kite on this raid, reads:

When nearing the target area the aircraft was struck by shrapnel. The fuselage was pierced in many places. Two more large holes were torn in the airframe, one in the starboard wing and the second near the mid-upper turret. The hydraulic gear was damaged and much oil seeped away and caught fire. The flames brilliantly illuminated the aircraft and at this moment a fighter attacked. WO Robertson took skilful evading action, however, while F/O Sharer, despite a most painful wound in the knee, successfully fought the fire. After extinguishing the flames, F/O Sharer returned to his post and, although his turret was unserviceable,

he maintained constant vigilance. In spite of heavy odds, WO Robertson completed a successful attack and afterwards flew the badly damaged aircraft back to this country. He displayed great skill, courage and tenacity. F/O Sharer also proved himself to be a valiant member of aircraft crew and his efforts contributed materially to the safe return of the aircraft.

Three other double raids took place in March when Le Mans was attacked on the 7th and 13th, Amiens on the 15th and 16th, and Frankfurt on the 18th and 22nd.

French targets, while they provided more or less trouble-free excursions, were nevertheless difficult inasmuch as crews were not allowed to drop their load unless they could see their target or the markers clearly, since indiscriminate bombing would damage the adjacent residential districts. For this reason there were seldom any half measures in a French target—they were either a howling success or an almost complete failure. And the first attack on Le Mans was certainly not the former!

It was a small show compared with the monster raids against Germany and the R.C.A.F. made up approximately half the number that sought out the marshalling yards. Several factors contributed to the foray's lack of success. The met reports were faulty in that they predicted less cloud over the aiming point. Then the pathfinders were late and, with hundreds of bombers milling around waiting for the target indicators to drop, the congestion was intense; to make matters worse, the clouds obscured the markers almost immediately they were dropped. As a result approximately one-third of the crews, acting on instructions, brought their loads back. Some went below the clouds and dropped their eggs on a fairly good concentration of markers lying right over the marshalling yards. There were practically no fires but there was one noteworthy explosion near the end of the attack.

It is unfortunate that arrangements misfired as the Jerries had virtually no flak or night fighter defence and, given

the correct co-ordination, the raid should have been an excellent effort. But these things happen and the only answer is a return engagement at the earliest possible moment. In this case, that was six nights later when a slightly smaller force, again almost entirely composed of Halifaxes, of which 50 per cent. were R.C.A.F., set out.

And whereas everything had gone wrong on the 7th, this time everything clicked into place. Weather conditions were good with no cloud and only a slight haze; the pathfinders, anxious to wipe out the memory of their previous effort, were bang on time and set down excellent concentrations of markers on the two aiming points. Defences were negligible as wave after wave of bombers swept in, dropped their bombs right on the tracks and swept triumphantly out again.

There were few fires but this was compensated for by continued explosions of which two were especially large. After all there is not a great deal to burn in a railway yard. Sufficient be it if the tracks are ripped up, and the signal systems wrecked. And the explosions did produce bags of smoke. The large roundhouse received a direct hit which completely destroyed ten bays. A similar fate befell the transshipment shed and severe damage was inflicted on the marshalling and sorting sidings. In fact the target, especially the southern section, was so damaged as to make its rehabilitation a problem of the first magnitude. All in all a good attack with a careful placement of bombs—and a satisfactory result. One redeeming feature of both attempts was the singularly small loss of aircraft. In the first not a single kite and in the second only one fell a victim to the weather, the flak, the night fighters or any of the hundred and one things which can make life unpleasant for a bomber.

Amiens was the next double-header. Again the objective was the marshalling yards, and again, though for different reasons, the lack of success of the first attempt at Le

Mans was repeated.

The clouds were light and scattered, the searchlights in action only on the route, and only a few night fighters appeared over the target area where the markers were well concentrated. But even then, despite several explosions and fires from which black smoke poured in great clouds, the attack was disappointing, and a second visit was necessary.

F/L F. G. Lord at the helm of a Ghost Squadron aircraft had a memorable evening when, on the outward journey, one of his engines cut 30 miles from the English coast. He continued on his course and successfully bombed the target. For this action and his general good work he received the D.F.C.

The following night the same R.C.A.F. squadrons set out again as part of a force of approximately the same size. Cloud conditions were favourable, defences weak and casualties small but there similarity between the raids ceased. When the last bomber had departed, the marshalling yards had had it. A further visit was unnecessary, at least for some time to come.

All parts of the yards suffered to a uniformly heavy degree. Every main line track near the workshops received a direct hit and only one line to the south and south-east (that to Arras) remained open for the movement of traffic. This second raid was particularly successful in that two of four special repair trains which had been sent from Germany to effect repairs were completely wrecked.

Back to Germany

The last monthly double was in Germany to Frankfurt, on the 18th and 22nd, on both of which attacks very large forces were used. On the first raid the city was covered with a foggy haze and in the early stages the markers were scattered. It is not surprising, therefore, that the bombs were spread over a wide area, but the sheer weight of the attack must have caused widespread damage. Losses were

not above average but G/C L. E. Wray, A.F.C., a well-known officer of the Permanent Force, was lost in a kite piloted by WO D. E. James of the Porcupine Squadron. Wray has since been reported a prisoner of war.

Four nights later the evening's main effort was again directed against Frankfurt. This time there was no haze and the bombers were able to see the river. The attack opened quickly and soon the streets stood out in the light of incendiaries, which shortly took hold and engulfed the city in a sea of flame, so intense that the fires were still visible 200 miles from the target.

Colossal damage was inflicted by these two attacks, and the centre of the city was practically wiped out. Damage extended to virtually every part of the built-up area, while the suburban district of Offenbach was almost completely obliterated. It was reported that the evacuation from the city following this raid got completely out of control and for several days was comparable to the panic flight from Hamburg after the devastating raids in the summer of 1943.

In further attacks on Germany, Bomber Command struck at Berlin on the 24th, Essen on the 26th and Nuremberg on the 30th.

A major force set out for Berlin, under unexpected weather conditions of complete cloud cover along the route, which thinned to 3 to 8/10ths over the target. Despite slightly scattered marking and some overshooting, a fair pattern of bombs was achieved as testified to by the agonized moans of the Berlin propagandists about "frightfulness"—usually an indication that the objective was well plastered.

Strong winds blew many of the returning aircraft so far off their course as to bring them over the heavy flak defences of the Ruhr Valley. As a result casualties were moderately heavy and included the Leaside Squadron aircraft piloted by McIntosh, of whom we have spoken earlier. McIntosh's crew included F/O A. Small, P/Os R. C. Elvin and

C. M. Schell and Sgts. Bandle, DeDauw and C. W. King. McIntosh, Small, Schell and Elvin are prisoners of war.

Two nights later Krupps of Essen were the recipients of attention when a very great force set out and met less opposition than was expected, with only slight to moderate flak and a not unduly large aggregation of night fighters in the target area. The crew of a kite of the Bison Squadron piloted by FS S. Puskas, whose gunners downed two Jerry fighters, reported:

Halifax K-King was attacked by three unidentified aircraft believed to be single-engined at 2249 hours.

The first indication of attack came when the rear gunner, Sgt. W. Faulkner, saw yellow tracer coming from both quarters and dead astern. He immediately ordered the captain to corkscrew starboard and at the same time opened fire. From then on the Halifax was attacked more or less continuously until 2320 hours when the captain was able to resume course.

No searchlights were in evidence at the time of combat but two fighter flares were dropped dead astern of the bomber just before. There were no other signs of imminent attack. Following one long burst from the rear gunner a bright explosion appeared in the sky and the captain, engineer, mid-upper lookout and rear gunner saw an aircraft fall earthwards and end in a flash on the ground. The mid-upper gunner was in the under-blister at the time and the wireless operator air gunner, Sgt. W. R. Wilson, went over to the mid-upper turret. A few seconds after getting in he saw tracer coming from the starboard beam and, ordering the captain to corkscrew starboard, opened fire in the direction of the tracer. The e/a moved round to the starboard quarter still firing when the rear gunner joined the mid-upper in firing a long burst. Suddenly a burst of yellow flame appeared, followed by a red glow and the outline of a single-engined aircraft as it dived and a few seconds later was seen burning on the ground. All this was witnessed by the engineer, wireless operator air gunner and rear gunner. Both enemy aircraft are claimed as destroyed.

The weather which had been clear over the North Sea closed down completely over the continent and clouds soon engulfed the markers leaving only a glow to bomb on. Though visibility was further impeded by numerous vapour trails, a fair concentration of the 2700 tons of bombs was

achieved. Losses were very small.

The month's last effort against Germany proper was to Nuremberg on the 30th when another major force attacked through 8 to 10/10ths cloud that suddenly appeared 40 miles from the target after a virtually cloudless trip over the continent. Visibility was good despite bright moonlight and vapour trails. Though the German communique the following day boasted of having rendered a terror raid abortive the damage is thought to have been considerable.

Night fighters were extremely active from the Ruhr right up to the target, where they seemed to disappear and thereafter paid little attention to the bombers. Our losses were extremely heavy, and included two flight commanders of the Lion Squadron, Laird and S/L J. M. Bissett, D.F.M., who was on his second tour. F/O W. E. P. Soeder, a veteran navigator making his 28th raid, was in Laird's crew, while Bissett had with him F/Os R. J. White, D.F.M., R. A. Zulauf, D.F.M., R. A. Shannon, D.F.M., and J. G. Le Claire, all equally experienced.

Sgt. Harry Glass, flight engineer in the Bison Squadron aircraft piloted by F/O J. H. Wilson, was awarded the D.F.M. for this raid. The official citation reads in part:

The aircraft was repeatedly attacked by fighters and sustained extensive damage. A fire commenced but Sgt. Glass, by his gallant and determined efforts, succeeded in extinguishing the flames. Later, while over the North Sea on the homeward flight, the pilot was forced to bring the aircraft down on the water. Two wounded members of the crew were in danger of losing their lives but were saved by Sgt. Glass who also assisted other members of the crew into the dinghy.

F/O F. F. Hamilton, D.F.M., of the Tiger Squadron, added the ribbon of the D.F.C. to his fruit salad during this raid. The text of the award runs:

During the operation the aircraft was engaged by a fighter and, before the enemy could be evaded, the bomber was repeatedly hit by cannon and machine-gun fire. The controls to the starboard engines were fused and one of the engines caught fire, while the constant speed unit

was damaged. Considerable height was lost before F/O Hamilton regained control. The aircraft was vibrating violently, however, and the situation was serious. At this stage the propeller of one of the damaged engines flew off. The aircraft became steadier and F/O Hamilton flew safely to base. Twice on the homeward flight the aircraft was attacked by fighters but they were driven off.

The series against the occupied countries included attacks on Meulan-les-Mueaux on the 2nd, Trappes on the 6th, Laon on the 23rd, Aulnoye on the 25th; Courtrai on the 26th and Vaires three days later.

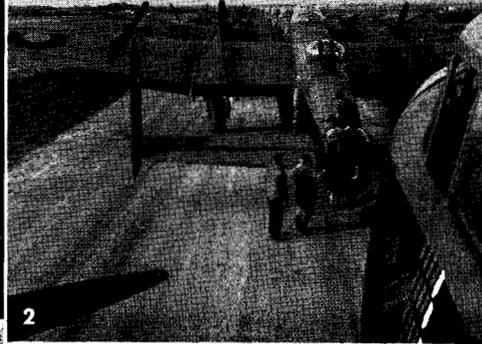
The aircraft factory formerly owned by Potez was the objective in Meulan-les-Mureaux. R.C.A.F. aircraft made up most of the small group that set out to attack a target covered by clouds varying in intensity from 3 to 10/10ths. The attackers bombed from below the clouds which began at 6,000 feet. Bombing was concentrated and a very large fire broke out in the south-west portion of the establishment which, with smaller blazes in the northern part, destroyed over half the factory buildings. The slight flak and few night fighters which constituted the defences did little to deter our men. There were no losses.

Four days later the marshalling yards at Trappes, an important railway junction near Paris, were the objective for a moderate force which delivered a well-concentrated and uniformly successful attack, the effects of which were pinpointed and photographed by many crews. At one point every track was put out of action. Heavy flak was very slight, there were no searchlights and only a few night fighters appeared. Again no aircraft was lost.

The marshalling yards at Laon were the target of a two-wave assault on the 23rd, when the R.C.A.F. Group provided about 40 per cent. of the attackers. Virtually all the first wave attacked the target with considerable success, and photographs of this phase show a thoroughly-plastered target. But the second wave found few markers and the majority returned with their bombs on instructions from the



COMMANDING OFFICERS OF BOMBER SQUADRONS: (1) W/C W. P. Pleasance, D.F.C. (2) W/C G. A. McKenna, D.F.C. (3) W/C E. C. Hamber, D.F.C. (4) W/C A. F. Avant, D.S.O., D.F.C. (5) G/C R. J. Lane, D.S.O., D.F.C. (6) W/C D. T. French, D.F.C. (7) W/C D. S. Jacobs, D.F.C., and F/L T. R. McDougall, D.F.C. (8) G/C R. S. Turnbull, D.F.C., A.F.C., D.F.M. (9) W/C H. R. Dow, D.F.C., and G/C W. F. M. Newson, D.F.C. (10) W/C A. R. McLernon, D.F.C., and W/C J. H. L. LeComte, D.F.C. (11) W/C J. B. Millward, D.F.C., and W/C C. W. Palmer, D.F.C.



(1) W/C J. A. D. B. Richer, D.F.C., of Montreal. (2) Marshelling Lincs. (3) W/C M. Fleming, D.F.C., of Vancouver (R.A.F.); S/L P. G. Weedon, D.F.C., of Paddockwood, Sask. (4) S/L V. F. Ganderton, D.F.C., of Edmonton; W/C C. W. Palmer, D.F.C., of Dundalk, Ont. (5) W/C J. F. Easton, D.F.C., of Timmins, Ont. (6) Friedrichshafen, Germany, May 1944.

Master Bomber.

Two nights later, the marshalling yards at Aulnoye were visited and again the Canadians made up one-third of the party, which had two main aiming points, both of which were partially obscured by haze. This time the markers were carefully laid, and, with very little flak and absolutely no night fighter opposition, all but one or two of our bombers dropped their eggs with uncanny precision. The attack culminated in one especially large explosion that threw a tremendous amount of debris high in the air, rocked the bombing aircraft, and then subsided beneath a carpet of smoke. No aircraft was lost.

On the 26th the marshalling yards at Courtrai were the objective of a raid, secondary to the major effort against Essen. In hazy weather but aided by excellent target marking the small force produced a wizard effect against the Belgian railway junction. Almost all the markers straddled the objective and the bombaimers not to be outdone dropped their cargo in a precise pattern around the indicators. Result—innumerable explosions and many fires, and another important link in the Nazi communications severed.

Vaires was the scene of the last attack on communications for the month when on the 29th the marshalling yards bore the brunt. There was slight patchy cloud with considerable haze and smoke over the target but visibility was good and the markers were clearly visible. Bombing was concentrated and resulted in a whole series of explosions culminating in one violent detonation that buffeted the bombers and from which flames shot up to 600 and smoke to over 12,500 feet. As a result of this raid work in the marshalling yards and engine sheds was brought to a complete standstill. If any further evidence of the effectiveness of the attack had been required it was supplied by the photographs, which showed wholesale destruction of rolling stock including 60 locomotives. One aircraft was lost.

Fauquier, former C.O. of the Vancouver Squadron, was

awarded a bar to the D.S.O. and W/C W. H. Swetman, D.F.C., commanding officer of the Thunderbirds, was awarded the D.S.O. during the month.

April

April was notable from two points of view; from that of the whole European air campaign, because the attack on communications begun in March not only continued but gained momentum, and time after time formations were sent out for the sole purpose of disrupting activity at key railroad junctions; from the purely R.C.A.F. standpoint it was even more outstanding as during the month four entirely Canadian raids were carried out. In one of these, to Ghent-Meirelbeke on the 10th, every aircraft came from the R.C.A.F. Group, while in the other three, Noisy-le-Sec on the 18th, Lens on the 20th, and Somain on the 30th, the Canadians were augmented only by small pathfinder forces. In each case the objective was a railway centre. Since all aircraft of the main waves came only from our Group, the four raids mentioned were naturally not major expeditions. To send major forces against such circumscribed targets as yards and junctions would be both wasteful and dangerous. A small force should, and in most instances did, deal adequately with such an objective without undue congestion.

As the first solo effort of the R.C.A.F. Group the raid on the Ghent-Meirelbeke marshalling yards was an outstanding success. Our attack was so timed that 600 tons were dropped in little more than six minutes. While this is not the greatest concentration ever achieved by Bomber Command on one objective, it will without doubt rank close to the leaders when the size of the target is considered. Damage inflicted was severe with 80 trucks derailed, 75 craters on the various railroad lines and 14 hits on the Brussels-Bruges line alone. All our aircraft returned.

Weather ranged from clear to 8/10ths clouds. During the cloudless period many crews, despite the heavy ground

haze, were able to see stick after stick burst directly on the tracks in two distinct lines running north and south. Frequent explosions culminated in one violent upheaval, lasting several seconds, that threw flame and debris thousands of feet in the air, and columns of dense gray smoke even higher.

Though the R.C.A.F.'s main interest that night was their expedition to Ghent, they also contributed to a fair-sized attack on Laon, where in good visibility and under a cloudless sky, a good concentration of bombs was registered. Satisfactory fires and a series of explosions produced a considerable volume of smoke. None of the R.C.A.F. aircraft was missing.

On the Group's second solo effort eight days later to the locomotive workshops at Noisy-le-Sec, the Canadians were reinforced by a small number of pathfinders. A slight ground haze was pierced by the blinding light of photo flashes and did not interfere with visual recognition of the target. Here again the attack was well concentrated and in the most intense five minutes of the raid over 560 tons were dropped with remarkable precision. Fires and explosions broke out and soon the yards were obscured by smoke and dust which rose from the twisted steel and rubble of the blitzed workshops.

Defences, consisting of some heavy flak, a few night fighters and completely ineffective searchlights, were negligible, but four of our crews did not return. One of the crews lost was made up of veterans, F/Os M. C. G. Mercer, A. H. Redman and A. H. McGregor, P/Os J. B. Bell and W. H. Kent and Sgts. S. O. Pett and A. McCluskie.

The Group's third solo effort, on the 10th, sought out the yards at Lens. Aside from searchlights in the Calais and Abbeville districts and on the last leg before bombing, opposition was extremely light. Despite the fact that the target was partially covered with clouds there were sufficient gaps to allow the bomb aimers to pinpoint their objective and

place their bombs accurately. One spectacular explosion rocked aircraft flying at 8,000 feet. Serious damage was done to locomotive and carriage repair shops.

F/L C. G. Ford, skippering a Ghost Squadron Halifax, was attacked by fighters and his machine caught fire. Fearing that he would be unable to get back to base, he gave orders to abandon aircraft and three of his crew complied. Subsequent efforts to extinguish the fire were successful and Ford got his kite back to the U.K. where he crash landed. He was later awarded the D.F.C.

On the same night, the Canadian Group contributed to a moderate-sized attack on Cologne. A photographic reconnaissance aircraft the next day reported fires still burning and much smoke on both sides of the river. The German High Command communique admitted considerable damage to buildings and casualties among the inhabitants.

Somain was attacked on the 30th under good weather conditions, with only a haze to interfere with pinpointing. The pathfinders were late and at first scattered their markers badly, but the Master Bomber halted the attack until the error could be corrected. This delay over a better-defended target would have been serious. Great numbers of Halifaxes orbiting caused a certain amount of confusion and heavy congestion for a short period. But once the new markers were set the bombers proceeded to plaster the marshalling yards. The smoke from terrific explosions prevented departing crews from seeing the devastation they had inflicted. Later reports, however, showed destruction to have been general throughout the yards.

Major Raids in April

Three major raids in which the R.C.A.F. had a part were carried out within five days when Dusseldorf was attacked on the 22nd, Karlsruhe on the 24th and Essen on the 26th.

Over a cloudless route, virtually unopposed except by

fighters over Lille, wave after wave of bombers swept in on Dusseldorf, where the pathfinders had placed their markers perfectly. The first wave, composed largely of R.C.A.F. kites, dropped their bombs in a remarkable concentration. Very serious damage was inflicted and very little of the centre of the town remained undamaged. High priority industrial targets also suffered severely. F/O W. L. Canter, D.F.M., a veteran skipper who did not return from this raid, has since been reported to be a prisoner.

F/L J. Atkins, at the helm of a Bison Squadron kite, was awarded the D.F.C. for this raid.

When nearing the target the aircraft was attacked by a fighter and sustained much damage. One engine was put out of action, while other parts of the aircraft were so damaged that it became difficult to control and some height was lost. Nevertheless, F/L Atkins went on and bombed the target, afterwards flying the aircraft to base. In the face of heavy odds this officer displayed great skill, determination and devotion to duty. He has completed a large number of sorties against targets in Germany and has invariably pressed home his attacks with great resolution.

On the same night the R.C.A.F. contributed to a raid on the Laon marshalling yards, where defences consisted only of a few fighters and some light flak. The Master Bombers effectively directed the attack which hurled debris and smoke high in the air, and was crowned by a terrific detonation as the last bombers withdrew.

Two nights later the R.C.A.F. Group was out in force as part of a major effort against Karlsruhe, which travelled a route reading like a meteorologist's nightmare. Very bad icing, static electricity, two or three hours in dense cloud and freezing rain were a few of the reports brought back. However, the weather cleared somewhat around the target, permitting some crews to pinpoint their objective. Little opposition was offered either by ground forces or night fighters and few combats ensued. The attack produced little accurate bombing with a strong tendency to undershoot,

and was by no means an outstanding success.

Sgts. J. A. Croteau and J. H. St. Yves, gunners in Sgt. V. J. Lachille's Alouette crew, shot down a Ju. 88 in flames en route to the target. The crash was seen by the other members of the crew.

S/L W. B. Anderson of the Bison Squadron won his gong for general excellence and specifically for this raid:

When his aircraft was hit by anti-aircraft fire, S/L Anderson was injured about the eyes by flying splinters. Although temporarily blinded he piloted the aircraft clear of the target area. Later, the second pilot took over the controls, but S/L Anderson fully maintained his duties as captain throughout the remainder of the homeward flight.

After a trouble-free journey the Essen raid opened punctually with many kites early on a target which had been exceptionally well marked by the pathfinders. Weather conditions were good and though ground defences were strong, the sticks were laid right on the markers and fires sprang up all over the area. These soon merged and pillars of smoke rose three miles in the air before the last bomber had left. The German communique again admitted serious damage to buildings and casualties.

Essen had been relatively undisturbed since the summer of 1943 and the great damage wreaked on the Krupp works at that time had largely been repaired. In this new attack no fewer than 91 buildings received extensive damage; not one of the major and very few of the smaller buildings remained unscathed. Over 75 per cent. of the built-up area and 30 per cent. of the partly built area of the city itself were either destroyed or damaged. Very few fighters were in evidence, few combats were recorded and only one Canadian kite was lost.

P/O I. C. Gilchrist of the Iroquois Squadron was the skipper of a Hally which was badly mauled by flak and burst into flames. By dint of outstanding work on the part of the crew the fire was finally put out and they landed at base.

Villeneuve St. Georges, the night's second target, had been raided earlier in the month when, on the 9th, it was one objective of a two-pronged attack that also included Lille. That attack, carried out in bright moonlight and ably led by the pathfinders, produced numerous very satisfactory explosions in the face of a fair amount of heavy flak and some night fighters. Photographs taken the following day confirmed early reports from the crews that the yards had been well pranged. The Lille attack fell mainly on the marshalling yards where every track was severed, and nearby industrial buildings suffered. No Canadian kites were lost and Sgts. R. Davis and H. Stevenson, gunners for P/O R. McCullough of the Bluenose Squadron, crashed an unidentified twin-engined Jerry in flames.

The second attack on Villeneuve St. Georges, coincident with the Essen foray on the 26th, got away to a poor start, but improved as the raid progressed. Photographs brought back confirmed substantial damage which, however, was not exactly on the target and for this reason the raid must be classed as unsuccessful.

The following night the operations had three objectives, on all of which the Canadians had representatives though their main contribution was to the Aulnoye raid. Token forces joined their R.A.F. brothers in the expeditions against Montzen in Belgium and Friedrichshafen on Lake Constance.

The R.C.A.F. attacked the southern of two aiming points in the raid on Aulnoye where they centred most of their bombs around the markers. Damage inflicted was particularly severe, especially to rolling stock and the tracks, every one of which was cut.

F/Os M. C. Sherwood and G. O. Spackman, pilot and bomb aimer of a Tiger Squadron kite, won their D.F.C.'s on this raid:

Just as the bombs were released over the target, the aircraft was struck by shrapnel. The wings and the bomb doors were pierced by

fragments of flying metal, the mid-upper turret was put out of action and its occupant wounded. F/O Spackman went to the assistance of his comrade and rendered efficient first aid. A fire had started close to a petrol tank. F/O Sherwood ordered all the engines fed from this tank, thus reducing the contents as soon as possible and minimizing the danger. Eventually F/O Sherwood reached this country and made a safe landing. This officer displayed great courage and determination in hazardous circumstances. F/O Spackman never spared himself in his endeavours to be of assistance to his captain.

When Montzen was attacked the R.C.A.F. were mainly interested in the airfield, which was well plastered in the face of very active night fighters. Losses were extremely heavy for the Canadians, with the majority of the unreported crews being more or less neophytes.

P/O J. L. Webb, of the Leaside Squadron, who was awarded the D.S.O. for this raid, made the following report:

The trip started off a little rough; as we were crossing the Belgian coast a flak burst caught us under the bomb doors.

We were on the run-up to the aiming point when we discovered that the bomb doors would not open. We turned slightly to starboard while the engineer worked on the emergency system. As soon as the doors opened we turned to attack.

On our run we picked up an Me. 110 which came out of the smoke and haze. Our guns and his fired. Simultaneously, the bomb aimer said, "Bombs gone", and we went into evasive action. The fighter closed to about 100 yards when his fire ceased but he stayed dead astern for a couple of seconds, then fell away to port, our gunners still firing and causing damage to his starboard engine.

As we were leaving the target we were again intercepted. This time we saw him first and we were able to get into a corkscrew, while our gunners scored hits. His shots were passing to port of our tail.

We were again attacked still farther from the target, but on this attack no shots were fired and we seemed to have shaken him. Twenty-three minutes later we encountered another fighter. His attack came from the starboard bow and the first indication was a cannon shell exploding in our starboard outer engine, which knocked off the oil filter. A few minutes later the engine feathered and we continued home on the remaining three.

We obtained a W/T fix at the coast and set course for On the way we were trailed by another fighter, who left us only when we went

into cloud at 6,000 feet. Steering the course, and using the ... beam, we broke cloud over the lighthouse and signalled that we were coming in. At about 50 feet and well down the runway, our starboard inner engine quit, causing the starboard wing to drop and putting us on edge in a violent turn to starboard. The only thing left was to try an overshoot. We had quite a bit of difficulty in regaining sufficient height, but at 600 feet finally got our starboard wing up and made another approach. This time everything went well and we landed safe and sound.

Webb's rear and mid-upper gunners, Sgts, D. H. Wright and W. J. Ziomko, were both awarded D.F.M.'s for their part in the show.

Friedrichshafen, the third objective, was very successfully attacked over a slight haze which, however, interfered very little with visibility. Fires started early and within 15 minutes the whole area was a mass of flames broken occasionally by explosions. Smoke rose to 18,000 feet from the town, a very large part of which was completely devastated. Flak, searchlight and night fighter opposition was only moderate and though the losses on the raid as a whole were fairly heavy, all R.C.A.F. kites returned.

Token contributions of R.C.A.F. aircraft were also made to Aachen on the 11th and Tergnier on the 18th.

During the month W/C W. A. McKay of the Leaside Squadron was awarded the D.F.C. and several changes in command of R.C.A.F. squadrons took place: Hamber replaced Swetman with the Thunderbirds; R. A. McLernon succeeded Richer in the Alouettes; and G. A. McKenna went to the Snowy Owls vice W/C D. McIntosh, D.F.C.

May

The imminence of the invasion of the Continent was reflected in the choice of most of Bomber Command's targets during May, when emphasis was shifted from long-range strategical objectives to smaller but more numerous targets of tactical importance. This change of policy meant that the number of aircraft involved against any particular target was seldom of major proportions. The exceptions were at-

tacks against Duisburg, Dortmund, Aachen and Bourg Leopold.

The general pattern of raids may be roughly described as a concerted attack on the enemy's communications coupled with due attention to what were vaguely described as "military installations" but are now known to have been, in many cases, the launching platforms for Jerry's much-vaunted robot bombs.

The R.C.A.F. had a busy month and in 32 days contributed to 24 attacks. This increased tempo meant the stepping up of squadron activity to such an extent that night after night units were required to furnish a maximum number of aircraft. And proud were the squadron commanders and their men who could meet the recurring demand! Despite the increased operations the percentage of losses showed a most encouraging drop; in fact more than one squadron completed the month without the loss of a single member due to enemy action.

Seven of the Canadian attacks were against communications when railway centres were bombarded at St. Ghislain on the 1st, Haine St. Pierre on the 8th, Ghent the 10th, Boulogne the following night, and Louvain on the 12th. Le Mans marshalling yards bore the brunt on the 22nd, with Aachen two nights later. In addition the wireless station at Au Fevre and the radar station at Mont Couple were both attacked on the last day of the month.

Gun emplacements were attacked at St. Valery-en-Caux on the 7th and 9th, with Calais also bombed on the latter night. Le Clipon and Merville-Franceville were the objectives on the 19th, Trouville on the 24th with Le Clipon again on the 27th and a rehabilitation camp at Bourg Leopold on the same night. A general industrial raid on Dortmund on the 22nd completed the major picture for the month.

Small numbers of aircraft were provided also against Montdidier on the 3rd, Mantes Gassicourt on the 6th, Mont

Couple and Le Mans on the 19th, Rennes St. Jacques on the 27th and Mardyck on the 28th. At the last named, a very experienced crew made up of F/L J. Mitchell, F/O A. Hinscliffe, P/Os R. D. Borrowes, D.F.C. (pilot) and R. L. Squires, and WOs R. J. Montgomery, G. D. Spearman and B. F. Pothier was lost.

The attack on St. Ghislain was carried out under good weather conditions except for a few broken clouds and slight haze. The bombers dropped stick after stick right across the target indicators on instructions from the Master Bomber and a series of explosions threw dust and smoke high in the air. When the bombers had withdrawn, 12 tracks and 75 to 100 wagons had been demolished, very severe damage inflicted on the locomotive shed and the carriage and wagon repair shop completely destroyed.

P/O J. C. McNary of the Moose Squadron on his 19th sortie was the skipper of one of two crews that were lost.

A week later the railway centre at Haine St. Pierre was attacked in bright moonlight. Markers were well placed in good quantity and the majority of the bombs fell directly across the tracks. Our losses were heavy, considerably greater than is ordinarily calculated for such a target. However, even in the face of heavy loss, the attack was deemed a success in view of the very extensive damage inflicted. A repair shop was destroyed, an oil store set on fire and main railway lines and sorting sidings were completely disrupted.

A veteran Thunderbird crew composed of 1st Lt. J. K. Smith, D.F.C. (U.S.A.A.F.), P/Os K. G. Markis, A. Jackson, V. Mudford, H. G. Congreve and A. L. Horton, WO K. L. Schmidt and Sgt. E. E. Park did not return from this raid. Two other experienced crews were lost in F/Ls W. M. Chase, G. N. Knupp and W. Sinclair, P/O C. M. Sylvah and FSs J. T. Gill, R. D. Daniels and J. M. Buckley; and P/Os A. E. Darlow and L. A. Nethery, WO G. A. Lorimer, FSs A. Burrell and D. J. Copeland and Sgts. T. E. Utton and P.

W. Richards. Darlow is a prisoner of war while Lorimer and Nethery are safe.

Gun positions at St. Valery-en-Caux, previously attacked on the 7th, were the objective again two nights later, when gun emplacements at Calais also felt the weight of our bombs. On both attacks, the customary haze made observation difficult, and, on the former, damage was negligible. There were no casualties on either raid. In the raid on Calais the pathfinders were most successful and, as is so frequently the case, the bombers were also accurate as later reports and photographs proved.

The following night the Canadians were back on railway targets with the marshalling yards at Ghent as the objective. The accurately-laid eggs caused fires and explosions and inflicted moderate damage. Night fighters were active both over the target and on the homeward journey and several combats took place. Sgts. A. E. Ashford, J. D. Turner and L. S. Owen, gunners on an Alouette Squadron kite skippered by FS C. A. 'Selfe, were successful when attacked by a Ju. 88 over the North Sea. After several bursts from our lads' guns the enemy broke away and hurtled into the mist in a spin with his whole starboard side in flames.

When Boulogne was attacked on the 11th crews had difficulty in finding the target because of unpredicted winds, and the weight of the attack fell on buildings to the west of the marshalling yards. One of the few crews lost included the following veterans, S/L C. K. Barrett, F/O D. G. Bentley, P/Os T. A. Goundrey and A. Hamilton and FSs G. E. Coe and W. H. Riding.

Back to Belgium on the 12th, the Canadian Group attacked Louvain in a raid which was highlighted by an enormous explosion. Heavy damage was done to nearby engineering works and considerable dislocation of tracks and rolling stock effected.

It was a week before the Canadians were out again at

which time they sought out two gun emplacements in France at Le Clipon and Merville-Franceville. Against the former the Hallies and Lancs, with well-placed markers to guide them, concentrated their bombing well but at Merville-Franceville, where slightly more flak was encountered, the results were not quite so cheering.

Three nights later the R.C.A.F.'s main interest was their attack on Le Mans railway centre, though they also contributed to the major raid against Dortmund. On the former there was some early congestion but despite this the bombing was well grouped and numerous sticks straddled the markers. Losses were again very slight, while damage inflicted was severe, many railway wagons being destroyed and the nearby Junkers repair plant almost completely wrecked.

From a Canadian standpoint the Dortmund raid was costly as Jacobs, the commanding officer of the Goose Squadron, who was well advanced on his second tour was lost with his crew, composed of F/Ls T. R. McDougall, D.F.C., and J. R. Hanson, D.F.C., F/Os W. G. Philpot, J. B. Dallyn, P. M. Hughes and L. E. Morgan, and P/O M. Henderson. P/O C. E. G. Patterson, a veteran of the Moose Squadron, was skipper of another aircraft that did not return.

Results of the raid, however, were fairly good. Well-spread-out fires and one very large explosion inflicted severe damage on the south-east part of the town which had been least affected by the 1943 series of attacks.

Two nights later the Canadians provided aircraft for raids on the west marshalling yards at Aachen and on gun emplacements at Trouville. At Aachen, though bombs straddled the tracks and caused explosions and fires, little important damage was done.

On this raid, Sgt. J. P. Florence, rear gunner in the Tiger kite captained by WO B. Vanier, crowned a most successful tour of operations by shooting down an Me. 410 after

giving the pilot the necessary instructions to evade an earlier attack by another Jerry night fighter. Florence was awarded the D.F.M.

Another outstanding performance was put up when F/L W. M. Stephen was beset by accurate flak and a night fighter some 70 miles before reaching the target. Despite serious damage to his aircraft, which made control almost impossible, Stephen carried on and after successfully bombing his objective brought his kite home to base. For this Bill was awarded the D.S.O. to complete a most successful tour of operations. Losses on this raid were not above average. One veteran crew was lost, composed of S/L G. Bennett, D.F.C., on his 46th operation, F/L E. Baker, P/O F. C. Davies, WOs W. V. Joel and J. H. Frame and FSs A. Rodgers, D.F.M., and J. I. Rees. Baker, Davies and Joel have since been reported as prisoners of war, while Frame is safe.

On the Trouville raid, which was carried out without loss in the face of very slight resistance, bombing was fairly well concentrated within the target indicators.

Three nights later the Canadians staged a small raid on Le Clipon in good weather. Though a series of medium-sized explosions was reported, results were only fair.

Similar weather conditions prevailed for an attack the same night on the military camp at Bourg Leopold. Aided by well-placed markers and a concise running commentary by the Master Bomber, a good bomb pattern was obtained. Very heavy damage was inflicted and not one large building in the extensive barrack area escaped damage. Other than night fighters, defences were negligible and the loss of aircraft was considerably smaller than usual. Sgt. P. Engbrecht, mid-upper gunner for Flt. O. J. G. Keys (U.S.A.A.F.) of the Tiger Squadron, shot down an FW. 190 and an Me. 110 while beating off 14 attacks. The 190 blew up in the air while the 110 exploded as it hit the deck.

Two aircraft of the Snowy Owl Squadron also had suc-

cessful encounters. Sgt. H. W. Robinson, rear gunner in the aircraft skippered by F/O E. M. Aldred, reported:

The e/a was first seen after tracer had been fired at another bomber, starboard quarter up at 500 yds. range.

I gave corkscrew starboard, and opened fire with a burst of 300 rds. Flames were seen to issue from the motor of the e/a and I gave a further burst of 400 rds. The e/a immediately caught fire and was seen to dive earthwards where it hit the ground and exploded.

F/O R. A. Kalle reported as follows:

The e/a was first sighted on the starboard quarter up, range 450 yards. Immediately after the rear gunner (Sgt. G. D. Burton) had given corkscrew starboard, both gunners fired. The e/a fired a medium burst registering hits on our starboard inner engine, wing, mid-upper turret and starboard top side of fuselage. The Halifax then went into a steep dive to port and the fighter raked the a/c with another medium burst causing damage to the bottom of the fuselage and bomb doors.

The range was now 100 yards and the rear gunner fired another long burst of 1200 rounds causing the e/a to burst into flames. The e/a went into a steep dive completely enveloped in flames and was clearly seen to hit the ground and explode.

The Halifax was now on fire with flames issuing from the starboard inner engine, wing and bomb bay. The pilot gave instructions to stand by to abandon aircraft, and the Halifax was put into another steep dive to try to extinguish the flames. This manoeuvre was successful and we resumed course.

Kalle was awarded the D.F.C. and Burton the D.F.M.

F/O E. E. Kirk was the captain of an Alouette Squadron aircraft, whose rear and mid-under gunners, P/O O. R. Collins and Sgt. L. S. Owen, were also successful:

Attacked by a single-engined fighter from port quarter down, first seen by the mid-under gunner at a range of 700 yards. Midunder gunner immediately gave corkscrew port, and opened fire at a range of 600 yds. E/a did not fire. The rear gunner opened fire at 500 yds. range. The fighter cut across the stern and broke away to starboard quarter down. The rear gunner, mid-upper gunner and engineer saw the e/a burst into flames. Thirty seconds later it was seen by the skipper, mid-under, rear and mid-upper gunner to hit the ground and explode.

A very active month closed with a double effort against Au Fevre and Mont Couple on the 31st. After travelling through virtually impossible weather over the United Kingdom, our bombers arrived to find Au Fevre standing out clearly under a cloudless sky. Markers were carefully placed and numerous sticks straddled the target indicators. Soon a cloak of smoke and dust, pierced from time to time by the flashes of numerous explosions, lay over the target area.

Defences were no more active than at Au Fevre when our aircraft swept in to plaster the radio station at Mont Couple with deadly efficiency. Severe electrical storms had dogged the way of all aircraft and interfered with the effectiveness of the Master Bomber, but when the raid was over the entire area was saturated with craters and the station completely unserviceable. There were no casualties on either raid.

W/C J. D. Pattison, who had withdrawn from the Bisons after being injured some weeks earlier, was succeeded by W/C A. F. Avant, D.F.C., early in the month, while H. R. Dow replaced W. F. M. Newson, D.F.C., in command of the Iroquois Squadron. W/C L. H. Lecomte took over command of the Alouette Squadron from Bob McLernon who was posted to the Goose Squadron to replace Dave Jacobs, lost over Dortmund. W/C W. A. G. McLeish succeeded D. T. French, D.F.C., in the Ghost Squadron and W/C J. K. L. MacDonald was posted to the Leasides in place of Bill McKay.

Unit commanders decorated during May were Bill Pleasance, McLernon, Bob Turnbull, Hamber, McLeish, and C. E. Harris, a Canadian in the R.A.F., commanding officer of the Bluenose Squadron.

CHAPTER V
SEA-MINING

THE work of Bomber Command is not confined to seeking out distant enemy targets and dropping a load of cookies or incendiaries on a specific location. Crews also undertake the less hazardous and usually duller tactical diversions, leaflet dropping, sea searches and minelaying in enemy waters.

Tactical diversion is a loose term to denote an operation in varying force sent out either just before or simultaneous with a major bombing effort in the hope of diverting enemy night fighters from the main force. The diversionary attack, which seldom carries bombs, penetrates only a short distance into enemy territory and is aimed in a direction far different from that of the main force. The tendency on the part of the enemy is to detail the night fighters to protect an objective in the direction toward which the spoof is pointed. On many occasions this ruse has been extremely successful.

At one time squadrons also undertook the dropping of leaflets, but this work has now largely been taken over by operational training units as part of a crew's preparation for the more arduous adventures ahead. Generally speaking the same holds good for tactical diversions but sea searches and mining are still frequent operations in most units.

Sea searches for missing aircraft are unhappy for two

reasons. Ten chances to one they involve stooing around a given area for the aircraft's limit of endurance, searching, in many instances vainly, for a dinghy which in all probability contains one or more of the crew's own pals. Not infrequently the weather is bad and the sortie resolves itself into five or six hours of vain peering around for a dinghy without even, at least in most instances, the enlivening attacks of a prowling Jerry.

But mining is a never-ending job. In the early part of the year covered by this story the Leaside Squadron took their Wimpies out night after night to channels and harbours on the enemy coast. When the Leaside Squadron converted to heavier aircraft the Ghosts took on the job and for some months carried out a concerted attack on Nazi waterways. In fact there is scarcely a squadron of the R.C.A.F. Group which did not at one time or another during the year send out aircraft with loads of mines.

Their objectives for security reasons must remain indefinite as, to be fully effective, the exact position of a minefield must be unknown to the enemy. Even if this cannot be achieved and Jerry knows approximately where the mines have been laid the effort is not entirely lost, as mines are not always fixed firmly and may shift with the wind and tide. For this reason he must keep up a constant sweep over areas which his shipping is likely to traverse, and divert a considerable force of men and vessels from other occupations, where they might be more profitably employed.

The actual tonnage of shipping destroyed, which is very considerable, is not the most important effect of our ceaseless campaign of minelaying. In the final analysis, it is the slowing up of shipping and the diversion of vital manpower which has the greatest effect on the German war effort and for this reason bears the greatest fruits. Night after night our kites fly through all kinds of weather to pinpoint their objective, drop their mines and scurry home. This is dull work, but the casualties are few. Seldom are the miners

interfered with by night fighters and when they do get the chop it is usually due to accurate flak. Not infrequently they get themselves into unpleasant situations through their inability to lay their mines in the designated area without coming into uncomfortably close contact with shore and ship batteries. Nor are their activities localized; tonight they may be along the coast of France, tomorrow night in the Baltic or a Norwegian fiord.

Minelaying Incidents

But all mining sorties are not boring as FS P. Dennis of the Leasides found one night in October. With his crew composed of P/O G. O’Gorman, FS G. Atkins and Sgts. Woolfenden and Quesnel, Dennis took his Wimpy off and successfully laid his mines. Then his troubles started. An Me. 110 attacked and Quesnel, the rear gunner, with a long burst set the Me. in flames and later saw it explode in mid-air. No sooner was this Jerry disposed of than another 110 appeared and peppered the Wellington, damaging the flaps, hydraulics, oil tanks, aerial, right elevator trim and wing before Quesnel’s bursts drove him off. The Wimpy limped home to base. This exploit was one of those cited when Quesnel was later awarded the D.F.M.

Bill Pleasance of the Iroquois Squadron also had some trouble on a sortie in October, when navigational and other aids, brake pressure, astrograph and one engine were all rendered snafu through unpleasantly close attention from flak. Despite all these difficulties he laid his mines in the appointed place and returned to base.

In March, FS W. Wood of the Bluenose Squadron was forced to abandon his mission owing to mechanical failure when only 40 miles from his objective. Just after turning homewards, the kite was attacked by an Me. 100 and the hydraulic system rendered u/s, rudder trim cables severed, the bomb doors hit by cannon shell and the escape hatch, starboard wing and tail planes all pierced by bullets before

the Jerry could be shaken off. Twice more the aircraft was attacked, a small fire started and three crew members wounded. Despite all these difficulties Wood brought his aircraft back to base.

P/O G. R. H. Peck, a pilot of the Moose Squadron, received a D.F.C. for a mine-laying operation in March.

On the outward flight one engine caught fire and had to be put out of action. Some height was lost but P/O Peck continued to the target to complete his task. On the return flight a second engine became useless. Height could not be maintained but P/O Peck brought the aircraft down on the water successfully. All the crew got safely aboard the dinghy and were rescued some three hours later. On this, his first sortie as a captain, this officer displayed inspiring leadership, great determination and devotion to duty.

When out mining one night in April, Sgts. J. Nowlan and G. Dunlop, gunners for P/O A. Doran of the Bluenoses, shot down a Ju. 88 which they saw crash and explode. P/O G. L. Gonyou of the Ghosts had two adventures. The first of these in May was when the distributor arm stuck in one position so that the mines couldn't be dropped. While crew members endeavoured to rectify the defect, the pilot stooed around over land for three quarters of an hour, but unwittingly he chose a Jerry aerodrome to fly over. Thinking he wanted to land the Huns turned on their lights, and he saw two other kites, probably Jerries, in the circuit. But mines aren't bombs, and the airfield escaped unscathed. Another night, in June, he had just dropped his mines, seeing only three fall, when the kite was hit by flak. Sgt. H. Prendergast, the flight engineer, and F/O F. W. Rose, the bomb aimer, went to inspect the bomb bays and just as they set to work the fourth mine fell out—apparently released by flak.

FS H. M. Smith of the same squadron had just finished mining one night when his aircraft was caught by flak and subjected to a heavy bombardment for nearly two minutes during which the machine was wracked from propellers to

tail and he was wounded. Despite all the difficulties Smith flew his kite back to base. On another occasion, F/L R. A. Anderson, another Ghost pilot, had his kite hit by lightning; the wireless operator, WO K. Dilley, was knocked unconscious and fabric blown off the wings and nose of the aircraft. The storm continued, the direction-finding instruments were put out of commission and the bomb aimer, WO K. F. Lockett, had his face frozen. The pilot was unable to return to his home aerodrome, due to the storm and his lack of instruments, but brought his plane safely down at another base in the United Kingdom.

F/O R. Bannihir of the Tigers had some fun in May. He ran into ice 50 miles before reaching his mining area and both inner motors packed up. It took 20 minutes of fiddling before they cleared and he could carry on to his objective.

Though mining operations may be less dangerous than long distance bombing, they nevertheless have their casualties. This was especially true in August when two experienced Porcupine crews were lost. The first crew was composed of F/Os J. A. W. Morgan, G. H. Gill, J. R. O. Clerc, and P. E. Marchildon, and FSs K. C. R. Stewart and J. W. Moffatt and Sgt. R. F. Young. F/L J. C. Valk, F/Os J. C. Sprott, G. Scott and M. H. Fleming, P/O J. A. Tolmie, FS T. L. Baker and Sgt. R. I. Atkinson made up the second. Gill, Marchildon and Scott are prisoners.

CHAPTER VI

DAY OPERATIONS-FIGHTER AND RECONNAISSANCE

A. Fighters

IN September 1943 five Canadian Spitfire squadrons were working together in the 2nd Tactical Air Force as an R.C.A.F. fighter wing under the command of G/C W. R. MacBrien. Three of them usually operated from the same airfield, commanded by W/C K. L. B. Hodson, D.F.C., D.F.C. (U.S.A.), and flew under the leadership of W/C B. D. Russel, D.F.C. One of these units, led by S/L E. L. (Jeep) Neal, D.F.C., was the original R.C.A.F. fighter squadron with which Dal Russel had won his gong during the Battle of Britain. The second, the Roaring, was commanded by S/L G. C. Semple, and the third, the Falcon, by S/L G. C. Keefer, D.F.C. The other two squadrons worked from another airfield under the command of W/C M. Brown with W/C J. E. Johnson, D.S.O., D.F.C., (R.A.F.), as winco flying. Johnny Johnson is one of the outstanding fighter pilots in this war; by the end of August 1943 he had a score of 24 enemy aircraft (including seven shared) destroyed over enemy territory, and had just won a bar to his D.S.O. With him flew the Wolf Squadron, which had been taken over late in August by S/L F. E. Grant, and the Red Indians under S/L R. W. McNair, D.F.C. and Bar, veteran of the Battle of Malta with 13 scalps at his belt and an

equal number of credits for aircraft probably destroyed or damaged. With such capable and successful flying leaders, the five squadrons formed a redoubtable fighting force. Between November 1942, when the wing became Canadian, and the end of August 1943, they had destroyed 96 enemy aircraft.

Two other squadrons, stationed in the Midlands, flew together as another wing under W/C L. V. Chadburn, D.S.O., D.F.C. S/L G. W. Northcott, D.F.C., commanded the Winnipeg Bears while S/L R. H. Walker had recently been appointed C.O. of the City of Oshawa unit.

The major work of the fighter squadrons was bomber escort. Since early in 1941, bombers protected by fighters had been making daylight attacks on airfields, railroad yards, factories and harbours in the occupied lands. These combined fighter and bomber operations had increased steadily in size and frequency until two, three, four or more strong attacks might be carried out in a single day. The Hampdens, Blenheims and Bostons which once had constituted the striking force had now been replaced by the medium Mitchell and Marauder or the heavy Fortress and Liberator bombers of the T.A.F. and U.S.A.A.F. Some of the fighter squadrons on these operations would provide close escort to the bombers while others swept in the van, to the flanks and in the rear to destroy any enemy aircraft which might come up to engage the main formation. The Spitfires also went out on high-flying sweeps behind the enemy-held coasts challenging the *Luftwaffe* to come up and give battle. At other times they streaked across the Channel, skimming the waves, to make low-level attacks on ground targets—enemy transport or airfields, gun posts or power installations. In addition they provided air cover for merchant convoys in the Channel and took part occasionally in attacks on enemy shipping, escorting a striking force of Beaufighters or other aircraft; occasionally the Spits themselves made the attack.

September

September was a busy and successful month for the Spitfires—the last good period of Hun-hunting before the fogs and rains of autumn and winter came along to halt operations. There were many escort missions for bombers hammering airfields and marshalling yards in France and Belgium. Much of this activity was part of a great combined sea-land-air exercise which began on August 25th and culminated on September 9th when a great armada of tank and troop-landing ships, escorted by cruisers, destroyers and smaller craft, put out into the Channel and paraded along the French coast ten miles off Le Touquet. Most of the air operations during the 16-day exercise were uneventful except for the usual flak barrages, but occasionally enemy fighters appeared. Buck McNair won his 14th victory on the 3rd when he blew up and crashed one of four Me. 109s which were shadowing some Fortresses, while F/O M. C. Love, one of McNair's pilots, destroyed another. This scrap was fought at such close range that bits of wreckage from the exploding Me. damaged Love's Spit and he had to bale out. Word has since been received that he is a prisoner of war.

On the 4th all three Canadian wings participated in a largescale operation, escorting Marauders in attacks on the railroad yards at Lille, Roubaix, and St. Pol, during which Johnson led one of his sections to intercept nine FW. 190s. The winco quickly destroyed one for his 25th victory but S/L Grant was lost during the dogfight. F/L N. R. (Norm) Fowlow, who had just been awarded the D.F.C., succeeded Grant in command of the Wolves. In a later phase of this operation, Chadburn's wing cut off 15 Me. 109s which were climbing through the haze to engage the Marauders returning from St. Pol. Chad shared one Hun with F/Ls R. D. Booth and D. E. Noonan and F/O A. H. Sager of the City of Oshawa Squadron and helped damage another. In the engagement, however, the wing was split up and as

Chadburn and six other pilots were crossing the French coast on their way out they were bounced by ten FW. 190s. Chad destroyed one, but F/O D. F. Prentice's kite was hit and he was forced to bale out over the Channel. An A/S/R launch soon fished him out. Meanwhile the Winnipeg Bears had engaged in a series of dogfights with a score of 190s during which Northcott destroyed one whitecowled fighter for his seventh victory; P/O L. A. Moore shot down another in flames and damaged a third, while Sgt. J. N. Thorne set fire to a fourth. Yet another Hun, an Me. 109, was destroyed by F/L J. D. Mitchner. For the loss of one pilot the R.C.A.F. squadrons had destroyed seven enemy fighters and damaged two in the course of the day's operations.

The Canadians were again in action over France on September 6th. One wing was covering a beehive of FORTS withdrawing toward the coast when Buck McNair, leading the Spits, spotted a bright blue FW. 190 following the bombers. Closing to point-blank range, Buck with one long burst crashed the FW. in a wood seven miles from Beaumont-le-Roger aerodrome, for his fifteenth decisive victory and his seventh since joining the Red Indians in June. Late the same afternoon, after completing another large-scale bomber *cum* fighter operation, McNair's wing swept inland towards Amiens. Just west of that city they encountered two groups of 190s and in the ensuing dogfight members of the Wolf Squadron shot down two in flames and damaged two others. F/L H. J. Southwood and F/O H. J. Dowding were given credit for the Jerries destroyed.

September 9th, the final day of the combined exercise, was reminiscent of August 19th, 1942 in the intensity of air activity and the pressure under which ground crews worked to keep aircraft serviceable. With that the similarity to Dieppe ended, however, as Jerry refused to play and there was a complete absence of fighting either on the sea or in the air. Astir and briefed before first light, all the Canadian

squadrons made at least three sorties during the day to provide cover for the "invasion convoy" and for the Mitchells, Bostons and Marauders engaged in shuttle-bombing of gun positions along the French coast and enemy aerodromes where, it was hoped, Jerry might be concentrating his aircraft. A feeble show of opposition at St. Pol was the only evidence of the G.A.F. Eight FW. 190s which bounced Jeep Neal's squadron lost their nerve and broke off without scoring any hits while Keefer's Falcons, free-lancing over the area, chased other 190s but couldn't catch them. This operation was the first for F/O G. F. Beurling, D.S.O., D.F.C., D.F.M. and Bar, as a member of the R.C.A.F. Buzz, who had just transferred from the R.A.F., had been posted to the Wolf Squadron with which two years and more earlier he had begun his fighting career as a sergeant pilot. For W/C Johnson, on the other hand, the day's activities marked the end of an operational tour. Since March 1943, when Johnny first led the Wolf-Red Indian wing, he had raised his score from nine to 25 enemy aircraft destroyed, while the pilots of his wing had accounted for almost 60 more. His successor, W/C H. C. Godefroy, D.F.C. and Bar, had a score of six destroyed plus several damaged when he reported as winco flying.

After this very active period in early September the next fortnight was much quieter. The routine of escort missions continued, hampered to some extent by the mists and rain of early autumn, but there were only a few fleeting engagements as the protecting fighters parried enemy thrusts at their bomber charges. On the 11th Dowding crashed an Me. log to win the D.F.C. for his third victory plus shares in two more, and eight days later F/L R. A. Buckham, a Red Indian flight commander, destroyed another. Buckham, decorated with both the British and American D.F.C.'s, was beginning his second tour; he had already destroyed four and a half enemy aircraft and damaged several others while flying with the City of Oshawa Squadron.

The two weeks of comparative quiet ended on September 24th when there were several brushes with groups of enemy fighters, which culminated in the afternoon in a free-for-all scrap in the Poix area. Encounters during the morning were inconclusive when Canadian Spitfires drove off two Jerry formations and attempted to bounce another. Two pilots of the Red Indian Squadron carried out a little strafe on their own. While flying at 21,000, P/O W. F. Cook blacked out due to oxygen trouble and dived to 8,000 before regaining control. His No. 2, F/L R. C. Wilson, followed Cook down to protect him and together they turned towards the coast. Just as they were about to cross near St. Valery they spotted a freight train and Wilson turned his cannons on the cars while Cook took on the engine. Steam and smoke poured from the locomotive as it lurched to a stop.

Following an unsuccessful attack on the freight yards at St. Omer in the early afternoon, strong formations of Marauders, with a fighter escort which included several R.C.A.F. Spitfire squadrons, struck at Beauvais-Tille aerodrome. Many enemy fighters were lurking in the sun and, as the formations swung away from the target, both Chadburn's and Godefroy's wings came into action. Climbing to engage three FW. 190s, Chadburn and Mitchner together destroyed one. Two others were credited as probables.

Meanwhile, over Poix, Hugh Godefroy with a section from the Red Indians had successfully bounced ten FWs. The winco put several bursts into one which headed for the deck, trailing smoke, and crashed south-east of Poix. At the same time Buckham went after three others which took violent evasive action as they dived away. Bob concentrated on the middle Hun, but the FW. on the port side crossed squarely in front of his sights and blew up in mid-air, giving the leader an opportunity to get away with only slight damage. While these combats were being fought Buzz Beurling had spotted an FW. circling above the formation

and turned to engage as the enemy pilot dived. One brief burst blew off most of the Jerry's port wing and the 190 spun down, obviously done for. The two wings together had destroyed four FW.s, probably destroyed two and damaged one. Beurling had won his 30th victory, Godefroy his seventh, Buckham his sixth and everyone was happy.

The last operation of the month was another large-scale bomber and fighter show against Conches airfield during the afternoon of the 27th, in which all three R.C.A.F. wings participated. Shortly after Chadburn's wing had driven off one group of enemy fighters, two Me. 109s appeared. Chad, after crashing one of these near Bernay, drove an FW. 190 off the tail of one of his pilots, chased the Jerry down to tree-top level and probably destroyed it. In addition to these two victories the winco had helped to send a third Hun high-tailing for home—and the attention of the repair section—while pilots of the Winnipeg Bears shot up and probably wrote off two more Focke-Wulfs.

Canadian losses during September were light. Two pilots did not return from operations in the early part of the month; a third was lost on the attack on Conches and F/O V. A. Haw, A.F.M., was taken prisoner following a dog-fight with several Focke-Wulfs. Haw had won his gong as a sergeant instructor at a service flying training school at Yorkton, Sask. On another sortie F/O J. W. Fiander of the Rams was forced to drop out of formation due to a glycol leak. From 14,000 feet, north of Rouen, Fiander glided out over the Channel with idling engine until he was down to 1,500 feet, 20 miles west of the Somme estuary, and then baled out. Less than an hour later, an A/S/R Walrus picked him up as he bobbed in his dinghy six miles north of Dieppe. With the additional load the Walrus was unable to take off again and taxied across the Channel to Dover, arriving there after a voyage of thirteen hours! This was the second time Jim Fiander had been hauled out of the drink.

All in all September had been an exceptionally good

month for the Canadian fighter squadrons, with a record of 19 enemy aircraft destroyed, six probably destroyed and 14 damaged. Eighteen of these 39 successes had been won by the Spit IX wing led first by Johnny Johnson and later by Hugh Godefroy. Lloyd Chadburn's two Spit VB squadrons had accounted for the others. Chadburn carried off individual honours with ten successful combats, in which he destroyed two enemy fighters, probably destroyed one and damaged two and shared two destroyed, a probable and two damaged with other pilots.

October

October began well when, on the 3rd, the R.C.A.F. wings destroyed ten Huns and damaged four. In the morning Godefroy's and Chadburn's wings encountered bags of Huns while escorting Marauders to Woensdrecht and Schipol aerodromes in the Netherlands. As the bombers turned away from Woensdrecht, Godefroy's pilots sighted several formations of FW. 190s flying at 23,000 feet. The Red Indians, led by Buck McNair, gave chase to one group of 11, and eventually caught them near St. Nicholas, southwest of Antwerp. "I closed on the two centre a/c", McNair reported, "actually putting myself in front of six on my starboard. I called for the starboard section to take the Huns behind (and) then opened fire from 300 yards, 10° (on the) port flank (and) slightly below. After a two-second burst my engine seemed to blow up and sheets of flame and black smoke obscured all vision. When my engine exploded and I spun down, the squadron broke off their engagement and came down with me." Pulling the Spit out of the spin, Buck limped homeward covered by the Indians. Over Ostend the Merlin picked up again and McNair got safely to base.

Buck had not been able to see what happened to his opponent but the pilots of his squadron noticed strikes and white smoke as the bursts hit home just before the FW.

went spinning down in flames. It was McNair's 16th victory.

Meanwhile Chadburn's wing, covering another Marauder formation returning from Schipol, had been bounced over the Dutch coast by upwards of 20 Me. 109s. The Huns in "turn were jumped by a higher formation of Allied fighters and a general dogfight followed. Chadburn destroyed one Messerschmitt and F/O W. G. Dodd finished off a second while Northcott, Mitchner and Thorne of the Winnipeg Bears damaged three others.

In the afternoon Dal Russel's wing, returning from an abortive effort as withdrawal cover to Bostons bombing a power plant near Paris, ran into trouble when the Falcon Squadron was bounced by 15 or more FWs. between Ault and Abbeville. In the ensuing dogfight FS H W. (Bud) Bowker shot one down into the sea and crashed a second into a house on Ault beach while another pilot was credited with a damaged. Enemy casualties in this engagement would probably have been higher if petrol shortage had not handicapped our pilots in pressing home their attacks.

After tea the R.C.A.F. wings set out again, one formation of three squadrons to escort Marauders to Beauvais while Buck McNair led another group on a sweep over Hardelot, Bethune, Amiens and Roye. Near Roye-Amy airfield the Indians tore into a group of 25 Jerries with guns blazing and destroyed three FockeWulfs. P/O J. S. Hicks accounted for one and P/O H. F. Packard another, while P/Os K. R. Linton and W. F. Cook shared the third. Cook did not return from the sweep, but while the Huns had brought him down, they couldn't keep him down; six weeks later he was back in England, re-visiting his old friends.

At the same time that the Indians were breaking up the first group of enemy fighters, the Wolves were being attacked from above by another strong formation of 40 or more. Sgt. S. Barnes was lost but F/L A. C. Coles destroyed

two FW. 190s in quick succession. Coles reported that as the Spitfires climbed into the Huns above:

One section broke off to the west and I followed them down with Red 4 from 20,000 ft. in a diving turn to port. I chose the middle one of seven and fired several bursts closing from 500 yards. White smoke started coming from him. At about 16,000 ft. I was forced to break to port into the three on that side. However, I was able to see my first opponent going down with a great deal of white smoke pouring from it and later saw it twice and then in its line of dive an a/c in flames on the ground. I claim this 190 as destroyed.

When breaking to port on the three 190s on that side I chose the middle one and following him fired bursts from about 500 yds., and closing. At approximately 12,000 ft. I saw an explosion in his port wing root and a number of big pieces fly off. I broke left and when I looked back two seconds later saw a parachute. I therefore claim this 190 as destroyed.

The next bit of excitement was on the 8th when four of Northcott's pilots, escorting an Anson on an A/S/R search over the North Sea, sighted a Do. 24 flying westward at sea level 65 miles east of Yarmouth. Dropping their long-range tanks the pilots, Dodd, Moore, F/L J. A. H. G. de Niverville and P/O L. Woloschuk, in turn dived on the flying-boat and saw their bursts strike home. After a second attack by Moore, which shot away part of the starboard wing, the three-engined aircraft plunged into the sea. No survivors could be seen. Two weeks later Dodd was awarded the D.F.C. "A fine leader (of) great skill and fighting qualities", he had previously served in the Middle East where he had destroyed four and a half enemy aircraft. His excellent work on one patrol, it was pointed out in the citation, "contributed materially to the rescue of ten airmen who were adrift on the sea".

Several changes in squadron personnel occurred at this time. On October 15th Buck McNair, who had just been awarded a second bar to his D.F.C., made his last sweep as leader of the Red Indians before succeeding Dal Russel as winco flying at another airfield. Dal received a bar to the

gong he had won in the Battle of Britain; during his tour as wing leader not a single under escort by his pilots had been lost through enemy air attack. S/L C. M. Magwood, D.F.C., who on his first tour had destroyed four Jerries and damaged several others, now became chief of the Red Indians. S/L I. C. Ormston, D.F.C., took over the Roaring Squadron from Semple, who had injured his knee, while Norm Fallow finished his tour with a score of four Huns and was succeeded as leader of the Wolves by Bob Buckham. In the City of Oshawa Squadron, S/L F. E. Green, D.F.C., another second tour man, succeeded R. H. Walker on the expiration of the latter's tour. After winning several victories with the Falcons in the summer of 1942 Freddie Green had commanded the Red Indians for over five months. F/L H. D. MacDonald, D.F.C. and Bar, also returned to operations as a flight commander in the Ram Squadron. During his first tour, with the Wolf Squadron, MacDonald had amassed a score of eight enemy aircraft destroyed, one probable and seven damaged, plus four trains and four barges damaged.

On October 18th the Wolf and Red Indian Squadrons led by Godefroy and their new C.Os, Buckham and Magwood, swept the area between Abbeville, Douai, Lille and St. Omer as part of the fighter cover for Fortresses bombing Germany. Near Lille, as the Indians were manoeuvring to engage two groups of 16 Jerries, Karl Linton noticed two more FW. 190s just above the Spitfires, flying below the cloud layer at 17,000 feet:

I led my section into the cloud, gaining on them slightly. For a second or two I lost them, but flew on instruments straight ahead and then saw them again. I was slightly below and 300 yards behind and not quite sure of identification. While I was trying to get closer to make sure, we broke into the open sky again. I recognized them immediately and fired a 1½ second burst from 15° off port. My No. 3 saw strikes on starboard wing root. I looked away for a second to see if we were being attacked and when I looked back I saw an FW. 190 going straight down, pouring smoke. It crashed on the bank of a river near Douai. No one else in my section had fired.

Buzz Beurling nearly bought it on a late afternoon show the same day. As his wing was sweeping over the Lille area Buzz saw some Huns below and went after them. At first he found it impossible to pull out of his dive and called over his R/T "I've had it"; after further efforts he managed to regain control but blacked out and came to again at 1700 feet. Twenty minutes after the rest of the squadron had touched down Beurling got home again.

It was four days before there was any further action. Then, on a sweep over Beauvais, Godefroy and his wing sighted 50 or more FW. 190s and the Red Indians bounced them while the Wolves remained above as top cover. Linton raised his score to three and a half by shooting the port wing off one FW., while F/O A. R. MacKenzie crashed another. A third was damaged.

Godefroy's and Chadburn's pilots fought their last actions of the month two days later while supporting Marauders bombing Beauvais-Tille and Montdidier airfields. South of Amiens, on the way in to the target, Northcott's unit was engaged by seven or eight FW. 190s, one of which the C.O. shot down in flames for his eighth decisive victory. The Spitfires were attacked again over the target but escaped without loss and managed to damage one of the enemy. Godefroy's wing also had two encounters, first with 20 Mes. northeast of Abbeville and then with a similar number of FWs. near Amiens. F/O J. D. Browne of the Wolves destroyed one Me. in flames while other pilots damaged three fighters. Southwood, one of the Wolf flight commanders, did not return.

Godefroy's wing led the scoring in October with ten Huns confirmed and four damaged, out of a total of 16 kills and nine damaged by the Canadians. The weather had been much less favourable for air operations than during the previous month and at the end of October there was a nine-day siege of fog and mist which left the fighter boys thoroughly browned off and impatient for action.

November

November 3rd, however, was worth waiting for; when the last aircraft had landed that evening the R.C.A.F. Spitfire squadrons were credited with 11 destroyed, one probably destroyed and another damaged. This total surpassed even the score for October 3rd and was the best day's hunting the Canadians had had since Dieppe.

The first of the day's operations was against St. Andre de l'Eure where the airfield was well plastered by American Marauders. Numerous enemy aircraft were seen in the target area and while the Wolf Squadron provided top cover the Red Indians went down to collect the scalps. One FW. 190 was crashed by Magwood for his fifth victory, and another by F/L F. J. Sherlock who also damaged an Me. 109. Another Me. was probably destroyed by a third pilot.

On the afternoon operation, a close escort job for Marauders attacking Schipol aerodrome, Chadburn's wing turned in one of the finest shows in the history of the R.C.A.F. When the bombers were threatened by 15 Messerschmitts on the way out from the target the Canadian Spitfires destroyed no less than nine of the Huns in a general all-out dogfight off the Dutch coast near IJmuiden.

Chadburn attacked one Me. which caught fire and crashed into the sea, and a few minutes later shot down another in flames as it was attempting to get on the tail of a Spitfire. Chad's victories raised his score to five destroyed single-handed, plus shares in four more to say nothing of 14 others probably destroyed or damaged. Mitchner, who had just been awarded the D.F.C., was also credited with two destroyed to bring his score to four and a half; the pilot of the first Messerschmitt apparently baled out in sheer terror as the Spitfire was getting in position to attack and the second fell in flames after bursts had shattered the wing root and ripped open the engine cowling. Yet another was blown to pieces in the air by Northcott who got a bar to his gong for his ninth victory. A sixth fell in flames to Noonan

and Sager. Noonan then engaged another Me. and shot away the cockpit cover, whereupon the Hun flicked on its back, dived vertically into the town of Zandvoort and crashed in flames. Booth brought down an eighth Me. which plunged straight into the sea. The ninth, which crashed near Zandvoort, was credited to F/L W. H. Jacobs, who did not return from the mission.

A combination of duff weather, which precluded any large scale operations, and a marked disinclination on the part of the Nazi fighter pilots to offer any serious opposition interrupted the Canucks' successes until the last days of November. But if they were denied the greater thrill of dogfighting, they did find a way to make use of the low clouds and get rid of their surplus energy by coming down to the deck and playing havoc with the Nazis' ground installations and communications. When the score was totted up the total was impressive. In the course of four ground strafes seven Spit pilots had pranged 20 locomotives and two lorries, destroyed an Me. 109 and shot up two flak posts and a formation of Nazi soldiers. P/O Bud Bowker and F/O E. C. Likeness of the Falcons contributed nine engines, the lorries, the Messerschmitt and the flak posts to this total. F/L J. D. Browne and P/O L. C. Rowe of the Wolves collected eight more locomotives on a single sortie from which Rowe did not return. The other engines were credited to F/Os H. R. Finley and J. P. Lecoq and P/O C. Weaver, D.F.M., also of the Wolves, while the parade of Jerries was precipitately dismissed by bursts from Weaver's cannons and Brownings.

After one sortie on the 8th during which they destroyed one locomotive, damaged another, blew up a lorry and set a second on fire, Bowker and Likeness went out again four days later. En route to the Lille-Bethune area they attacked and damaged six locomotives. As Likeness was exploding the boiler of one engine, Bowker dived on two of five Me. 109s which were preparing to take off from Lille aero-

drome. He hit them both and blew one up in flames despite accurate fire from nearby flak posts which destroyed the R/T and all instruments in the Spit, blew off the coop top and wounded Bud in the neck and head. When they turned homeward the two Canadians passed directly across Lille, flying at roof-level to avoid further fire from guns posted on the buildings. In the suburbs Likeness beat up another locomotive in a freight yard and near the coast both pilots finished their .303 ammunition on two flak posts.

On November 26th when several squadrons went out on a many-barbed thrust into France the fighter pilots made the first contact with the *Luftwaffe* in over two weeks. One wing acted as escort for Marauders striking at Cambrai-Epinoy airfield, while another swept ahead and a third acted as withdrawal cover over Doullens and Amiens. Approaching the target, F/L J. Sheppard of the Ram Squadron led his section down to deal with several fighters taking off from Achiet, west of Cambrai.

We came down behind the e/a in line astern closing fast at 450 m.p.h. Throttling down, I fired a short burst from dead astern and over-shot; e/a which had not seen us until then commenced violent evasive action. I pulled up to 200 feet and dived again firing a short burst and observed some strikes on wings and fuselage. The e/a was then using all available ground cover, and jinking furiously. He led us over the aerodrome from n.e. to s.w. where I had to skid violently to avoid light flak bursting all around my aircraft. I then chased the e/a down the railway towards Albert, giving him another short burst and observing strikes. Hopping over trees and hedges the pilot was taking such violent evasive action that he hit the ground three times with his propeller sending up dust. He then led us over Albert, at roof height. Turning starboard, I gave him a long burst from 200 to 75 yards and observed strikes in the fuselage and wings. The cockpit cover came off in two jagged pieces. I swung into line astern, then over to port side of e/a, seeing flames surrounding the pilot's cockpit. A few seconds later he flew into the deck and blew up.

Sheppard's FW. was his squadron's first victory on their new Spitfire IXs and their first Hun since the middle

of July. Meanwhile, other Ram pilots had been strafing various ground targets as they streaked across the airfield. F/L A. E. Studholme shot up the dispersal huts and an Me. 109 parked nearby, while F/L T. Koch took squirts at a flak tower and an FW. F/Os H. K. Hamilton and J. T. Murchison and FS J. J. Morrisey fired bursts into trains and flak posts. During the same operation the City of Oshawa Squadron also got their first victory on Spit IXs when Sager in the escort wing after taking on four FW. 190s over an airfield south of Arras, chased one right along the deck and destroyed it.

Three days later while the Spits were escorting Ma-
rauders to the airfield at Chievres in Belgium they destroyed two Huns and damaged two others. The bombers concentrated their bursts well in the dispersal area and apparently touched off an ammunition dump which went up with a terrific explosion. Over the target area Neal's and Keefer's lads mixed it with ten FW. 190s at 20,000 feet and one fell to the guns of F/O L. M. Cameron of the Rams. Near Furnes F/L D. R. Matheson of the Roaring Squadron chased a pair of FWs. and crashed one for his squadron's first success since the middle of July. Coles of the Falcons put several bursts into one Jerry before he and his No. 2 became involved with six more. Neither Spitfire returned but Coles was later reported a prisoner.

Operations had been possible on less than half the days of November, yet during the few spells of clear weather the fighter wings had shot down 15 Huns confirmed, with four more probably destroyed or damaged. Ground strafes had netted one Me. destroyed, another damaged, and a mixed bag of 20 trains, four trucks, numerous freight cars, flak towers and a military formation. Chadburn and his wing, thanks to their success on the 3rd, led with ten crashed Jerries. On the debit side, ten pilots were reported missing from the month's operations. Two of these were lost on the last day of the month when Studholme had to

bale out over Holland and Deane MacDonald attempting to nurse a duff engine home over the North Sea was unable to reach the English coast. Studholme was captured by the Nazis.

December

December achieved about the same measure of success with fewer casualties. The initial victory was won on the 1st during a Marauder attack on Cambrai-Epinoy airfield, when four Roaring pilots of McNair's wing were detailed to engage enemy fighters taking off from Croisilles. Matheson shot down one FW. 190 in flames, and, after a chase along the deck, F/O S. A. Mills crashed another; but as Matheson and his No. 2 attempted to rejoin the formation they were in turn bounced by two more FWs. and both Spits went down. It has since been learned that Matheson is a prisoner.

It was nearly three weeks before any further large-scale operations were possible, and by that time S/L J. F. Lambert had succeeded Magwood as chief of the Red Indians, while Jeep Neal, who had led the Rams for almost a year, longer than any other C.O., had handed over to Lorne Cameron, who rose from flying officer to the command of his squadron in three weeks. A few later Ian Ormston relinquished command of the Roaring Squadron to S/L J. D. McFarlane.

On the 19th, while Claude Weaver and F/O R. T. Pentland were searching below low-hanging clouds for a target, they saw a military staff car enter the gateway of what proved to be a well camouflaged motor transport yard and proceeded to shoot the works. Five times they came down and saw vehicles and oil drums burst into flames. At least eight or nine vehicles, some of them apparently wireless vans or mobile workshops, were destroyed.

The next day, when one of the wings was making a diversionary sweep for Fortresses striking at Bremen, F/O D.

J. Givens and P/O L. A. Dunn of the Roaring Squadron caught a Do. 217 over Brussels, set the port engine and wing on fire and watched it crash after three of the crew had baled out. A few minutes later Cameron shot down in flames a second bomber which had just got the better of an argument with P/O R. J. Buckles. Buckles, who baled out of his damaged Spit, and two other pilots, F/O N. W. Maybee and FS Morrissey, involved in a collision on the way home, were subsequently reported prisoners of war.

Meanwhile Godefroy's wing, sweeping over Douai and Lille, sighted about 40 Huns near Merville and the Indians turned to engage one lot of 18 while the Wolf pilots gave top cover. A wild dogfight ensued from which Lambert's pilots emerged with six more scalps plus one probable and two damaged. MacKenzie won an immediate award of the D.F.C. for destroying two FWs. and probably destroying an Me. Two more FWs. were finished off by F/L E. L. Gimbel, D.F.C., and P/O T. De Courcy and a pair of Mes. by Karl Linton and Lambert. But Lambert, who had been the C.O. of the Indians for just a week and was leading them in action for the first time, was shot down. S/L W. G. Conrad, D.F.C., took over command. Wally had been shot down over enemy territory in August but had made his way back to Britain.

A combat in which a Ju. 87 was destroyed over Peronne aerodrome by F/L J. Hodgson and P/O W. J. Myers on the zest, was the last bit of action until the 30th, when two wings formed part of a fighter force covering the withdrawal of a huge formation of Fortresses and Liberators from a raid on Ludwigshafen. As the Spits met the bombers north-east of Paris the Forts and Libs were being harried and the Falcons went after the Jerry fighters. Buzz Beurling, who was leading one flight, submitted the following report on his 31st victory:

I was flying No. 1 in Yellow Section when I sighted an FW. 190 cutting in from behind and below Blue Section. I rolled to starboard

and cut into the FW. 190 which dived away. I turned to follow and took a long-range three-second burst. I closed in to 270-280 yards and fired another one-second burst from starboard quarter and below. This was at about 8,000 ft. The e/a rolled to starboard and I fired another burst for luck. It went straight down in flames and I saw the pilot bale out.

At the same time Finley and Claude Weaver of the Wolf Squadron saw four Me. 109s, and each shot one down, the first in a wood west of Albert and the second south-east of Amiens-Glisy airfield.

Despite all the bad weather it had been another successful month with 14 Huns destroyed, two probably destroyed and seven aircraft, plus a score of MT vehicles, damaged. Of the six pilots lost on operations, four were known to be prisoners.

At the end of December W/C N. H. Bretz, D.F.C., was appointed winco flying in succession to Lloyd Chadburn, whose brilliant leadership, tactical skill and courage won him the first bar to the D.S.O. awarded to a member of the R.C.A.F.

During the fall and winter months when duff weather so frequently curtailed offensive operations across the Channel, the Spitfire pilots took part in "evasive exercises". Armed only with a map and a small compass, they would be transported to points many miles distant from their stations and then set loose to make their way home through cordons of police and guards. These games provided valuable experience in case of a forced descent in enemy-occupied territory and also produced many amusing and exciting incidents—such as chases across ploughed land with the Home Guard in full hue and cry. On one occasion three pilots returned in state, flying two Spitfires and a Tiger Moth which they had snaffled from a neighbouring airfield; two more rode home in an Army lorry which they had "borrowed". The squadron appropriately decorated its trophies with the insignia of "The Derogatory Finger" before returning them.

The experiences of some other “evaders” have been described by one of the participants. “With extreme caution we wended our way through fields and along roads and were forced on several occasions to dive into cover at the roadside to avoid detection from motorcycle patrols. After several close escapes from pursuing Home Guards we finally reached a village, feeling very tired. Our attempt to steal a civilian vehicle here proved unsuccessful and the irate owner chased the two of us for 100 yards before giving up amidst much shouting for us to stop. However, we were able to borrow (without permission) two bicycles, upon which we rode to the outskirts of the airfield. Here we were intercepted by a motorcycle patrol and forced to abandon the bicycles and flee into a field closely pursued by the R.A.F. Regiment. By this time we were exhausted and raced into a farmyard. The writer observed several bayonet-equipped men already in the yard and dived into cover behind some barrels. However, a gruff voice shouted, ‘The game’s up’, and I saw a bayonet bearing down on me.”

January and February

During the last months of 1943 the weight of the bomberfighter daylight offensive had fallen on *Luftwaffe* airfields in northern France and the Low Countries. Close behind these targets came freight yards and railroad junctions which were key-points in the *Wehrmacht's* lines of communication. In the New Year, as the softening up of the Nazi *Festung* continued unchecked except by the weather, emphasis tended to shift from these objectives to coastal defence positions and to the rocket or flying bomb emplacements in the Calais, Abbeville and Cherbourg areas. In December R.C.A.F. fighter squadrons had participated in attacks on these special targets, flying in their usual role of escort to the bombers. Through January and February these attacks were multiplied, while the strafing of aerodromes

and railroad yards continued. But the G.A.F. fighters who had frequently taken a beating from

Allied fighters during the last months of 1943—R.C.A.F. Spitfires alone had destroyed 65—now seldom put in an appearance. During January the Canadian squadrons had only six engagements and in February there was but one.

In these rare encounters five enemy aircraft were destroyed and one damaged: two FW. 190s brought down by F/L R. W. Orr of the Roaring Squadron and Hamilton of the Rams on January 6th, two more crashed on the 21st by Finley and Weaver of the Wolves, and an Me. 210 shot down in flames by F/O R. K. Hayward, another Ram pilot, on February 4th. Weaver's victory brought his score to 12 and added a D.F.C. to his D.F.M. A week later, on the 28th, Weaver and two companions took advantage of cloud cover to make a free-lance sweep around Lille and Amiens. Flying 3,000 feet below a layer of cloud, they were bounced by a dozen or more FW. 190s and, greatly outnumbered, the three R.C.A.F. pilots had to fight for their lives. F/O L. Foster was able to put a damaging burst into one Hun, but Weaver was last seen breaking upwards towards the clouds with two Jerries close on his tail. An outstanding fighter pilot, Claude Weaver had proved his merit over Malta, where he had shot down ten "Eyeties" and Nazis, and again over northern France.

Whenever weather permitted the fighter boys dropped over to the French countryside to shoot up whatever they could find. Results of these ground strafes were not spectacular but must have annoyed Jerry to say the least. On three sorties a six-wheeled truck and trailer were riddled and left smoking, two army lorries were battered and a group of Nissen huts pranged, while on another occasion three pilots came down to the deck to strafe the Cambrai-Epinoy dispersal area.

During one of these low-level sorties P/O R. M. Dav-

enport of the Rams was brought down by flak. Tex wasn't away long; three months later he was back in Britain. In February F/L J. C. Trull of the Wolf Squadron was also forced to hit the silk when his engine conked over enemy-held territory but he too made his way back to Britain.

The weather in February was much better than in January, permitting the Allied air forces to press their campaign against the rocket coast, Nazi airfields and communications in western Europe and other more distant targets in Germany. Day after day the Canadian fighter pilots escorted medium bombers plastering airfields and marshalling yards, or penetrated deep into Hunland to pick up the heavies as they returned from daylight raids into the Reich. But Jerry's persistent refusal to come up and mix it freely deprived these long sorties of much interest for our fighter boys. There were numerous air battles during the month but they occurred over western and central Germany far beyond the range of the R.C.A.F. Spitfires. In the coastal area the great airmadas went their way unopposed except for intense anti-aircraft barrages.

March

March's record was rather better, from the fighters' point of view, although two units monopolized the honours and most of the action was confined to four days. On the 7th the *Luftwaffe* appeared briefly over France, but most of our pilots had to be content with just a glimpse, for the Nazis quickly ducked into cloud cover when the Spits drew near. The Rams, however, came home with their tails up; they had really got Jerry! Crossing Cormeilles aerodrome, en route to Creil, Sheppard spotted an FW. 190 flying on the deck. With his section he went down, engaged the Hun at treetop level and saw it crash and burst into flames. As the section was reforming and regaining height, F/O W. T. Klersy dived on another 190 skimming along just above the ground and after a short chase and several good bursts forced the enemy

fighter to half-roll into a hill-side in flames. Meanwhile Red and Blue sections had rejoined their Marauder charges in time to intercept 12 Me. 109s diving on the rear of the bombers. The enemy pilots turned to meet Red section head-on but almost immediately broke off to seek the shelter of the clouds. During the brief chase two were damaged by Lorne Cameron and F/O W. E. Cummings.

The next day, when several formations swept over France as far as the outskirts of Paris, the Ram pilots set on fire and destroyed a barge and a tug in a bend of the Seine at Caudebec-en-Caux, while a group from the Wolf Squadron beat up three army lorries farther south near Verneuil, but lost two aircraft to intense and accurate light flak from a wood near St. Andre de l'Eure. F/L D. Goldberg crash-landed in France but after a time rejoined his unit. The machine flown by F/O J. H. Ballantyne, D.F.M., was seen to hit the ground and explode. Ballantyne, who had completed one tour of ops and won his gong in Malta, had reported to the Wolf Squadron early in January to begin a second tour.

The Ram pilots again went to town on the 15th, when they destroyed four Huns and damaged two more. That morning Cameron led one wing of Canadian Spitfires while another swept behind the bombers, who were attacking the railway yards at Aulnoye, east of Cambrai. At Cambrai airfield Jack Sheppard spotted nine FW. 190s in the circuit but unable to land because an Me. 410 with a broken undercart was blocking the runway. It was a perfect set-up for the R.C.A.F. fighters. Sheppard blasted one Focke-Wulf out of the air, while F/O D. D. Ashleigh, making only his fifth sweep, shot another down in flames; F/L A. F. Halcrow accounted for a third, blowing it up at such close range that flying debris damaged the elevators of his kite. A fourth was shot to pieces by Hayward who also damaged one FW. and then, with Ashleigh, fired several bursts into the pranged Me. 410 on the runway. Cameron's able leadership on this and other occasions won him the D.F.C.

On March 23rd, a sunny clear day for a change, two wings spent the noon hour escorting Marauders on another visit to the yards at Creil. When over the town, at 14,000 feet, F/O D. C. Laubman of the Falcons picked out a Ju. 88 flying on the deck far below, and with his team-mate, F/L W. B. Needham, plunged to attack. Needham passed Laubman in the dive and got in the first bursts; then Don closed in and elicited some return fire from the Hun. The port engine of the Junkers burst into flames and, as the pilot made a wheels-up landing in a large field, four of the crew scrambled out.

This operation was the last on which McNair led his wing in action. In July 1943 Buck had been forced to bale out over the Channel when his engine caught fire and the searing flames which scorched his face during the few seconds he struggled to get free had affected his sight more seriously than had at first appeared. Finally in April, it became clear that his days as a fighter pilot were over, and Buck was posted to non-operational duties. He was awarded the D.S.O., a fitting tribute to one of Canada's greatest fighting pilots and wing leaders.

Fighter-Bombers

The bomber escort operation on March 23rd also marked the close of one phase of the long prelude to invasion. For many weeks the fighter squadrons had been training for the time when they would undertake a new type of work, high- and low-level dive-bombing. Racks to carry one or two 500-lb. bombs had been fitted to the Spitfires and thus another role was added to what has frequently been described as the finest fighter aircraft in the world. The use of fighters for bombing attacks was not new. The first fighter-bombers were the Sopwith "Camels" of last war fame. A handy little single-seater and first-class fighting machine, the Camel was fitted with racks to carry a number of 25-lb. bombs for ground strafing and during the

last months of that war did particularly good work on low-level attacks. A generation later, in the autumn of 1940, the G.A.F., after its mass raids on Britain had been beaten off with such slaughter to the Dorniers, Heinkels and Junkers, began sending over Me. 109 fighters fitted with a bomb or two. In contrast to the Camels of 1918, the Messerschmitts flew at great heights and their bombs, dropped indiscriminately over southeastern England, had little appreciable effect. In October 1941 the R.A.F. began using the Hurricane IIB or Hurri-bomber, which carried two 250-lb. bombs, and came down to low levels to hurl its missiles at Nazi encampments and installations along the French coast or to attack enemy shipping as it attempted to slip from harbour to harbour. For some months in the winter of 1941-2 one R.C.A.F. squadron, led by Vaughan B. Corbett and later by R. E. E. Morrow, flew these Hurri-bombers. When the FW. 190 appeared the *Luftwaffe* also used it as a fighter-bomber for sneak hit-and-run raids on the south coast of England. R.C.A.F. pilots flew many hours on defensive patrols against such attacks and had a number of successful encounters with the bomb-carrying FWs. Now the Spitfires and the new Typhoons entered the arena as fighter-bombers.

The "Bombfire" and "Bombphoon" were not dive-bombers like the much vaunted and grossly over-rated Ju. 87 or Stuka of the *Luftwaffe*, which was suitable for only one job-dive-bombing; once the bomb had been dropped and the Stuka pilot began to pull out he was cold meat for either fighters or ack-ack gunners. Against seasoned troops the Stuka's offensive power was slight; its defensive power was nil and in many an encounter, as at Dunkirk and over the Western Desert, the 87s were slaughtered in great numbers. But the Spitfire and Typhoon were true dual-purpose aircraft; they could fight and they could bomb. They came in on their target much faster than the Stuka and pulled out faster, and with their cannon and machine-guns

were a match for any enemy fighter which might come their way.

In the last days of March the operational strength of the Canadian day fighter force was augmented by the addition of two new wings, one outfitted with Typhoons and the other with Spitfires, all equipped to carry out the new dive-bombing tactics.

By the fall of 1943 the war situation in the Western Hemisphere had made it possible for Canada to release the personnel of six fighter squadrons for service overseas. Three of these units, flying Hurricanes and Kittyhawks, had gained some operational experience in the Alaskan and Aleutian campaign but few of the pilots had had an opportunity to use their guns in combat; the other three squadrons had for some time been stationed on the east coast of Canada. Arriving in England between November and January, three of them, led by S/Ls F. G. Grant, H. H. Norsworthy and W. H. Pentland,¹ were formed into one wing under the command of W/C F. W. Hillock. As winco flying, Frankie Hillock had W/C R. T. P. Davidson, D.F.C., a Canadian from Vancouver who had joined the R.A.F. in pre-war days. After some initial training on rocket-projectile Hurricanes, these units were re-equipped with the Typhoon, the new fighter bomber driven by a 2,200 h.p. Napier Sabre engine and carrying four 20 mm. cannon in addition to its bombs.

The other three squadrons formed a new Spitfire IX wing under W/C J. E. Walker, with Johnny Johnson as winco flying. Jimmie Walker, from Edmonton, had fought in both the freezing cold of Russia and the sweltering heat of North Africa; he won the D.F.C. while flying a Hurricane with the R.A.F. mission to the Soviet and then in the

¹ Hugh Norsworthy had already completed one tour of operations flying Bostons and Mosquitos with a famous R.A.F. intruder squadron. More recently he had piloted Tiffies with another R.A.F. unit. Bill Pentland had seen active service with an R.C.A.F. fighter squadron in Egypt and Tunisia.

Mediterranean theatre added a pair of bars to his gong before returning to Britain with a score of 11 Axis aircraft destroyed. He was the first Canadian to win the triple D.F.C.

Each of the three squadrons in Walker's wing was seasoned with a number of veteran pilots as C.Os and flight commanders before starting operations. G. U. Hill, the second R.C.A.F. winner of the triple D.F.C., led one. After the Dieppe operation, where he won his first victories, George had gone to North Africa with the invading forces. There he rose to command one of the most famous fighter squadrons in the R.A.F. and ran his total of victories up to 14. Brad Walker, D.F.C., C.O. of the second squadron, had completed one tour with an R.C.A.F. squadron in Britain and later saw service in the Aleutians with the unit which he now led overseas. Another outstanding fighter, H. W. McLeod, of Regina, led the third squadron. In Malta, where he was a contemporary of Buck McNair and Buzz Beurling, Wally McLeod had blasted a baker's dozen of Huns and "Eyeties" out of the sky and had been twice decorated with the D.F.C.

When the older wings were temporarily withdrawn from operations late in March to practise air-firing and bombing and engage in large-scale army exercises, the new units moved south into the zone of active operations. On the morning of the 10th Grant and three Typhoons of his Wildcat Squadron swept at low level over the French coast from Cherbourg to Alderney, strafing enemy troops and a staff car. A week later Davidson led a second squadron on its baptismal flight over Cherbourg; but this wasn't a baptism of fire, for the Nazi gunners ignored the Typhoons as they roared overhead and our pilots on their return commented with amazement on how peaceful and serene it was over enemy-occupied land.

In contrast to these unwarlike initial flights of the Typhoon units, the new Spit wing had a field day on its first

operation. On March 28th W/C E. P. Wells, D.S.O., D.F.C. and Bar, of the R.N.Z.A.F., temporarily attached to the wing, led two squadrons on a sweep into the Seine valley in support of Fortresses bombing airfields in northern France. As the formation flew over Dreux aerodrome, west of Paris, the winco spotted many aircraft on the ground and led one squadron down to strafe them while the other stayed above as top cover. Wells destroyed one Me. 410 on the ground, F/O T. A. Brannagan finished off a second and added a single-engined aircraft for good measure, while Johnny Johnson and F/O P. A. McLachlan destroyed another twin-engined machine, probably a Ju. 88. In addition four others were damaged.

While these pilots were smashing up the grounded aircraft others turned their cannon and machine-guns on the buildings, hammering bursts into the control tower, the headquarters building and a flak tower. Of the twelve pilots who took part in this attack six were making their first operational trips over France.

April

April opened quietly. Some of the squadrons moved to new airfields, resuming the mobile tent existence of the previous summer and, inevitably, it rained. Two wings passed under new leaders. George Keefer was named winco flying in succession to Buck McNair and about the same time was awarded a bar to his D.F.C. Lloyd Chadburn, who had just returned from a spell of leave in Canada, took over Godefroy's wing. Under Hugh Godefroy's leadership the Wolf, Red Indian and City of Oshawa Squadrons had destroyed 28 enemy aircraft. Hugh, who had personally destroyed seven and damaged three during his tour with the Ram and Wolf Squadrons and as wing leader, was awarded the D.S.O. F/L Karl Linton received the D.F.C. on completion of a tour with the Red Indians during which he had destroyed four and a half Huns and damaged

others. Jack Sheppard, formerly a flight commander in the Ram Squadron, succeeded Keefer as leader of the Falcons, while Norm Fowlow took over the Roaring Squadron from McFarlane, who transferred to the U.S.A.A.F.

April 8th marked the opening for the R.C.A.F. fighters of the new fighter-bomber phase of the tactical preparation for invasion when, early in the afternoon, six Typhoons led by Davidson divebombed a rocket emplacement. Scarcely had the Tiffies landed when the Wolf Squadron took off on the first bombing attack carried out in Western Europe by Spitfires. In the next two months there were many such sorties. Scores of flying-bomb sites were dive-bombed by the Spits and Tiffies with apparently good results; that is, the bombs would be seen to burst within the target area, hurling dust and debris into the air and spreading a pall of smoke over the scene. But precise observation of the results was seldom possible. The vital parts of the target were small, well camouflaged, very strongly constructed and able to withstand a lot of punishment. On one occasion a pilot who was able to see his bomb burst squarely on a concrete structure reported that there was no visible sign of damage after the smoke had cleared.

In addition to the rocket emplacements, which were top priority targets for the dive-bombers, the Typhoon and Spitfire wings also made many attacks on bridges, sealing off the future battle area in Normandy. On April 24th, when the Wildcats led by Davidson and Grant plumped 16 bombs around a bridge at St. Sauveur in the heart of the Cotentin peninsula, the Typhoons for the first time carried two 1000-lb. bombs. The war-load of these powerful single-seaters compared favourably with that carried by medium bombers in the early days of the war and in fact equalled the cargo carried by R.C.A.F. Hampdens on their first raid in August 1941.

On the following day there were three Bombphoon attacks on another bridge near Agon at the base of the Cher-

bourg peninsula. The first two were unsuccessful, but a third attempt in the late afternoon had better results. Diving from 6,000 feet to 3,000, the Tiffies let go their eggs, at least six of which made direct hits on the south end of the structure, while others made near misses alongside the foundations. As Davidson led his pilots home from one of the morning shows they strafed trucks and troops working along a stretch of the Norman coast. Their cannon shells no doubt caused some damage and confusion but equally important was the information which the pilots passed on to the intelligence officer about the Nazis' activities in planting mines and under-water defences along that section of the coast.

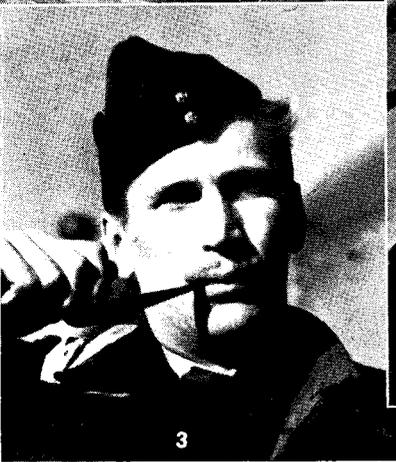
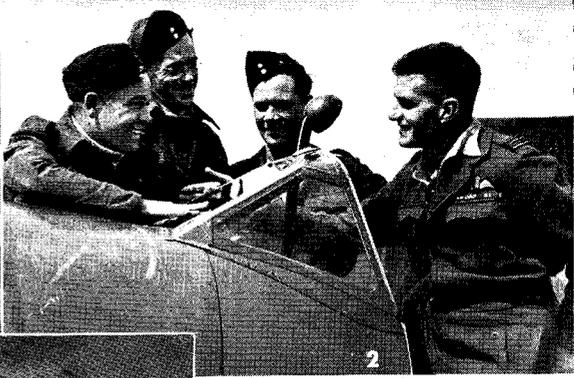
April 27th was a particularly busy day. The Bombphoons led by Davidson plastered one railroad bridge between Baupte and St. Jores while Spitfires struck at another bridge near Granville and then, diving through a box barrage of 20 mm. flak, made at least two direct hits on a third near Baupte. F/L G. B. Murray, unable to get his Spit lined up on the bridge, released his bomb at a factory and scored a direct hit. From one of these sorties Cummings did not return while F/O C. D. Cross nearly got the chop over the Channel. His engine, damaged by flak, gave out off Selsey Bill but Cross was down to 200 feet before he could bale out. At that low height the parachute did not have time to open fully and impact with the water broke Cross's left shoulder blade and collar bone and inflicted other injuries. Fortunately a corvette was near at hand to rescue the new member of the Goldfish Club.

On another sortie the same day Keith Hodson led a formation of Spit fighter-bombers to blast an oil storage and refining plant near Duclair on the Seine. Lorne Cameron's squadron bombed first and when Norm Fowlow's pilots arrived ten minutes later a column of brown smoke was billowing 1,000 feet into the air from one storage tank and several buildings. The second attack added to the de-

struction and confusion with more direct hits on the refinery.

Although dive-bombing predominated in April and May operations the Spit squadrons continued to provide fighter umbrellas for R.A.F. Mosquitos and Mitchells and U.S.A.A.F. Marauders. Railroad yards and airfields throughout northern France and Belgium, scores of flying-bomb sites around Calais, St. Pol, Abbeville and Le Treport, bridges over the Seine, all these were targets attacked by the Tactical Air Force with R.C.A.F. Spitfires forming part of the fighter cover. But still the *Luftwaffe* declined to give combat. In March only seven enemy aircraft had been destroyed by R.C.A.F. fighters in combat (four more had been written off on the ground); for April the total was only ten, with eight of these falling to the new wing led by Johnson. On most of the escort stooges not a Hun was seen and even low-level sweeps over G.A.F. airfields usually failed to bring forth any Jerries. Using long-range auxiliary petrol tanks (the pilots called them "jet" tanks because they could be jettisoned after the fuel had been exhausted) the Spitfires were able to extend greatly the range of their operations. On April 22nd, for instance, Johnson led Brad Walker's and Wally McLeod's squadrons deep into the Rhineland, sweeping as far as Coblenz, the deepest penetration into enemy territory yet carried out by Spits. Fortresses were bombing the Rhenish city and the fighter boys planned to take on any Jerries which might come up to interfere. The area teemed with Allied aircraft, but as usual not a Hun appeared and heavy flak was the only opposition encountered.

In the early evening of April 19th two of Johnson's squadrons formed part of the escort for Marauders striking at Malines, north-east of Brussels. After the bombers had left the target Johnson led a section of six Spits down to the deck on a wide sweep over the area. Between Brussels and Louvain McLeod caught a Do. 217 at tree-top level and quickly polished it off. When the 217's starboard engine



(1) S/L G. W. Northcott, D.S.O., D.F.C., of Minnedosa, Man., and W/C L. V. Chadburn, D.S.O., D.F.C., of Aurora, Ont. (2) W/C J. E. Johnson, D.S.O., D.F.C. (R.A.F.), and his ground crew. (3) W/C J. E. Walker, D.F.C., of Edmonton. (4) W/C R. W. McNair, D.S.O., D.F.C., of North Battleford (Portrait by F/L R. S. Hyndman). (5) W/C R. A. Buckham, D.F.C., D.F.C. (U.S.A.), of Vancouver. (6) W/C H. C. Godefroy, D.S.O., D.F.C., of Toronto. (7) W/C G. C. Keefer, D.S.O., D.F.C., of Charlottetown, P.E.I. (8) W/C B. D. Russel, D.S.O., D.F.C., of Montreal.



(1) F/O H. W. Bowker of Granby, P.Q. (2) F/L E. C. Likeness of Ottawa. (3) F/O F. B. Evans of South Porcupine, Ont.; FS J. A. Chapin of Brantford; F/L R. M. Davenport, D.F.C., of Houston, Texas. (4) F/L R. M. Stayner, D.F.C., of Saskatoon; S/L L. M. Cameron, D.F.C., of Winnipeg; S/L J. E. Sheppard, D.F.C., of Vancouver. (5) Spit pilots in the crew room. (6) S/L C. Scott conducts an impromptu church service.

burst into flames and debris flew off, the bomber pulled up steeply, stalled and crashed in the middle of a field. Several members of the crew attempted to bale out but their parachutes did not have time to open. This victory, McLeod's 14th, was the first kill for the new squadron which he led, and the first Hun shot down by R.C.A.F. day fighters in nearly a month.

It was five days before another Jerry appeared. Then as a formation of Spits led by Cameron streaked through the evening sky in a great sweeping curve from Laon to Juvin-court, Chartres and Fecamp, F/O W. A. Bishop spotted an Me. 110 which, prudently, dived for safety chased by the Rams. One section headed off the fleeing Hun which turned in desperation on a second section of his pursuers. Hayward opened fire and saw strikes all over the Messerschmitt. Both engines began to smoke. Next Ashleigh closed in to hammer further bursts into the hapless machine. One member of the crew jumped out as the Jerry plunged earthward and two more scrambled out when the Me. crashed. At the same time P/O T. W. Dowbiggin, who had momentarily fallen behind the formation, saw another 110 as he flew across a satellite airfield near Laon. Half-rolling downwards the Spit pilot closed in very rapidly, thumb on the firing button. "The starboard engine blew up and I saw strikes on the cabin, then the port engine caught fire. The e/a yawed violently and crashed in flames. The ammo exploded for about five minutes on the ground; it looked like flares going off one by one. As the e/a hit the ground I saw two men come tumbling out the starboard side and somersault along the ground, both on fire."

On April 25th while the R.C.A.F. Typhoons were busy divebombing bridges in Normandy, the Spitfires were out over France sweeping, escorting and fighting. The day began well with Johnson's wing turning in a perfect score, six Jerries—six victories. Two squadrons took off just before 0730 on a diversionary sweep for Libs and Forts on their

way to France and Germany. As the wing swept along near Laon six FW. 190s were sighted flying northeast at the same level, apparently climbing to intercept some formations of Liberators following the Spitfires. Johnson led his squadrons in pursuit, climbing and working into position for a surprise attack. One section came up on the right side of the unsuspecting Huns, another on the left, while other Spitfires gave cover. After a chase of about 20 miles the Spits were all in position and the winco sprang the trap. Not one Jerry escaped. Johnson himself crashed two—his 26th and 27th victories; F/Ls D. M. Walz and H. Russell of McLeod's squadron each destroyed one and the remaining two fell to the guns of George Hill's pilots. George himself and P/O R. H. Sparling shared one, while F/Os J. W. Fleming and L. A. Plummer divided the other. Unfortunately Hill and his No. 2 did not return. His pilots saw their C.O. make a forced-landing in a large field and while two circled overhead George legged it at top speed for the cover of a large woods nearby. Sparling rejoined his squadron, signaling that his R/T was out of commission, but later broke away from the formation for some reason and was not seen again. Searches for him were fruitless. Many months later George Hill was reported to be a prisoner of war.

The day's success was also marred by the death of Jimmy Walker who was killed in the crash of a little Auster communication plane. He was succeeded as commander of the wing by W/C A. D. Nesbitt, D.F.C., one of the original members of No.1 Fighter Squadron and a veteran of the Battle of Britain. S/L J. D. (Danny) Browne took over Hill's unit.

The only other engagement in April occurred on the 28th when six pilots went looking for trouble around Dreux aerodrome. All they saw was a solitary French Caudron transport plane with Nazi markings; Tommy Brannagan and Leslie Moore made quick work of it. A flaming torch, the twin-engined machine plunged into the ground.

May

A week later, as Johnson's wing made an early morning sweep to Lille to clear the air for bomber formations, the winco saw an FW. 190 a mile below and crashed it in a field near Douai; that made 28 for Johnson. Striking further inland to Charleroi in Belgium, the wing wheeled about to sweep back towards the Channel. Between Mons and Douai the Spits bounced a formation of five low-flying Focke-Wulfs, and in the general melee McLeod, after chasing one eastward at tree-top height, sent it down in flames for his 15th confirmed victory. P/Os F. A. W. J. Wilson and T. C. Gamey of Browne's unit shot down two more which exploded in flames as they crashed. Wilson, who had previously won five victories with R.A.F. squadrons, put up his D.F.C. after this combat.

After a day's break the fighters were in action again on May 7th. Repeating the tactics of previous days, Keefer led his squadrons on a sweep from Lille to Laon to clear the way for a huge formation of over a thousand Fortresses and Liberators on their way to Germany. Near Laon, Russ Orr of the Roaring Squadron spotted two Focke-Wulfs 6,000 feet below and destroyed them both; These were the unit's first successes since January, when Orr had also been the successful pilot.

Before Keefer's formation landed another Canadian Spitfire wing was in the air to sweep around Mons in support of Bostons attacking a locomotive works near Valenciennes. As the group flew along above great masses of cloud four FW. 190s dived out of the sun in an attempt to bounce one section of the Wolves but the Spit pilots broke just in time and F/Ls J. D. Lindsay and Hodgson were able to fire damaging bursts into their attackers. Lindsay's FW. disappeared into the clouds and as the Spit pilot came out in pursuit he sighted two Me. 109s skimming along on the deck. Diving on one, Lindsay fired a long burst which sent chunks flying before the Messerschmitt crashed headlong

into the ground and exploded.

Weather reconnaissance over the enemy-occupied coast and hinterland was a frequent assignment for the fighter boys. F/Ls F. J. Clark and H. P. Zary and F/Os P. G. Johnson and R. W. Murray of the Red Indians drew this routine job on the morning of the 8th and took off shortly after 0600 hours. Flying right on the deck, the four Spits headed for Cambrai and met an Me. 110 as they zoomed over a hill. Our lads broke to right and left as Jerry flew past; then Johnson swung in and the Hun was soon a pile of wreckage in a field. On their way home the four pilots shot up some Ju. 88s dispersed on an airfield and strafed a flak post.

May 10th was another of the exceptional days when Jerries were seen and caught but this time the score was against the Canadians. On a morning wing sweep F/L Hamilton of the Rams damaged an FW. 190 as it taxied along an airfield, but was himself brought down by the flak defences and taken prisoner. Early in the afternoon the same wing made a second sweep from Creil to Cambrai. Near Rheims the Falcons sighted two FWs. and one section went down to attack. F/L J. A. Crimmins fired first and then broke away; he was not seen again. Then F/L Likeness closed in and shot down one of the two Huns, but his own machine was apparently hit by enemy fire and, after making a valiant but unsuccessful attempt to get home, he had to take to the silk a few miles from the French coast. Like Hamilton he was captured by the Nazis. The second Focke-Wulf was sent down by Sheppard in a cloud of smoke to burst into flames on the ground.

May 15th was another unlucky day for the R.C.A.F. wings. In the morning F/L S. A. Mills of the Roaring Squadron was captured when his Spitfire was shot down by a Bofors flak post during a fighter sweep around Montdidier. An hour later the Wolf Squadron lost one of its flight commanders while escorting Marauders to bomb the marshalling yards at Douai. Passing north of Lille, the

Wolves saw some Huns on an airfield near Courtrai, and one section dived on an FW. 190 which had just landed. F/L C. P. Thornton got in the first burst, followed by F/L E. C. Williams, F/Os J. D. Orr and A. J. A. Bryan, and the Focke-Wulf was set ablaze. But Chuck Thornton's aircraft was hit by flak and he had to bale out. Although Chuck headed for cover as fast as his legs would move the Nazis caught him.

A spell of duff weather in mid-May favoured ground-strafting and the Wolves and Red Indians turned in several good shows. Early one morning some Indians, after beating up two flak towers and a water tower, pounced on a large convoy of tanks, armoured cars, trucks and staff cars moving along a road between Paris and Rouen. Eight or ten vehicles were seen to be damaged and some of the personnel were certainly killed.

On another dawn sortie two flights of Wolves, led by Doug Lindsay and Hart Finley, headed across the Channel. One group, ranging over the area west of Paris, strafed two armoured fighting vehicles and set one on fire. Lindsay led his flight to St. Quentin where they beat up the airfield in the face of intense and accurate anti-aircraft fire. Two small blister hangars were riddled and an FW. 190 parked alongside received several squirts. On several other occasions during the pre-invasion period Spits came down to the deck to beat up airfields; once some pilots gave five aircraft a thorough pasting before discovering they were dummies.

On May 18th Doug Lindsay took his flight out again to hunt at ground level around Paris. Three motorcycles were destroyed; a gas truck exploded in a mass of smoke and fire; one flaming staff car ran into a ditch and a second was forced to stop with smoke pouring out; and a three-ton lorry was left haring along the road towards Caen with its rear-end blazing. Some hours later another section led by F/L P. Logan strafed and set on fire three trucks on a road north-west of Rouen. Another early morning sortie led by F/L A.

R. MacKenzie added a truck to the squadron's score, while an evening sweep under Pete Logan's leadership bagged two Huns which were credited to the Lindsay-Hodgson team. As the Spits were flying towards Paris they saw two FW. 190s crossing Beaumont-sur-Oise airfield. Lindsay took on the first and Hodgson the second, and each crashed his victim.

In the last days of May restrictions against train-busting attacks were raised and the Spits ranged over northwestern France, pranging anything that moved along railway lines, roads or canals. The first mass ground-straft, carried out by Freddy Green's City of Oshawa pilots on the 21st, resulted in a bag of 13 trains destroyed or damaged. Later in the day the Indians added four more trains, two trucks and a staff car while the Wolf pilots shot up another train, two army buses, a brace of despatch riders and five motor trucks. All three squadrons encountered intense and accurate anti-aircraft fire throughout and four kites bought it. Two pilots, F/Os S. T. Lundberg and J. F. Davidson, baled out and were taken prisoner. The others, F/L R. W. Nickerson and F/O Tony Bryan, in due course reached safety. Evading capture Nickerson made his way southward across the Seine and waited until a Canadian patrol reached his hiding-place late in August.

Again on the 22nd the ground-strafters had a field day over France. The Red Indians collected two trains on one sweep, while two pilots from the Ram Squadron making a weather recce over the Cherbourg peninsula had a crack at a 25-car train. But the outstanding achievement was turned in by the City of Oshawa Squadron which on three sorties destroyed five Huns and damaged at least ten trains. Early in the morning six pilots, after shooting up four trains in the lower Seine area, saw three enemy fighters take off from a landing strip south-west of Etrepagny and engaged them in a dogfight in which three more Jerries joined. Three Focke-Wulfs were destroyed by F/Ls R. D. Forbes-Roberts and G.

R. Patterson and P/O W. H. Palmer, while two Me. 109s were shot down by F/L W. F. Mason and F/O A. R. McFadden. Three of the enemy aircraft burst into flames as they crashed.

At the same time a second section of six pilots was beating up a 15-car freight train in a cutting west of Bernay. Three flak cars directed intense and accurate fire at the Spits as they raked the train from end to end and brought it to a stop with the locomotive enveloped in smoke and steam. In the early evening a third section led by Freddy Green damaged four freight trains, started two fires in a string of oil cars and stopped the engine in clouds of steam while on a low-level sortie over Caen, Argentan, Le Mans and Laval.

The same day Bud Bowker, now an F/O and test pilot for an R.C.A.F. repair and salvage unit, flew out over the Channel to test his cannons and found some Jerries to use as a target. Let him tell what happened:

At 700 feet, south of Selsey Bill, I sighted two FW. 190s on bearing of 250-260 degrees magnetic at literally zero feet, below and slightly in front. I dived and turned starboard to 300 yards astern. The e/a were flying in very close formation, line abreast. They pulled up to about 30 feet and turned slowly to port, closing in even more. I fired a long burst with is degrees deflection, hitting port wing of port aircraft, midway along, where a bulge which I thought to be a bomb, rocket or tank, had previously been observed. An explosion occurred and the aircraft was blown to starboard with right wing down. The second aircraft flew into the first, which exploded and hit the deck. I expended the remainder of my ammunition on the second which had a buckled port mainplane and fuselage. Two strikes were observed—on tail and starboard wing tip. Aircraft was now out of control and hit the deck almost vertically. I orbitted position and gave fixes, but saw only a few pieces of wreckage.

Bowker, who had previously destroyed two Huns in the air and one on the ground while flying with the Falcons, rejoined that squadron a few days later.

Continuing their campaign against the enemy's transportation system Spitfires pranged two trains on the 23rd and three on the 24th. As the Ram pilots were beating up

the third train on Victoria Day an FW. 190 was spotted circling close to the ground. After a long chase over the countryside Lorne Cameron caught the Focke-Wulf and crashed it into a wood with one brief burst. This victory was Cameron's fourth and the last won by R.C.A.F. Spitfires before D-Day.

The *Luftwaffe* remained in hiding during the next 12 days while the R.C.A.F. continued ground-strafting and dive-bombing with an occasional escort mission for variety. The ground-strafting paid good dividends and in the two weeks immediately preceding D-Day the Spitfire wings shot up and destroyed or damaged at least 54 trains and locomotives, 40 armoured cars, trucks, staff cars and other army vehicles and a dozen or more canal barges. But low-level attacks almost invariably exact a price and in addition to the casualties already mentioned F/L J. Hodgson, F/Os R. H. Smith and C. B. Cohen and WO L. N. Guillot were reported missing. F/L R. W. Henry was brought down by flak and captured, the first casualty suffered by the Indians in six months. Two other pilots, F/O E. D. Kelly and F/L R. W. Orr became members of the Caterpillar and Goldfish Clubs when their Spits came down in the Channel.

Northcott's pilots, still flying their Spit Vs, had none of the excitement of combats or dive-bombing forays. Day after day they visited most of the hot spots of Belgium and northeastern France, protecting bombers which plastered airfields and freight yards. On one sortie the fighter pilots themselves took a hand in the strafting and gave the airfield at Achiet a good going over, smashing shells and bullets into a hangar, a water tower and several electric transformers. They went on to beat up railway sidings nearby and left a locomotive and freight train smoking.

Dive-Bombing in May

In addition to destroying 21 Jerries in the air and strafting targets on the ground the fighter-bombers had been

busy pranging the rocket coast, bridges, freight yards, railroad junctions and other targets. Late in May enemy radar installations along the Channel coast were knocked out as one essential step toward the achievement of tactical surprise on D-Day.

Among the incidents in the month's dive-bombing record was an attack by two Typhoon squadrons against an *Elbing* class destroyer beached off Pontusval in the Brest peninsula. The pilots, led by Hugh Norsworthy and Bill Pentland, damaged the stern of the warship with a number of near misses and then strafed the decks. On the same day, May 3rd, the Wildcats touched off an ammunition dump in a clump of bushes at the end of a runway when they dive-bombed a *Luftwaffe* airfield. But the real fireworks were reserved for three Spit squadrons which, at five-minute intervals, attacked a rocket site near Abbeville. F/L W. G. M. Hume's kite picked up more than its share of flak and, after struggling but over the Channel, Mac had to bale out. He drifted down into the sea just five miles off the French coast where he spent an uncomfortable hour in his dinghy until an A/S/R Walrus swooped down to snatch him from under the very eyes of the Hun.

Most of the targets attacked by the dive-bombers were strongly defended and naturally there were losses. One of the most tragic was suffered on the 19th when S/L N. R. Fowlow's Spitfire was hit by flak which detonated the bomb and blew the kite to pieces in mid-air. A skilful fighter and able leader, Norm Fowlow had destroyed four Huns in a period of two months while flying with the Wolf and Red Indian Squadrons. His position as commander of the latter unit was taken over by S/L G. D. Robertson.

One of the most amazing stories of this period concerns W/C R. T. P. Davidson, leader of the Typhoon wing. On May 8th he led his squadrons to dive-bomb the railroad yards at Douai. The attack was successful, the dozens of 500-lb. bombs causing considerable damage to rolling

stock and tracks. On the return flight Davidson reported over the R/T that his engine had cut out and then a few minutes later, after he had forced-landed, called: "Tell my wife I'm A. 1. Have to go now. Ta-ta." Davidson had been the winco flying for four months, ever since the Canadian Typhoon wing had been formed, and had led his pilots on all their important shows. He was succeeded by W/C M. T. Judd, D.F.C., A.F.C., also a member of the R.A.F.

For four months there was no news of Davidson: he was simply missing. Then one day in September he reappeared. His adventures after he left his Typhoon and took cover in a wheatfield have been graphically described by Alan Randall of the Canadian Press:

While he hid in the field German soldiers hunted through a nearby woods for him. Davidson said: "I heard a German officer give the order to shoot me on sight. Later they brought hounds to the scene and attempted to put them on my trail, but the wonderful French people came to my aid. They milled all around the aircraft and so confused the dogs that it was impossible for them to pick up my scent."

A French partisan working in the wheatfield that day indicated to Davidson that he was a friend. Several hours later when darkness fell and the Germans moved off the Frenchman led the young pilot to a farmhouse where he was fitted up with the shabby clothes of a French peasant, a beret and false identity papers. The papers described him as a specialist carpenter. Under the coaching of the French, Davidson's rudimentary knowledge of the language quickly improved.

For a few weeks Davidson hid in barns and pig-sties. From Frenchmen who worked in the vicinity of flying-bomb sites he gathered detailed material, including drawing plans of Hitler's secret weapon. The Air Ministry now has this information and among the facts that Davidson was able to pass on was one, since confirmed by others, that 15 per cent. of the robots crashed on take-off.

For some weeks Davidson mixed with the F.F.I. He joined them in cutting telephone wires, raiding guard posts, stringing rope across highways to trap despatch riders, stealing guns and documents and blowing up bridges and military installations.

"We used to go out at night and slip past German patrols," he said. "We'd steal explosives and carry them away in sacks. Two or three days later a bridge would very mysteriously blow up."

Once when he was lurching at a farmhouse a German entered and

sat down. By this time Davidson was very French and the Nazi shared the meal with an R.A.F. officer without realizing it.

He came home from France with 4,000 francs in his pocket. When asked where he obtained the money, he grinned and said: "You see, I taught some of my French friends to play poker."

During the two weeks immediately preceding D-Day the tempo of the dive-bombing and ground-strafting campaign quickened, without intervention by the *Luftwaffe*. Dozens of sites along the rocket coast, freight yards at Douai and Mons, bridges over the Seine and army camps were among the targets blasted by the Canadian dive-bombers while the ground-strafters ranged the roads of northern France and the Low Countries. Much of the dive-bombing was directed against enemy radar installations which formed a great warning network along the French coast.

The R.C.A.F.'s participation in the latter phase of the preinvasion campaign began on May 22nd when the Westmount and Ottawa Squadrons each made two sorties to accompany rocket-carrying Typhoons in attacks on four radar posts between Cap de la Hague and Cap d'Antifer. The Canadian Tiffies, acting as anti-flak escort, went in first to strafe flak posts defending the stations and were followed by the rocket planes. F/O A. A. Watkins who took part in two of these shows was posted missing after the second. His Typhoon hit by flak, Watkins had to bale out five miles off the French coast and was seen to get into his dinghy, but darkness set in before a rescue aircraft could locate him. Searches the following morning proved fruitless. Four more days passed and finally on the morning of the 28th, five and a half days after he had been forced down in the drink, Watkins was found and taken safely aboard a Walrus amphibian.

For a fortnight, from May 22nd to June 5th, the campaign continued against the radar posts along the French coast from the Cherbourg peninsula to the mouth of the

Somme. Spitfires shared with the Tiffies in dive-bombing and strafing the stations. The last attacks by the Canadians were directed against a radar post at St. Peter Port on Guernsey. On June 3rd two formations of Typhoons led by Hugh Norsworthy and Bill Pentland attacked the target in the face of extremely heavy flak. Later reconnaissance having confirmed that the site was three-quarters destroyed, the squadrons returned on the morning of June 5th to finish the job, and in a dive from 12,000 to 4,000 feet the twelve Bombphoons got their missiles either squarely on or very close to the target. As the pilots pulled out they noticed a disturbance in the sea and at first thought it was caused by bombs which had overshot. But one Typhoon flown by F/L Johnny Saville, the leader of the formation, did not return. Presumably he had been hit by the intense flak and failed to recover from his dive. Saville had repeatedly distinguished himself leading formations of Tiffies in attacks on rocket sites, bridges and other targets.

The preparation for invasion was now complete. For weeks the airfields had been carrying out practice moves. Weights and loading tables had been worked out for each vehicle; again and again the equipment had been packed and stowed away. Convoys had moved across country, learning by trial and error the necessity of proper march discipline. Vehicles had been marked and waterproofed. Ground personnel had been trained in driving trucks, in handling small arms and in laying out and camouflaging camp sites. Route marches had been laid on to toughen them up. Visits were made to south coast ports to examine various types of landing craft. Dakota transports came to the airfields to practise loading personnel to be carried across by air as soon as landing strips were available in France. The arrival of French interpreters, the introduction of French lessons, the imposition of rigid censorship, the curtailment of passes and leaves were the final evidence. Staff officers came and went, discussing plans to the small-

est detail, and then, in the last days of May, the squadrons were visited by A/C/M Sir Trafford Leigh-Mallory, A.O.C.-in-C. A.E.A.F., and A/M Sir Arthur Coningham, A.O.C.-in-C. and Tactical Air Force, who gave informal talks to the pilots about the job that lay ahead.

Advance units, which had the heavy responsibility of preparing landing grounds on the beaches, began moving to concentration areas; ground personnel were confined to barracks. The tension which had been mounting steadily received a new fillip on June 4th and 5th when the aircraft of the squadrons burst forth in their spectacular invasion stripes—broad black and white bands from wing roots to ailerons and wireless mast to tail. On these last two days the pilots made many defensive patrols over the south coast and marvelled at the stupendous array of shipping in the harbours. On the 5th movement on the seas began. One squadron that afternoon noted a vast armada of 400 ships, guarded by cruisers and destroyers, under way off the Isle of Wight. Late that night the long-awaited news was passed. D-Day had arrived!

B. Fighter Reconnaissance

Since June 1943 the fighter-reconnaissance squadrons of the R.C.A.F. had formed part of an R.C.A.F. Wing under G/C D. M. Smith, who was succeeded early in 1944 by G/C E. H. Moncrieff, A.F.C. The functions of these units, as their name suggests, were twofold—fighting and reconnaissance—but with emphasis on the latter. Pending the opening of a land front in western Europe the pilots in their fast, powerfully-armed Mustangs were busily engaged photographing the enemy-held coasts, defence positions, construction activities, railroad centres, canals, airfields and other features of vital interest to the planners of the great invasion. They also accompanied or followed Typhoons and other aircraft attacking Nazi targets, to photograph the results. All this work, interrupted only by the weather, con-

tinued through the nine months preceding D-Day.

One very special task in which our pilots shared was that of locating and pinpointing the small, skilfully concealed sites from which Hitler's secret V-weapons might be launched against Britain.

Although the missions assigned to the recce pilots were normally routine jobs, they were seldom dull. Flying at high speed at zero feet, the pilots had to be most expert navigators. Furthermore throughout the whole of their flight over enemy territory they were liable to attack by flak and by Jerry fighters on the watch for the low-flying kites. Enemy opposition was accepted as a matter of course, something to be endured or evaded, and seldom did it foil a sortie. Meteorological opposition, on the other hand, often made it impossible to complete a job and through the last months of 1943 and the first months of 1944 the entry "mission unsuccessful due to weather" appeared frequently in the unit records.

The prime purpose of reconnaissance sorties is naturally to bring back information as quickly as possible and pilots are not encouraged to tangle with enemy aircraft unless it is unavoidable. On one occasion, early in September, F/O R. E. Baker of the Imperials turned to meet the attack of an FW. 190 which bounced him and F/O S. C. Chapman as they were returning from a photo mission over the French coast. Bob's intervention saved the other Mustang at the cost of his own life. On many other days the recce pilots got home with their valuable films only by taking violent evasive action to shake off attackers.

Small wonder then that the Mustang pilots welcomed the opportunity to vary their regular duties by low-level offensive sorties on which they could go gunning for enemy aircraft or let off a stream of machine-gun and cannon fire at flak towers, military vehicles and trains along the way. Their total of enemy aircraft destroyed never bulked large in comparison with that of the fighter pilots, but they

did leave a trail of desolation along roads and railways. Especially impressive were the scores amassed by some of the loco-busters.

It was on a sortie of this type on September 28th that F/L D. M. Grant, D.F.C., and F/O W. H. Jessiman of the Toronto Squadron found themselves the target for very accurate flak when flying at a low level near Ault. Jessiman was able to escape but Grant apparently received a direct hit, for shortly after he disappeared in a cloud there was an explosion in a clump of trees. Bitsy Grant, one of the R.C.A.F.'s most successful destroyers of Nazi rolling-stock, had accounted for at least 30 locomotives. He had also shot down two, probably three, enemy aircraft.

Other low-level strafes during September added six trains, seven electric pylons, several flak towers and one enemy aircraft to the Mustangs' score. The aircraft, a Ju. 52 transport, was destroyed on the 10th by F/O A. T. Carlson of the Toronto Squadron, whose one short burst at close range hit the enemy's port engine and started a fire that quickly enveloped the entire aircraft.

The weather in October and November, duff as usual, made photo recce work difficult and frequently impossible; but the low clouds which persisted on so many days did favour the ground-strafer, who in the six weeks from October 1st to November 12th destroyed or damaged at least 79 locomotives, 19 electric pylons, ten barges and tugs and a number of flak towers, gun posts and wireless stations. Early in October F/L R. T. Hutchinson, D.F.C., F/Os J. C. Davidson and L. F. May and P/O J. H. Donovan added ten engines, two barges, a tug and a pylon to the Imperials' successes. Chick Davidson returned from the sortie with the wings and tail of his Mustang badly battered by flak and marked by the branches of a tree through which he had flown. Later in the month Lew May and Jack Donovan pranged six locomotives while F/Os F. E. Hanton and G. S. Brown of the Torontos beat up no less than a dozen trains

on one sortie. A few days later Hank Hanton was awarded a D.F.C. for his score of two enemy aircraft destroyed and 35 locomotives exploded or damaged.

Five enemy aircraft were destroyed and several others damaged during the last days of October. F/L K. L. Morham and F/O J. M. Robb, of the Torontos, had already damaged at least three engines during a low-level sweep when Morham intercepted a Do. 217 a few miles south of Florennes. With a short burst he set one motor on fire and made the Dornier crash into a river bank. Two days later, on the 24th, F/Os L. W. Seath and W. W. Kennedy, of the same squadron, set off again for the Chartres area. After attacking an electric engine on which hits were scored, they saw a dozen or more aircraft circling the town and aerodrome and Satch Seath shot down an Hs. 126 monoplane in flames with a threesecond burst. After losing contact with Kennedy, Seath was making for home at a low altitude when he ran into an He. 111 near Rouen. Chasing the Heinkel in and out of the low-lying fog, he got in a burst which apparently holed the gas tank, for when last seen the Jerry was weaving at full throttle just above the tree tops with petrol streaming from the right wing. The same afternoon, Carlson engaged an FW. 190 in the Hesdin area and, after a long fight, the luckless Hun pilot baled out at only 500 feet as his machine plunged into a forest. At the same time Carlson's companions damaged a second Focke-Wulf.

The month ended with a noteworthy low-level sortie by Lew May and F/O R. C. J. Brown of the Imperials, who caught a Yale training plane bearing German markings and crashed it into a clump of bushes south of Paris. At Breigny aerodrome May opened fire on a Ju. 88 on the ground and saw it begin to burn. Then the two Mustangs shot down a second 88 in flames in a ploughed field. Following this it was Jerry's turn and May and Brown were bounced by two FW. 190s which chased them ineffectually for 15 minutes.

Three more Huns were destroyed, one probably de-



(1) F/L C. W. Fox of Guelph. (2) F/L E. L. Gimbel, D.F.C., of Chicago. (3) S/L G. U. Hill, D.F.C., of Pictou, N.S. (4) F/O W. J. Myers of Windsor. (5) F/L J. Hodgson of Calgary. (6) F/L J. D. Orr of Vancouver. (7) The Red Indian Squadron.



(1) S/L D. Goldberg of Hamilton. (2) S/L N. R. Fowlow and S/L J. E. Sheppard. (3) S/L R. K. Hayward, D.F.C., of St. John's, Newfoundland. (4) A fighter dispersal room. (5) BACK FROM A SWEEP: F/L I. G. S. Keltie of Edmonton; Sgt. M. W. Murray of London; F/L J. D. Mitchner, D.F.C., of Saskatoon; F/L M. Johnston of Selkirk, Man. (6) S/L H. C. Trainor, D.F.C., of Charlottetown, P.E.I. (7) P/O Claude Weaver, D.F.C., D.F.M., of Oklahoma City, U.S.A. (8) F/L M. E. Jowsey, D.F.C., of Ottawa.

stroyed and another damaged by the Mustangs in November, in addition to their toll of rolling stock, pylons and other targets. On the 2nd, F/Os R. B. Moore and V. C. Dohaney of the City of Sudbury Squadron beat up a section of eastern Normandy, returning with a count of ten, possibly 11, locomotives and five electric pylons destroyed. On the same day F/Os R. O. Brown and G. Wonnacott of the Imperials damaged four trains and destroyed an FW. 190 during a sortie on which they were subjected to heavy flak that damaged the tail member of Brown's kite.

The ground-strafters, were busy again on the 5th, Seath and Kennedy flying under low clouds to attack four locomotives between Vire and Laval and beat up a flak post, while F/L C. H. Stover and F/O K. A. Brown damaged another engine and burned a Ju. 52 on the ground at Beauvais-Tille aerodrome. Other pilots added yet another locomotive, some barges, pylons and flak posts to the score. But it was an unhappy day for the Imperials as their C.O. was shot down during a sortie into Belgium and southern Holland. Flying with Wonnacott, S/L H. P. Peters, D.F.C., had attacked four trains, two small coastal vessels and a number of pylons when his machine was then hit by heavy flak and began to burn. Peters climbed, apparently in an endeavour to gain sufficient height to bale out, but stalled and dived toward the ground. He was seen to jettison his cockpit hood and, about 20 feet from the deck, jump into a mud bank. Smoky Stover succeeded Peters in command of the Imperials.

Jerry's locomotives took another beating on the 7th when F/Os G. W. Burroughs and B. B. Mossing of the Imperials shot up nine. On the following day F/Os A. J. Alliston and T. Bell of the Sudburys claimed two more and a pair of pylons. Armistice Day was also successful for the strafters with four engines, two pylons and a wireless station pranged during the morning. In the course of an afternoon sortie, Duck Morham and Robb met a Me. 210 which they

shot down in flames between Albert and Arras. Then ten miles east of Arras they found two more 210s, one of which made off with its port engine on fire while the other, hit on the tail by Morham's guns, fled with both engines smoking. This was the year's last outstandingly successful day of ground-strafting as a long period of duff weather again intervened and then, when the skies finally cleared sufficiently to permit flying, offensive operations against trains and rolling stock in the enemy-occupied lands were suspended.

At the close of the year the City of Toronto Squadron was re-equipped with unarmed Spitfires and Mosquitos and became a photographic reconnaissance unit. It was not until late in February, however, that the last of the Mustangs were turned in after one final sortie on which the pilots had an important assignment to take pictures, at minimum altitude, of a prison building in Amiens. This mission required navigation of the highest calibre and was regarded as one of the best ever carried out by the squadron. On the homeward flight the pilots beat-up gun posts and strafed a train. In May the Mosquitos were also withdrawn, leaving the Spitfire XIs. Since that time the squadron's pilots have been engaged on photographic reconnaissances, flying alone in the substratosphere of 30,000 feet and above—a marked change from the old low-level work in pairs. Flak and enemy fighters are not common hazards five or six miles up in the air, but the rarified atmosphere places a much greater physical strain upon the pilots, while the intense cold has its effect upon the, human frame, aircraft, engine and camera.

Preparations for D-Day

In the four months preceding D-Day the high-flying Spitfires were busy keeping a photographic check on *Luftwaffe* airfields in northern France, recording bridges and river lines in the future battle area from the Brest peninsula

to the Seine, making mosaics of the Caen area, and photographing harbours, railroad yards and junctions, gun emplacements, *Wehrmacht* headquarters and rocket sites; in brief through their cameras they were collecting information for the use of the 2nd Tactical Air Force and the Army when the time came to seal off Normandy and Brittany by blasting bridges, railroad junctions and highways and to neutralize enemy defences in the area.

While the Toronto Spitfires were flying at high level, the Imperial and Sudbury Mustangs were continuing their low-level reconnaissances with an occasional offensive operation for variety. On January 28th, F/Ls Burroughs, Wonnacott, J. T. Seaman and F/O R. O. Brown were out on mischief bent when they encountered two unfamiliar aircraft, possibly Arado 9613s, and destroyed them both, one blown up by Brown, the other shot down in flames by Wonnacott and Burroughs. Then they met a pair of 109s, both of which went into the deck in flames; but after this engagement Bob Brown was nowhere to be seen.

These were the only air combats the R.C.A.F. Mustangs had in the five months before the invasion of Normandy began, although they still had their moments of excitement thanks to the untiring efforts of the Nazi flak gunners. Their work during this period was largely concentrated in the area where in June the Allied forces were to land. The changing panorama of the invasion coast, the roads about Caen and Bayeux, bridges in Normandy, *Luftwaffe* airfields, freight yards and harbours and the buzzbomb areas around Abbeville and Boulogne were photographed again and again. Although this sounds simple the sorties were not always so as in most instances the targets were heavily defended. Especially was this true of the Cherbourg area where time and again the pilots grumbled that the Jerries threw everything at them "except the ruddy gun". Not infrequently pilots, unable to complete their sortie due to weather or other conditions, returned to the same district

twice, thrice or even four times to get the required information.

With the end of April the tempo of reconnaissance work increased as the air tactical preparation for invasion gained momentum. Day by day the vital areas of northern France were checked. New tasks were added to the old. Frequently the Mustangs accompanied bomb-carrying Typhoons and Spitfires to bring back photographic records of the attacks. As D-Day drew nearer the blasting of bridges, railroad yards and junctions rose to a crescendo while Mustangs photographed the bombing and its results. Steadily the isolation of the future bridgehead areas went on until one final step was taken, the knocking out of enemy radar posts which might detect the approach of the invaders. In this too the Mustangs played a part by photographing the sites to pinpoint them and then re-visiting them to check the effect of the fighter-bomber attacks. A dozen R/D/F installations along the French coast from Cap Blanc Nez to Cap de la Hague were covered in this manner by the Imperial and Sudbury pilots. For this work the Mustangs were fitted with special cameras permitting the pilots to take pictures at 400 m.p.h. as they power-dived through the especially intense barrage of flak which guarded the radar stations.

On D minus 1 the Mustangs made a final check of the area on which for the next few weeks the eyes of the world were to be concentrated. Tactical reconnaissances along the roads from Honfleur to Chartres and Caen found no unusual movements. That evening, as the ground personnel painted invasion stripes on the aircraft, Moncrieff broke the news to his pilots that the invasion was already under way, directed against the area over which they had flown so many times in the past weeks.

The work of the fighter-reconnaissance squadrons was seldom spectacular; rarely did it hit the headlines, yet it did play a vitally important part in the making of those headlines. The pilots had fewer opportunities to win gongs than

did aircrew in other types of squadrons, yet several by their courage, resolution and example did gain the purple and white ribbon of the D.F.C. Hutch Hutchinson, Smoky Stover and George Burroughs, of the Imperials, and Alan Carlson, of the Torontos, were all four decorated for their services on reconnaissance missions and in attacking enemy aircraft and locomotives.

CHAPTER VII

NIGHT FIGHTERS AND INTRUDERS

A. Night Fighters

NIGHT fighting is today one of the most highly specialized branches of aerial warfare. In the early months of the war, while the new science was still in an embryonic state, the bomber squadrons of the *Luftwaffe*, although they were driven out of the daylight skies over Britain, were able to spread a trail of destruction across ports and cities as night after night they droned across the Channel. As the effectiveness of our aircraft crews and ground organization and anti-aircraft and searchlight defences improved, so the weight of the Hun blitz diminished until it was reduced to sporadic hit-and-run sorties which gave the night fighters few opportunities for action. In this defeat of the night raider Beaufighter squadrons of the R.C.A.F. had taken an active part and in the course of 13 months, September 1941 to September 1942, had won 43 successes—18 enemy bombers destroyed, six probably destroyed and 19 damaged. But in the next year the Canadian night fighters were able to record only eight confirmed victories plus three probables and damaged—an indication of the small scale of G.A.F. night operations during the fourth year of the war.

Through the first five months of the period covered by this narrative (September 1943 to January 1944) the night fighters had little joy as they flew their routine of defensive patrols and carried on their endless programme of training. They were, nevertheless, fulfilling their appointed role as a constant and dangerous threat, thereby forcing the Nazis virtually to eliminate night bombing of the British Isles from their grand strategy.

The only victories scored by R.C.A.F. night fighters during these months were credited to the Cougar Squadron led by W/C G. H. Elms. For a time the Cougars, flying Mosquitos, combined offensive intruder operations with defensive night fighter duties and, as a result, had more opportunities for action than did the other night fighter units. It was an intruder sortie which brought the squadron its first victory of this period.

On September 26th, F/L M. A. Cybulski and F/O H. H. Ladbroke blew up a Do. 217 over, the sea north of Ijmuiden, but burning petrol and oil from the victim scorched the fuselage and wings and burned most of the fabric from the Mossie's rudder. In addition, one engine was damaged by flying wreckage. Cybulski was temporarily blinded and lost control of his kite which plunged 4,000 feet before Ladbroke could reach the controls and pull out. Recovering his vision, Cybulski flew 250 miles back to base with one engine u/s. This episode, one of many in the spectacular career of this team which had included the first daylight intruder operation over Germany, was mentioned when both pilot and observer were awarded the D.F.C.—the first gongs in the Cougar Squadron.

On other intruder sorties during September the Mosquitos bombed *Luftwaffe* airfields and railroad bridges in northern France and F/Os E. S. P. Fox and C. D. Sibbett exploded a locomotive with cannon fire.

Then the squadron left its base in the Midlands for a new station in what used to be Hell's Corner. Here it was

engaged chiefly on night fighter patrols and scrambles and soon chalked up a kill when, on November 5th, F/O C. F. Green with P/O E. G. White as observer was scrambled to intercept an Me. 410. Closing in on his quarry Green fired one good burst and observed strikes on the Hun's fuselage and port wing. A second squirt drew a blinding flash from the Jerry as it blew up and crashed in the sea off Dungeess.

Five weeks later, on December 10th, F/Os R. D. Schultz and V. A. Williams of the Cougars were the central figures in what has frequently been referred to as one of the most outstanding night flights of the war. In rapid succession this redoubtable pair destroyed three Do. 217s and narrowly escaped being shot down themselves. Their first success was off Clacton when one short burst in reply to machine-gun fire from the Dornier found its mark and the engines of the marauding Jerry burst into flames. Further bursts sent the Nazi kite plunging down to the sea before the pilot could jettison his bombs. The second victim was claimed while the first was still burning on the sea and was exploded in mid-air by one burst from dead astern. So close was Schultz to the Dornier that he flew through the debris.

The third bomber offered much stiffer opposition and a number of bursts were required to finish it off. During the long combat the enemy pilot showed great skill in taking evasive action and his gunners maintained a defensive barrage even after both engines of the Dornier had been set on fire. Finally the flaming bomber struck the sea and went straight in. But the Mossie had not escaped undamaged and for a time it looked as if the crew had bought it. Schultz's instrument panel had been shattered by a cannon shell that missed him by a bare three inches, and the starboard motor began to splutter as fire broke out in the port Merlin. Fortunately the fire died out and the starboard engine picked up long enough to enable Schultz to make a successful landing with his crippled aircraft. Both pilot and observer received immediate awards of the D.F.C.

During these months the R.C.A.F. Beaufighter squadrons had been engaged on uneventful routine patrols and scrambles. The Lynx Squadron was under the command of W/C R. C. Fumerton, D.F.C. and Bar, the pilot who had scored the R.C.A.F.'s first night fighter victory and, after a very successful tour in Egypt and Malta, had now returned to his old unit. The Nighthawks were led by W/C J. W. Reid. The two squadrons were located on opposite coasts of Britain, guarding important ports and shipbuilding areas, but no Huns appeared and the weeks lengthened into months of watchful waiting and constant training.

As a break from this unexciting programme the squadrons were frequently called upon to search the seas for ditched crews, and the skies for lost aircraft which they were to shepherd home. One night in September F/L D. D. S. Grant and P/O W. R. Breithaupt of the Nighthawks, with their observers, located a ditched kite off the Northumbrian coast and were instrumental in rescuing the crew of five. On other occasions, P/O H. F. Pearce with WO C. Allen found a wandering Halifax and directed it to a safe landing, and F/O W. H. MacPhail, despite extremely inclement weather, performed the same service for a lost Oxford.

The days and nights of patrolling, training and searching were not without their moments of humour. A Beaufighter of the Lynx Squadron was flying low near a large city in the Midlands on a scramble one night when two trams appeared to open fire. Startled by this display of hostility the Beau pilot took immediate evasive action out of range. Subsequent calmer reflection convinced him that the flashes which had caused his alarm were from wet trolley wires, not ack-ack guns.

Then there is the story of the immersion switch. One day the Engineer Officer of the Nighthawks called together the somewhat sceptical aircrews to demonstrate a new type of switch of his own design that would immediately release and inflate a dinghy housed in the Beaufighter's wing the

moment the switch was immersed in salt water.

“Duly at 1325 hours (the official record relates) all the aircrews assembled agape before the mighty Beau which stood there in its majestic splendour. In his best manner ‘Mick’ took the centre of the stage, announced that the demonstration was about to begin, signalled to his chief aide and stepped back with the look of a proud father who is showing off his first born son to the neighbours. The aircrew stepped back apprehensively so that when the cover and the dinghy popped out no one would be hurt by the hurtling bits. All was ready—the sergeant plunged the immersion switch into a pan of salt water. Every eye was glued on the dinghy panel—and nothing at all happened. The sergeant swished the switch around—still nothing happened. Then he began frenziedly splashing about—still nothing happened. ‘Mick’ began to fidget. He sent an erk into the cockpit to pull the release lever there. A faint hissing ensued. ‘Mick’ relaxed. The hissing continued and a faint thread of steam came from the panel. Again everyone cowered back under cover and waited—and waited. Finally ‘Mick’ had the cover pulled off the wing. The dinghy was still rolled in a tight cocoon and the CO² bottle was manufacturing dry ice as fast as it would go. ‘Mick’ had the dinghy pulled out onto the ground. Inert it lay hissing malevolently. ‘Mick’ struggled with it, but it still lay without movement. This proved too much for the crowd. Their released breath sounded like a clap of thunder and they came out from under their shelters. Ribald comments were heard as the crowd went about their duties. On passing the hangar at tea time there it was—a fully inflated dinghy. Not to be beaten ‘Mick’ had tried another bottle and this time it worked. ‘Mick’ stood by, beaming happily—but the aircrew still wear a sceptical look when immersion switches are mentioned.”

Late in 1943 the Lynx and Nighthawk Squadrons moved to more active zones near the English Channel. But

the aircrews, who saw in the move a prospect of more joy, were destined to a further period of acting as aerial St. Bernards. Four times Lynx Beaufighters located airmen down on the sea and directed surface craft to their rescue, and on five occasions they guided home lost aircraft. One of these was a Fortress which had on board Col. Elliott Roosevelt of the U.S.A.A.F.

There was one bit of action early in 1944 when the Lynx Squadron, clashing with the enemy for the first time in eight months, found its quarry on the sea. Early in the morning of January 21st S/L D. J. (Blackie) Williams, D.F.C., and F/L G. Sutherland, with their observers P/O J. L. N. Hall and FS G. T. Jones, were scrambled to deal with E-boats in Lyme Bay. They found three Jerries racing through the water and raked them from stem to stern with cannon shells, but were unable, because of the darkness, to observe more than a damaged which was credited to Williams and Hall.

Some weeks later the Lynx and Nighthawk Squadrons began conversion to Mosquitos. The re-equipment of the night fighters meant the relegation to second line of the Bristol Beaufighter which for so long had been one of the speediest and most heavily armed aircraft in service. For many months the Beaus had ruled the night skies, but the introduction of speedier German bombers for the first time threatened their supremacy, and they found themselves unable to overtake the bandits. As the supply of Mosquitos improved the Beaufighter units were re-equipped with the revolutionary De Havilland machine, which at that time was the fastest aircraft in the world.

The "Little Blitz"

In the winter of 1943-4 the *Luftwaffe* after a long period of relative inactivity began a series of raids which culminated in February and March in the "little blitz". These raids, which were on a much smaller scale than those in the

Battle of Britain, did not attempt any deep penetration, most of them being directed against London. After the "little blitz" had petered out the G.A.F. made sporadic attacks, chiefly along the south coast, until D-Day opened a new phase. This display of enemy activity gave our night fighters more trade and joy than they had known for many weeks. In four months they won 22 confirmed victories with four probables and the same number damaged. The German raiders were using a counter-radar measure consisting of strips of metallized paper to nullify our detection instruments. This device was inspired by one which had been successfully employed by the R.A.F. for some time, but the Nazi copy was less efficient and many bombers were intercepted.

The Cougars were stationed directly in the path of the raiders striking at London and during the period of the blitz they destroyed eight and damaged several others. Fox and Sibbett made the first kill on February 3rd when they intercepted a Do. 217 and, despite its very violent evasive tactics, shot it down in flames over the sea. At the same time F/O W. G. Dinsdale and FS J. Dunn were stalking a Ju. 88 that suddenly turned and came at them head-on, passing so close that one of the Mossie's propellers grazed the Junkers. Our crew was credited with a damaged.

Ten nights later when the Nazis again attacked London, the Cougars knocked down two and damaged a third. S/L J. D. Somerville with his observer, F/O G. D. Robinson, destroyed a Ju. 88 over the sea and damaged another Junkers of the newer 188 type, while Schultz and V. A. Williams contributed a flaming 188 for their fifth confirmed kill. Raids later in the month added two more to the squadron's score when S/L C. A. S. Anderson and FS G. P. A. Bodard destroyed an 88 and a 188 on a single sortie.

In March the Cougars, under the command of W/C G. A. Hiltz, shot down three bandits and probably a fourth. On the 14th, when the heaviest raid of the month took place,

the Canadian squadron accounted for two of the seven aircraft destroyed by night fighters. Lt. A. A. Harrington (U.S.A.A.F.) with Sgt. D. G. Tongue intercepted and shot down in flames a Ju. 188 despite its showers of "gremlins", while S/L W. P. Green, D.F.C., and WO A. L. Grimstone, D.F.M., meted out a similar fate to an 88. The third victory was credited to F/O S. B. Huppert and P/O J. S. Christie who destroyed an 88 a week later. On the 24th, when another fairly sharp attack was made, WOs W. F. Price and J. G. Costello pursued an Me. 410 all the way to the Dutch coast and saw pieces of burning debris fall from the bandit. It was counted as a probable.

So far Ab Hiltz's Mosquitos had enjoyed a monopoly of the night fighter trade. Moose Fumerton's Lynxes and Windy Reid's Nighthawks, beginning conversion training on the Mosquito, were stationed on the fringe of the active zone and few bandits entered their sectors. The Nighthawks had to wait until D-Day to see action, but the Lynx Squadron was able to re-open its victory book in the last days of March. When Blackie Williams and F/O C. J. Kirkpatrick downed an He. 177 in flames on March 19th, it was the first Lynx kill in more than a year, and the squadron's sixteenth.

A week later when the *Luftwaffe* raided the Portland, Plymouth and Bristol areas, F/L H. D. McNabb, flying with Hall as his observer, chased a Ju. 88 for ten minutes before catching up and sending it hurtling earthwards in flames. On the same night P/Os R. L. Green and A. W. Hillyer set fire to a 188 that plunged into the sea.

In April the R.C.A.F. night fighters destroyed five raiders and damaged another, of which four were credited to the Lynx Squadron and one, plus the damaged, to the Cougars. Huppert and Christie of the latter squadron got an He. 177 in flames while F/O R. L. Snowdon and FS A. McLeod damaged a Ju. 188 during a scattered raid on the 18th.

The Lynx boys scored their four victories in one week

when German raiders again became active off the southwestern coast of England. On the 23rd, WO G. F. MacEwen and FS C. S. Headley caught a Junkers off Start Point and sent it diving into the sea, a burning mass of wreckage, before the enemy gunners were able to fire one shot in defence. Six nights later Blackie Williams and Kirkpatrick, making the Lynx Squadron's first operational sortie on their new Mosquitos, scored a double by downing one Do. 217 over land and another, 11 minutes later, over the sea. The same night 1st Lieut. S. I. Kvam (U.S.A.A.F.) and P/O G. A. Read, on a Beaufighter, blasted a Ju. 88 so effectively that it showered down into the sea in a thousand pieces.

In May, as the *Luftwaffe* continued to probe at south coast ports, the R.C.A.F. night fighters tallied six kills, three probables and a damaged. Moose Fumerton's boys had the most successful night in Lynx Squadron history when, on the 14th, in eight combats within two hours, they destroyed four raiders, probably destroyed three and damaged one. McNabb and his observer, FS B. F. Tindall, started the ball rolling by probably destroying a Junkers and damaging another bandit, while P/Os W. G. Muschett and Hall took on three 88s in rapid succession. The first Junkers rolled over on its back and crashed in flames; the second, after a couple of bursts, also flipped over and spun in, while the third went whirling down in flames. Although followed almost to the deck by a searchlight beam, the third victim was not actually seen to crash, so Muschett and Hall only got a probable on that one. Only five minutes elapsed between the first combat and the third.

At almost the same moment that Muschett and Hall scored their second kill Moose Fumerton and F/L A. H. C. Lynes, in a Mosquito, destroyed another 88 twenty miles off Portland for the C.O.'s 14th victory. Closing in quickly, despite the bandit's jinking and streams of paper gremlins, Fumerton fired a long burst that shot pieces off the Junkers, blew up the port engine, and sent it flaming into the sea.

Near the Channel Islands P/O D. J. McConnell and F/O M. Kazakoff engaged two more raiders. After a long chase the first, an He. 177 flown by a skilful pilot, dived steeply toward the sea, followed closely by the Beau. At the last moment McConnell pulled out, but the 177 was nowhere to be seen and is presumed to have been unable to recover from its dive. That was a probable. The second encounter, with a 188, was more decisive, for the Junkers, after bursting into flames, glided down toward the sea and then blew up in a mass of blazing fragments. McConnell and Kazakoff scored again the following night, when they exploded an He. 177 with a blast that threw the Beau violently to one side amid a shower of flaming debris. The Lynx Squadron now had 27 confirmed kills, of which 12 had been scored in the previous eight weeks.

Following their string of victories during the February and March blitz the Cougars had found little joy as the raiders were avoiding the Metropolitan area. But late in May P/O L. J. Kearney and F/O N. W. Bradford, after a long chase over the North Sea and France, overtook a Ju. 88 near Lille and set its petrol tanks on fire to chalk up the 20th Cougar victory since January 1943.

B. *Intruders*

While some night-flying fighter squadrons are engaged on defensive patrols over Britain others spend their flying hours on offensive missions, intruding far and wide into enemy-occupied territory. These intruder squadrons have roughly four different objectives: by maintaining a patrol over *Luftwaffe* airfields they prevent night fighters from attacking our bomber formations and at the same time are able to destroy returning Nazi bombers; by strafing railroads and roads they disrupt the enemy lines of communication; and by daylight attacks deep within occupied Europe they harass the German flying training fields. It was not an uncommon occurrence for a Nazi fledgling trying

out his newly-sprouted wings in the comparative quiet of a training school circuit far in the interior of the occupied countries, or even in Germany, to find himself suddenly beset by a stream of cannon shell. In these varied activities the City of Edmonton Squadron, under the command of W/C P. Y. Davoud, D.F.C., has been conspicuously successful.

The squadron opened the period of this chronicle with a typical night's work. One Mosquito crew dropped two 500-lb. bombs on Laon-Athies airfield, a second served the Juvincourt airfield in the same manner, while a third worried the night fighters based at Melun-Bretigny, and two other crews blew up railway lines. Again and again during the autumn and winter months the story was repeated, the only difference being in the names of the targets patrolled or attacked. Specific results of the bomb bursts and cannon fire could seldom be observed, but occasionally an encounter with enemy aircraft highlighted a night's work.

September was particularly successful with eight victories added to the squadron's record. Three crews scored doubles. On the 5th, S/L R. J. Bennell and F/O F. Shield while patrolling in the Mannheim area shot down one Jerry in the circuit at Worms-Biblis aerodrome and a Do. 217 at Mainz-ober-Olm. Later in the month, on the 23rd, S/L M. W. Beveridge and Sgt. B. O. R. Bays crashed an Me. 410 and a Do. 217 in flames south-west of Stuttgart. All three officers received the D.F.C. and Bays the D.F.M. The third double was won by F/L H. S. Lisson and F/O A. E. Franklin when, four nights later, they shot down an unidentified twin-engined kite and a Ju. 88 over Volkenrode aerodrome. The Junkers was blasted just as it touched down on the runway, while the first aircraft was blown to pieces in mid-air, forcing Lisson to take evasive action to dodge the debris.

Another Hun, an FW. 190, was exploded over France by F/Os J. R. F. Johnson and N. J. Gibbons, while the

eighth fell to S/L C. C. Moran who was awarded the D.F.C. as a sequel to his night's work. Edmonton Mosquitos were busy over G.A.F. airfields in Holland on the 22nd, supporting Bomber Command's heavy attack on Hanover, when Charlie Moran blew up a kite as it circled an airfield. So close was he to his victim that the explosion seriously damaged the Mosquito and threw it out of control. Righting his machine with difficulty, Moran limped homewards to within 25 miles of the English Coast where the Mossie caught fire and he and his observer, FS G. V. Rogers, were forced to bale out. Three hours later Moran was picked up by A/S/R launches, but an intensive search found no trace of Rogers. On his return Moran reported:

On trying to jettison the door the bottom hinge stuck and Rogers had considerable difficulty in getting it clear—the aircraft was then flying on one engine and very difficult to control. He finally kicked the door free and baled out head first at about 3,000 ft. He appeared to leave the aircraft quite freely. After giving a further transmission for a fix I endeavoured to get out of my seat, but some part of my harness got caught and while I was trying to free myself the aircraft got out of control and lost height to about 1,000 ft. I got back into my seat, pulled the stick back and the aircraft rocketed up with the port wing well down. I then got clear and, keeping my right hand on the stick as long as possible, I turned on my stomach and left the aircraft without difficulty feet first. The parachute opened without any trouble and after stopping a bit of sway I made a good landing on the sea. I did not release my harness until I had made sure I had a good grip on the dinghy lanyard. Before climbing into the dinghy I only half filled it and let it inflate fully round me while I was seated inside. I then collapsed, and when I came to I found that the parachute was pulling one end of the dinghy down. I released the lanyard and threw the floating torch into the sea. It lighted satisfactorily and remained on until I was finally rescued.

In addition to aircraft, trains, barges and automobiles were also successfully attacked and at least 17 locomotives were strafed, seven on the 15th alone. Three of these were accounted for by Charlie Moran with Rogers, and two each by Beveridge with Bays, and Sgt. A. Williams with Sgt. R.

J. Gurnett. On one occasion in September, FS G. Labram with Sgt. A. L. Smith shot up four trains before their ammo ran out, while F/O D. D. Johnston with F/O D. F. Dwyer halted two trains and blasted eight barges and an automobile on another sortie.

But intruder operations are not the prerogative of the Allied air forces alone, as Williams found to his discomfort one evening just as he was about to land. A Jerry intruder opened fire, but fortunately his aim was poor and Williams landed unscathed, whereupon the Hun followed up his attack with a shower of anti-personnel bombs, 86 of which were counted the following morning by the bomb disposal squads.

Intruders require better weather for their work than do heavy bombers and the proverbially duff English weather seriously curtailed intruder operations during the last quarter of 1943. It was seldom that the Edmonton crews found much joy, except for locomotives—of these they pranged ten in October and 14 in November. Four each were credited to F/O J. L. Armstrong and 1st Lieut. J. F. Luma (U.S.A.A.F.), and three each to Massey Beveridge and F/O. H. E. Jones. In December, however, the strafing of locomotives was suspended and the intruders lost one of their chief pastimes.

The prevalence of unfavourable weather during the winter did not mean a complete cessation of intruder operations and on many nights the Mosquitos, despite very difficult conditions, worked in conjunction with attacks by Bomber Command. One night in December outstanding shows were put up by P/O S. Wilson and F/O E. A. Brown, navigators for S/L D. C. S. Macdonald and F/O C. C. Scherf (R.A.A.F.) of the Edmontons, who in the face of dense banks of cloud guided their pilots far into Germany to their objective and back—a journey of over 1,000 miles, completed without a single pinpoint except the glow of fires and enormous clouds of smoke high above Leipzig.

After September's string of victories the intruders rarely encountered enemy aircraft. One night in December was an exception, however, when the Edmontons, while patrolling *Luftwaffe* bases in the Lowlands and southwestern Germany in support of bombing raids to Frankfurt and Ludwigshafen, destroyed two Jerries and damaged a third. Herbie Jones with F/O A. J. Eckert, after strafing the control tower at Illesheim, flew on and found Ansbach lit up and two kites in the circuit. Jones poured a squirt into an Me. 110 just as it came in to land, turned one engine into a sheet of flame and watched the luckless Nazi crash and burn just outside the perimeter track. As Jones swung back to take a cine-camera shot of the flaming wreckage, he almost collided with a second Hun, but petrol and ammunition being low he did not engage. F/O J. T. Caine with FS E. W. Boal scored the second kill of the evening and the first of a long series credited to this team when, near Moncel, they saw another kite flying a parallel course with all navigation lights on. It took just one burst from the Mossie's cannons to turn the Jerry into a diving ball of flame that ended in a pyre on the airfield. A third crew got a damaged the same night, and the team of F/L D. A. MacFadyen and F/O J. D. Wright was credited with a probable two nights later.

Daylight Intrusions Begin

Although locomotive-busting was banned and night intrusions yielded little joy, the last weeks of 1943 witnessed the introduction of a new type of operations for the Edmontons—daylight intruder sorties—which were to prove most successful. The first of these was carried out by Scherf with Brown and J. R. F. Johnson with Noel Gibbons in the late afternoon of November 28th. Under excellent cloud cover the Mossies hedge-hopped their way to the seaplane base at Lake Biscarosse, near Bordeaux, where Johnson damaged at least two of six Arado 196s moored by a slipway and

Scherf took a squirt at a large flying-boat. A fortnight later, on December 12th, F/L R. A. Kipp and Johnson with their observers, F/Os P. Huletsky and Gibbons, while flying along the deck between Bourges and Avord, deep in France, spied an He. III a thousand feet above. Pulling up behind, they filled the Heinkel with cannon shell and watched it crash and blow up in a nearby field. Continuing on their way, they met a second Heinkel which they also attacked. After absorbing the Mossies' bursts, this one, though diving steeply, was not seen to crash, so the pair were only credited with a probable.

Following these experimental sorties, the Edmontons late in January cut loose in the air, setting a pace which never slackened. From Denmark and the Baltic across Europe to Bordeaux and the Pyrenees the speedy Mosquitos ranged day and night, knocking Jerries out of the air or smashing them on the ground. In less than four months the squadron ran its score from 20½ to well over the century mark. By D-Day the total was 122. Of the 100 which had been destroyed since the beginning of the year more than 70 were accounted for on daylight sorties.

Night operations during January were not fruitful as low banks of cloud still hampered the intruders. Nevertheless, Kipp and Huletsky damaged an Me. 210 on the 14th and Luma and Eckert destroyed another a week later. After chasing the Jerry for 20 miles Luma got in a burst which caused an explosion in the fuselage; then a wing broke off and the Messerschmitt plunged to the ground, blew up and burned. The Mossie returned with two fragments imbedded in its wing as concrete evidence of Luma's first victory. On other night intrusions the airfields at Athies, Melun, Beauvais, Abbeville and Cambrai-Niergnies were bombed and a small coastal vessel in the Bay of Biscay was clobbered by Scherf's cannons.

If nocturnal pickings of the intruders were meagre, four daylight sorties on January 27th afforded ample compensa-



(1) F/O R. H. Rohmer (Portrait sketch by F/L E. A. Aldwinckle). (2) S/L C. H. Stover, D.F.C. (3) F/L J. A. Lowndes. (4) W/C R. A. Ellis, D.F.C. (5) F/O T. H. Lambros (Portrait sketch by Aldwinckle). (6) F/L K. L. Morham. (7) F/L D. M. Grant, D.F.C. (8) F/L G. W. Burroughs, D.F.C. (9) F/L F. E. W. Hanton, D.F.C. (10) F/O L. F. May, D.F.C. (11) F/L A. T. Carlson, D.F.C., and F/O E. E. Tummon. (12) F/O L. A. Doherty, F/L W. T. Blakeney and S/L R. T. Hutchinson, D.F.C.



(1) Lt. S. I. Kvam (U.S.A.A.F.). (2) W/C D. J. Williams, D.S.O., D.F.C. (3) F/L C. J. Kirkpatrick, D.F.C. (4) W/C J. W. Reid, D.F.C. (U.S.A.). (5) F/L R. D. Schultz, D.F.C., and his navigator, F/L V. A. Williams, D.F.C. (6) F/O G. D. Robinson and his pilot, S/L J. D. Somerville, D.S.O., D.F.C. (7) W/C R. C. Fumerton, D.F.C. (8) F/L J. W. Peacock of Montreal. (9) F/L M. Kazakoff. (10) F/L M. A. Cybulski, D.F.C., and his navigator, F/L H. H. Ladbroke, D.F.C. (R.A.F.).

tion. Weather conditions were ideal for an intrusion deep into France and about three o'clock in the afternoon two teams of Mosquitos set out. "The result of these trips (the squadron diary records) was terrific." Seven, probably eight, aircraft destroyed was a record bag of which any squadron could justly be proud.

One team, J. R. F. Johnson and Johnny Caine with their observers, Noel Gibbons and Earl Boal, first flew towards Bourges where they shot down a Ju. 34 in flames. Then they flew to Clermont where they separated. Caine intercepted a Ju. 88 ten miles north-east of the airfield and brought it down with a three-second burst. One member of the crew baled out before the Junkers dived into the deck and burned. Meanwhile, Johnson probably destroyed a Ju. 86 as it landed at Clermont, but broke off his attack to take on an 88. Whipping round behind the second victim, the Mossie let off two short bursts, whereupon the Junkers caught fire and exploded in mid-air. Turning towards the flaming wreckage of Caine's 88, Johnson came up behind another Ju. 34, gave it a burst from close range, and like the others the Jerry plunged headlong in flames.

While Johnson and Caine were setting off fireworks around Clermont-Ferrand, Macdonald and Scherf were busy at Tours, Bourges and Avord. Passing south-east of Bourges at tree-top height, Macdonald and his observer, Stanley Wilson, overtook an He. 111 which they blew up "in a lovely mess". A few minutes later the two crews saw a big four-motored FW. 200 ahead of them, near Avord. When Scherf and Brown attacked with a long burst from close astern, the under-part of the fuselage began to blaze and pieces flew off. For a moment the bomber levelled off while the pilot baled out; then with one motor in flames the Focke-Wulf plunged into a wood. Next Macdonald attacked another four-motored job, an He. 177, and set the starboard motors and fuselage on fire. Once again one of the crew baled out before the Heinkel crashed headlong.

During January the squadron changed commanders. Davoud, its C.O. since June 1943, became a group captain in command of an R.C.A.F. fighter wing and the proud possessor of a D.S.O., and was succeeded by W/C D. C. S. Macdonald, who shortly afterwards was awarded a D.F.C. in recognition of his feat on January 27th. Macdonald's observer, Stan Wilson, was also decorated with the D.F.C. some weeks later.

February was an even more successful month for the Edmonton intruders, with 16 enemy aircraft written off. Thanks to the *Luftwaffe's* "little blitz" and improving weather conditions night intrusions paid good dividends once more. The month began well when, on the 3rd, three Nazi airfields were bombed and strafed and three Huns chased. F/L T. G. Anderson and F/O J. F. Cadman, making their second operational sortie, caught one of the Jerries as he turned into the flare-path at Tours and let him have it. Twenty miles away the flames of the crashed Hun could still be seen. Luma and F/O C. G. Finlayson won the month's second victory on the 12th when they shot down an He. 177 as it came in to land at Merignac airfield, west of Bordeaux.

In the early hours of the 19th, Kipp and Huletsky bagged two Me. 410s as the Nazis returned to their base at Juvincourt following a raid over south-east England. The two bombers crashed in flames on opposite sides of the airfield, lighting up the countryside for miles around. Four nights later, on the 22nd, FS Williams and WO Gurnett, after damaging one Jerry at Coulommiers, turned on a second and set both engines on fire.

In addition to these five destroyed on routine intruder missions, bomber support operations accounted for five more Huns. On the 19th, Charlie Scherf and Gurnett scored a victory without firing a shot. En route for Leipzig, the night's bomber target, Charlie forced a single-engined Jerry into such tight turns that the German pilot, losing control of

his machine, dived and crashed into the deck near Florennes in Belgium.

The Australian followed this unusual victory with a double five nights later. Patrolling between Illesheim and Ansbach, with Finlayson taking the place of his regular observer, Al Brown, who was sick, Scherf set fire to a Ju. 88 with a well-aimed burst and saw it blow up as it crashed. Then, finding another, he got in two good bursts before the twin-engined kite crashed in flames on the edge of the airfield. The same night MacFadyen and Wright shot down an Me. 410 in flames as they patrolled over German airfields. Johnny Caine and Earl Boal added another, their fourth, on the following night when three aircraft landed hastily on the snow-covered field at Riem as the Mossie approached. Caine dived on a fourth which offered a good target as it taxied along the perimeter track with its lights on, blew up one engine and set the whole machine afire.

Night operations in February had been quite profitable, but once again it was a daylight sortie which highlighted the month's work, when, on the 26th, two Edmonton Mosquitos destroyed six enemy aircraft and damaged another. In mid-afternoon Scherf with Finlayson set out along the deck to visit St. Yan, accompanied by F/L H. D. Cleveland with FS F. Day. First they shot up the airfield, with Scherf aiming his bursts at two Ju. 52s parked on the east perimeter. One exploded, the second began to blaze and a petrol bowser standing between them also began to burn furiously, while Cleveland's first target, a parked Ju. 86, flamed fiercely. Then, while en route to Dole-Tavaux, they met an aerial procession flying sedately at 2,000 feet. In the lead was an enormous bi-Heinkel, a curious machine constructed from two bimotored He. 111s joined together. The monster was towing two Go. 242 gliders in line astern. Cleveland took the rear glider and gave it a burst at very close range while the other Gotha cut loose too late to evade devastating blasts from Scherf's cannons. Both glid-

ers fell in a shower of wreckage. Then Scherf set fire to the starboard engines of the aerial tug; a longer burst from Cleveland smashed the port engines and port fuselage, whereupon the freak dived to earth and burst into flames. On the way home Cleveland finished his ammo on another Go. 242 standing in a field. The total score (including the gliders) was three aircraft destroyed on the ground, three (or four if the bi-Heinkel could be counted as two machines) destroyed in the air, a petrol bowser in flames and a glider damaged.

During February the squadron again changed C.Os. Macdonald, after seven weeks at the helm, was succeeded by W/C R. J. Bennell, D.F.C., A.M., a former member of the Edmontons who had just returned following a few months' rest. He was joined a few days later by F/O Frank Shield, D.F.C., his old observer, but their second tour was of tragically brief duration for on their first sortie, a daylight mission on March 9th, Dick and Frank were posted missing. At the end of March W/C Anthony Barker assumed command of the squadron.

March

March was a poor month for the Edmonton's score of Jerries downed by night as they claimed only two destroyed and one damaged on bomber escorts and night intrusions. On the 6th, Luma and Finlayson limped into base on one engine, 90 minutes overdue from a flight deep into France. At Pau, not far from the Spanish border, Luma had caught a long-nosed FW. 190 and, after a chase, exploded it in mid-air with one good squirt. But so close was the explosion that pieces of flying debris damaged the Mossie's starboard radiator. The second night victory was won on the 10th when F/L C. A. Walker with his observer, F/O T. J. Roberts, shot down an unidentified Nazi aircraft at Melun. Two nights later this team did not return from another sortie; Walker was subsequently reported safe, while Roberts was

taken prisoner.

Daylight intrusions, however, yielded nine Huns destroyed and 13 damaged, all of which were accounted for on two days. On the 12th Johnny Caine with Earl Boal (now a P/O) in company with F/O C. M. Jasper and F/L O. A. Martin beat up the airfield at Clermont. Johnny blew up and destroyed a Ju. 52 and a Ju. 86P parked on one side of the field, while the other crew damaged another Junkers trimotor. As a sequel to this show both Caine and Boal received the D.F.C. They had destroyed five Huns and shared in two more.

On a second daylight intrusion on March list two crews destroyed seven enemy aircraft and damaged a dozen more. In mid-afternoon of this first day of spring the Luma-Finlayson and MacFadyen-Wright Mossies took off together to visit airfields in eastern France. At Hagenau, north of Strasbourg, they swept across the field, skimming the deck, and riddled two Do. 217s, an He. 111 and a Go. 242 on the ground, all of which went up in flames.

Around the intruders came again for a run down a line of Gotha gliders and Luma, in the lead, saw his cannon shells strike two while MacFadyen, following him, smashed bursts into eight more. From there they flew to Luxeuil where Luma blew up a Ju. 34 in the air, then dived on an Me. 109 trying to take-off down-wind, overshot, but made hits on two other 109s parked on the field. Meanwhile, MacFadyen crashed a Bucker 131 training plane just as it was landing. Turning homeward the two Mosquitos jumped a Ju. 52 and crashed it into a forest in flames. These victories raised the squadron's total to 55½ enemy aircraft destroyed in the air and on the ground.

MacFadyen, Wright and Finlayson received the D.F.C., while Luma, who finished his tour in April with a score of six and a half e/a destroyed and several more damaged, was awarded both the American and British D.F.C.'s. S/L H. S. Lisson and F/O A. E. Franklin also received D.F.C.'s on

the completion of their tour, as did J. R. F. Johnson and Noel Gibbons. Early in March Charlie Scherf also finished his tour with the Canadian squadron, put up the extra half ring of a squadron leader and the D.F.C., and left for an intruder controller's job. But his new duties did not keep him on the ground and he came back whenever possible to add many more to the seven and a half destroyed, plus two damaged, which already stood to his credit.

April

April set a new record for the Edmontons when nine crews in the course of four daylight intrusions destroyed 24 enemy aircraft and damaged ten. Charlie Scherf opened the bag when, on the afternoon of the 5th, he took off with F/O W. A. R. (Red) Stewart as his observer. Despite lack of cloud cover they penetrated to Monsteroux in the Rhone valley where they saw a Fieseler Storch and turned to attack, but the cannons refused to fire. While Scherf circled, making repairs, the Storch landed hurriedly and its two occupants ran for cover; then the Mossie came down again and blew up the abandoned kite. Resuming their course to Lyons, they intercepted a twin-engined Hun, possibly a Potez 630, that also blew up, crashed and burned, after which they turned on a second bi-motor and shot it down in a ball of flame. Rather than stooge around waiting for darkness to cover their return trip they set course for St. Yan where they found two He. IIIs parked side by side. Bursts from very close range set both burning merrily.

Four days later, on a mid-day visit to eastern France, F/O H. C. Ford with F/O J. I. Clark destroyed one and damaged a second FW. 190 in a line of eight and also damaged a training machine, while F/Os G. N. and G. D. Miller wrote off one and damaged two more FWs., after which the two teams shared in damaging a trainer. Then they shot up the control tower before proceeding to St. Dizier where they raked two hangars and damaged two more aircraft.

On the 14th, penetrating into the Sound between Denmark and Sweden, Kipp and Caine, with Huletsky and Boal, encountered four Ju. 52s, three of which were girdled with mine-detonating rings, sweeping over the water in formation. They shot down all four into the sea. The two Mossies then strafed a number of aircraft standing on the tarmac at Kastrup near Copenhagen, where Caine set fire to an He. 111 and damaged a Ju. 52, while Kipp swung his tracers along three Do. 217s, hit all three and set two blazing. Kipp's "careful planning and audacious tactics" on this occasion were recognized by the award of the D.F.C.; Peter Huletsky, his observer, was also decorated and Johnny Caine added a bar to his gong.

A fourth daylight intrusion on April 16th cost the *Luftwaffe* ten aircraft destroyed and one damaged. Jasper with Martin, accompanied by F/L W. J. Harper with F/O T. H. Rees, took off first with Luxeuil as their destination, where Harper shot down a Ju. 34 in flames while Jasper set ablaze one of several Caudron bi-motored transports standing on the aerodrome. Flying through the flames, Jasper set fire to a second, zoomed up under a third which had just taken off and crashed it with both engines on fire. Meanwhile Harper, after losing sight of one Ju. 34 in the poor visibility, caught a second as it tried to land in a small field and made it slew into a tree. One wing was torn off and the machine, turning over, smashed into fragments.

At the same time another pair, S/L Cleveland with FS Day, and F/L J. B. Kerr with F/O P. Clark, were visiting other airfields. At Toul they blew up two FW. 190s and one Bu. 131 trainer, set fire to another Bucker and damaged a third. Ten miles north of Thionville, Cleveland and Kerr found a Ju. 87 standing in a field and finished it off before turning home.

Night intruder operations in April increased the squadron's tally by six Huns destroyed, four probables and one damaged, and in addition four *Luftwaffe* airfields were

thoroughly raked with cannon and machine-gun fire. WO M. H. Sims and Herbie Jones scored the first successes on the night of the 11th when over one airfield Sims and his observer, P/O J. D. Sharples, smashed two bursts into a Ju. 188 which hit the end of the runway, bounced, spun round on the ground and ended up a total wreck, while near another airfield in the Munich area Jones with Al Eckert blew up an FW. 190 with a short burst from dead astern.

The next night was even better. Near Verdun Jasper and Martin destroyed a 190, while at Kolberg on the German Baltic coast the Millers attacked three enemy machines in quick succession. The first, an He. 177, dived away with flames spurting from its port engines and was probably destroyed; the second, an He. 111, plunged straight into the ground, "going up in an enormous explosion", and a third twin-engined aircraft shed debris as it dived steeply towards the sea. These successes won the D.F.C. for G. N. (Lefty) Miller.

Late in April there were several other successful engagements as the Mosquitos intruded over G.A.F. airfields in France and Bavaria. On the 26th Merv Sims and Junior Sharples crashed one Hun at Schweinfurt in addition to shooting up and probably destroying two machines on the ground. Kipp and Huletsky damaged another as it taxied along the airfield at Evreux on the following night, while Cleveland and Day destroyed their seventh Hun without firing a shot. As they patrolled near Toul, Cleveland closed in on a bi-motor which had its lights on. In a panic the Jerry pilot dived too quickly, hit the runway, slewed round and burst into flames.

May

Though April had been a good month for the Edmontons, May was even better and set a new record of 36½ aircraft destroyed and a further 14 damaged. Once again daylight intrusions were responsible for most of the victories—

26½ of the destroyed and 11 of the damaged.

On the 2nd Charlie Scherf, who had just been awarded a bar to his D.F.C., left his controller's job and returned to his former unit for a day to celebrate. Accompanied by Johnny Caine and Earl Boal, Scherf and Red Stewart took off for the German Baltic coast. Approaching Ribnitz they found a number of float-planes and flying-boats moored in the water. Scherf knocked bits off two He. 115s while Caine blew up two Do. 18 flying-boats and damaged two more. At Barth they found 12 machines of various types parked on the airfield and the two Mossies shot the works. Scherf blew up an He. 111 and a Do. 217 while Caine destroyed a variety of Junkers, a 34, a 52, an 88 and an 86P. Johnny's port engine, however, packed up after being hit by debris from the exploding Junkers, and he had to limp home on one Merlin.

Meanwhile, Scherf and Stewart flew on to Greifswald where they shot down a Ju. 86P in flames and blew up an He. 111 on the ground, and on the way home destroyed another Heinkel on the airfield at Bad Doberan, near Rostock. Altogether on this recordbreaking sortie, the two Mossies had destroyed 11 machines and had given the Nazi repair squads a job to do on four more. Stewart received a well-merited D.F.C.

When some mathematician pointed out that the squadron total was 96½ destroyed there was a rush to get the 100th. Three crews went out that night. MacFadyen, with Wright, damaged a bi-motor on the ground at St. Yan and set fire to an He. 111Z (bi-Heinkel), but as they dived again to take photographs a machine-gun slammed a burst into one of the Mossie's engines and touched off an explosion. Feathering the propeller, MacFadyen and Wright limped home to claim No. 97½. Half an hour later Kipp and Hulet-sky touched down with the century, and another record, in the bag. They had cracked down four FW. 190s to beat all previous night records for a single aircraft, an achievement

which won the D.S.O. for Kipp and a bar to the D.F.C. for Huletsky. Near Ammer See, south-west of Munich, they crashed a Focke-Wulf which was on a searchlight co-operation exercise. Over Gunsburg on the Danube they shot down a second and then on the way home blew up two more that were practising formation. But the debris through which he flew damaged Kipp's kite and for a moment he lost control. Barely 100 feet above the two piles of blazing wreckage, the pilot righted his Mossie and set course for home.

On May 5th, Harper and Sims added four Jerries during a daylight strafe at Thionville and Metz when, at the first place, Sims with Sharpies blew up a Ju. 87 while Harper with Rees exploded a Ju. 88; at the second, Harper set fire to another 88 and damaged a third and two 87s while Sims finished off another Stuka. Four more were written off on the night of the 8th. F/Os D. E. Roberts and A. D. McLaren blew up an FW. 190 before the pilot knew what had hit him. Herbie Jones and Al Eckert did the same to a big Ju. 290 over southwestern Germany and then shot up a train. On the Baltic Coast Johnny Caine and Earl Boal, on another visit to the Greifswald area, blew up one Do. 18 on the water, damaged two more and got a flamer, a BV. 138. Their victories this night gave Johnny and Earl a total score of 17 destroyed, including 12 on the ground, and five damaged, for which Boal pinned a rosette on his D.F.C. ribbon. A second machine which accompanied them that night was brought down by flak, and F/L J. M. Connell and F/O D. W. J. Carr were taken prisoner.

Winco Barker with F/L R. G. Frederick had a close call two nights later. On a visit to airfields in France their Mossie suffered flak damage and on the way home Barker had to ditch in the Channel. Frederick's leg was broken, but the two men scrambled out through the bottom of the cockpit, inflated their individual dinghies and lashed them together. It was then about 0145 on the morning of the 11th.

It was not until 1930 hours, almost 18 hours after they had crash-landed, that an A/S/R Walrus picked them up two miles north of Dieppe.

The Edmontons had destroyed 24 Huns during the first two weeks of May and by nightfall of the 16th they had broken their April record. After an early breakfast on the 14th Jasper and Martin flew across to eastern France where they shot down an He. 111 between Nancy and Toul and then blew up a Ju. 87 standing on an airfield, to win their sixth victory and the D.F.C. Meanwhile, two crews had been beating up Luxeuil. F/Os F. M. Sawyer and J. E. Howell saw their own bursts damage two Stukas and reported that Harper and Rees had hit another. But both Mosquitos were struck by flak and the latter crew did not return.

Two days later Charlie Scherf dropped in to spend another "48" with the squadron. Teamed up with Finlayson and accompanied by Cleveland and Day on another Mossie, the Australian headed for the Baltic where, off Falster Island, he shot down an He. 111 into the sea in flames and followed up by blowing an FW. 190 to pieces. Swinging into Kubitzer Bay, the Mossies separated, Scherf and Finlayson heading for Parow, where they destroyed an He. 177 in a head-on attack over the sea, shattered an He. 111 parked on the airfield, and then chased a Henschel 123 out over the Bay and blew it up. After damaging a Do. 18 moored on the water at the seaplane base, Scherf chased a Ju. 86P across Stralsund and crashed it south of the town. Flak made several hits on the Mossie and on the homeward flight further damage was inflicted by a flock of birds which smashed many holes in the leading edge of the wings.

Meanwhile, Cleveland and Day had set fire to a Do. 217 standing on Parow airfield and crashed an He. 111 just as it was touching down. Following this, they turned to strafe a line of seaplanes moored just off shore, but as they passed over a hangar, two Bofors guns let loose and hits

were sustained in the fuselage and starboard engine, blowing out the roundel on the starboard wing. "(They) feathered the starboard engine and then turned north over the Baltic. Instruments had been destroyed and as aircraft was in very sluggish condition it was decided to try to make Sweden. (They) ditched in the sea just over three miles from the Swedish coast and were picked up three hours afterwards. Unfortunately, FS Day was dead by the time help arrived." After a period in a Swedish hospital Howie Cleveland was repatriated. Awards of the D.F.C. to Cleveland and the D.F.M. to Day, which had been recommended earlier, were announced a day or so after this operation. Scherf got the D.S.O. and Finlayson received a bar to his D.F.C. Before he was finally grounded the Australian pilot had destroyed 23½ enemy aircraft during his tour and subsequent extra-curricular sorties. Finlayson had shared with his pilots in the destruction of 17 Huns.

There were three more successful daylight operations before D-Day. On May 21st, Kerr and P. Clark, on a combined mission with sections of Mustangs, destroyed one LeO. 45 bi-motor over the Danish coast and shared another with two Mustangs. In the early morning of June 1st, S/L E. R. McGill and F/L T. G. Anderson with their observers, F/Os F. D. Hendershot and Pete Huletsky, headed for the Rhone valley where they found a Do. 217Z north of Avignon, which Anderson shot down in flames. A few minutes later the two Mossies dived on Valence airfield and McGill's bursts knocked fragments off a bi-motor parked in one corner. Anderson ended the morning's outing by strafing a freight train in a station near Vichy. After supper that evening, Sims and Sharples, under cover of low cloud, paid a visit to the upper Rhine where they blew up a Ju. 34 near Baden-Baden to score their fifth victory. Flames from the Junkers seared the paint off one wing of the Mossie.

Night operations during these last weeks had yielded little with only one Hun, an He. 177, blown up in mid-air

over Gascony by Kipp and Huletsky on the 14th. There were no further night combats before D-Day, but a few successful attacks were made on ground targets. Several airfields were bombed and at least three trains well strafed by P/O W. E. Bowhay, F/O D. E. Roberts and F/L L. E. Evans. One night a Beaufighter of the Lynx Squadron, flown by F/L H. D. McNabb and FS B. F. Tindall, joined in to shoot up a freight train.

On the eve of D-Day the City of Edmonton Squadron was the most successful fighter unit in the R.C.A.F. with a total of 122 Jerries destroyed in the air and on the ground and about 70 more probables and damaged since its formation in November 1941. Of this impressive total 39½ had been destroyed in the last four months for a loss of six crews.

CHAPTER VIII

SPITFIRES OVER SICILY AND ITALY

THE City of Windsor Squadron had followed in the wake of the Eighth Army across North Africa and, shortly after the conquest of Tunisia, flew from Ben Gardane to a new base at Luqa in Malta. Here the pilots spent a more or less restful three weeks until the invasion of Sicily, with an occasional escort to medium and heavy bombers, while they plastered Axis airfields in Sicily, as their sole occupation.

On July 10th, the sea-borne landings began and the Windsors, now under the command of S/L P. S. Turner, D.F.C. and Bar, a Canadian with long experience in the R.A.F., patrolled high above the Canadians landing at Cape Passero and also escorted a medium bomber attack on Caltagirone. A heavy schedule of such operations tested the effectiveness of the maintenance crews as sweep after sweep was crowded in, until, on the 15th, the squadron set out for Sicily to take over Pachino airfield. In rapid succession it followed the advancing Army from Pachino to Casibile and finally to Lentini West, where it remained for the duration of the Sicilian campaign.

Operational activities of the Windsors during the conquest of Sicily were confined to dull bomber escorts with the no-less boring job of standing patrols as virtually the only break. Neither job is to be scorned if the enemy shows

any aggressive spirit, but either the G.A.F. was sadly lacking in day fighters or it was purposely confining its activities to night operations. Of these there were plenty and the peace of virtually every night was rent by the crash of bombs, the chatter of machine-guns and the shattering bark of ack-ack batteries. After searching vainly for many nights, the raiders finally found Lentini and gave it a thorough pasting. The Canadian squadron was the only unit of the wing to escape casualties, although in common with the other squadrons the Windsors lost several aircraft.

After the conclusion of the 39-day Sicilian campaign, the squadron again began a series of moves which continued almost without interruption until the end of this narrative. Two weeks after the landing on the Italian mainland, the Windsors moved, on September 19th, to Grottaglie, ten miles north-east of Taranto; a week later they journeyed on to Gioia delle Colle, where they stayed for ten days before taking up new quarters at Foggia. Sweeps, interception and convoy patrols, all without incident, were their sole source of amusement for three weeks until, with the strengthening of the Nazi positions across the peninsula, the *Luftwaffe* at last reappeared.

It was on October 4th that F/L A. U. Houle, D.F.C., scored the squadron's first kill in many months when his patrol intercepted 12 FW. 190 fighter-bombers. After two bursts from Houle's guns one 190 plunged into the sea off Vasto. Following this Bert Houle proceeded to damage two more. Later days did not fulfil the promise of October 4th. Scraps were few and indecisive with nothing better than a damaged Ju. 88 to record. Nevertheless, routine jobs continued while the squadron made a Cook's tour of the towns and airfields of southern Italy, escorting bombers or carrying out unexciting weather reces and eventless defensive patrols.

The Sangro Battle

The Battle of the Sangro River, from November 28th to

December 3rd, did brighten the lives of the fighter boys and produce several exciting combats. On the 30th they flew five patrols over the bridgehead which the Eighth Army had established across the river. Four were uneventful, but the fifth found good hunting and the Windsors destroyed two Jerries and probably a third. F/O D. E. Eastman fired two short bursts into one FW. of a mixed formation of ten 190s and 109s, and blew it up. WO H. G. Johnson attacked another Focke-Wulf which turned over on its back and dived vertically into the deck, sheathed in flames. F/O J. A. O'Brian scored a probable at the same time. Jimmie O'Brian is the son of Air Commodore G. S. O'Brian, A.F.C., one of the best-known men in the R.C.A.F. by virtue of his having for many months commanded the reception centre in England through which all R.C.A.F. reinforcements passed. A brother is a wing commander in the R.A.F. and holds the D.F.C. and Bar.

Three days later Houle, who had succeeded Turner in command of the squadron, blew the tail off one Me. 109 "flamer" and crashed another, despite the fact that the Jerry fighters showed little inclination to mix it even when numerically stronger. On the 8th Houle's boys again saw action when F/O G. E. Horricks, D.F.M., reported:

I was flying Red I at 8,000 ft. in a northerly direction, when 12 plus FW. 190s dived out of the sun. I dived after them and was able to close to 75 yds. range when at about 4,000 ft. I attacked one with a two-second burst at 75 yds. range, and saw it roll over and dive away at a steep angle to port.

I then attacked a second e/a, this time from about 150 yds. range, with a short burst at slight deflection. After this attack, the e/a dived for the ground but straightened out on deck and headed for the mountains. I gave chase for approx. 15 miles and fired another three bursts at various times with no apparent effect, other than that he slowed down about 100 m.p.h. By this time I was about ten miles inside enemy territory, and was heavily fired at by very accurate Breda, and was hit in the engine. I turned, and headed for our lines on the deck.... After a few minutes my engine stopped and started to catch fire. I pulled up to about 400 or 500 ft. and baled out. I landed in a gully between two hills.

Some N.Z. machine-gunners came looking for me, and took me to their post. I had landed between our own and the enemy lines.

Horricks's claim to one destroyed was verified by other members of the formation and by the Army. In the same scrap, F/O R. H. Little probably destroyed one FW. 190 and damaged another, despite the fact that his own aircraft had been badly shot up by flak and cannon fire.

Though ground fighting continued fiercely for the balance of December, air activity was slight and it was seldom that Jerry appeared over the sector where the Eighth Army was engaged. Lacking opposition in the air, our fighters began to badger the German rear lines in a battle which now seemed to have developed into a stalemate a few miles short of Pescara. The first of these ground strafes was carried out on January 8th when F/L H. J. Everard and WO H. E. Morrow, on a shipping and weather reconnaissance over Jugoslavia, shot up a locomotive in the Ploca area. The engine blew up in a cloud of smoke and steam that belched 1,000 feet into the air. An hour or two later Houle, leading a section of three Spits, attacked a power station near Sulmona, and on the following day he and Eastman destroyed two locomotives and damaged a third at Campo di Giove. This work continued for the next five days during which a locomotive, a small yard engine, ten freight cars, three tank cars, eleven assorted vehicles, two ack-ack posts and an observation post were successfully strafed by Houle, Turner, Horricks, Morrow, Eastman, F/L W. J. Whitside, F/Os S. A. Corbett and H. Hale, P/Os J. R. Daly and G. I. Doyle and Sgt. P. S. Jennings. While Jack Daly was diving to blast a truck on a road he unwittingly tore down a cable strung across the valley and brought back 50 feet of it wrapped around the tail of his Spit.

Anzio and Cassino

By this time the major centre of pressure had shifted to the west coast where the Fifth Army was attempting to

crack the Gustav Line. The Windsor Squadron moved again to a base near Naples to take part in these operations. For the next three months an extensive programme of patrols was carried out over the new beachhead at Anzio, interspersed with frequent escorts for bombers or an occasional fighter sweep, during all of which greater activity on the part of the *Luftwaffe* offered many opportunities for scraps. On January 22nd Houle, while leading the first patrol over the Anzio beaches, destroyed a 190. Three days later in another dogfight over the beaches, F/L B. N. M. DeLarminat, after damaging an Me., sent down an FW. streaming black smoke. Whitside, leading the Canadian patrol, damaged another Me. In this action Eastman was shot up by one of the Jerries who showed more experience than those met in recent months. Eastman had to bale out, but was picked up by the Americans suffering from a slight leg wound.

When another Windsor patrol on the 26th got stuck into a formation of ten 190s they destroyed one and probably destroyed another. The next day Houle blew the tail off one Me. Fighter-bomber and shot large pieces from the port wing of another. On the 28th the Windsor Squadron intercepted and broke up a formation attempting to dive-bomb the beaches. One FW. plunged into the sea and a second fled, trailing smoke.

The squadron's 14th victory was chalked up by Houle on February 7th when he destroyed an Me. 109 that fell in flames after the pilot had baled out. The next day a squadron formation damaged three FW. 190s and sent the rest of a formation of 15 scurrying home, still carrying their bombs.

Between the 14th and 18th the Windsors were again engaged in hard fighting and raised their bag to 18 destroyed, six probables and 19 damaged. Houle destroyed one FW. and damaged another in a combat on St. Valentine's Day during which he was wounded in the neck. Hor-



(1) F/L P. Huletsky, D.F.C. (2) P/O M. H. Sims. (3) S/L R. A. Kipp, D.S.O., D.F.C. (4) F/O J. D. Sharples. (5) Lt. J. F. Luma, D.F.C., D.F.C. (U.S.A.), (U.S.A.A.F.); F/L C. G. Finlayson, D.F.C. (6) F/L N. J. Gibbons, D.F.C.; S/L R. G. Gray, D.F.C. (7) A Mosquito in flight. (8) W/C D. C. S. MacDonald, D.F.C., hands over the keys of the Operations Room to W/C R. J. Bennell, D.F.C. (9) Sgt. E. H. McKenna (R.A.F.); F/L S. H. R. Cotterill, D.F.C. (10) P/O E. W. Boal, D.F.C.; F/L J. T. Caine, D.F.C. (11) F/L C. J. Evans and F/O S. Humblestone (R.A.F.). (12) Four Mosquito crews.



(1) S/L A. H. U. Houle, D.F.C., of Massey, Ont. (Portrait by F/L P. A. Garonson).
 (2) F/L G. E. Horricks, D.F.M., of Toronto (Portrait by Goranson). (3) F/L S. A. Corbett of Alton, Ont. (Portrait by Goranson). (4) F/L B. J. Ingalls, D.F.C., of Danville, P.Q. (5) D. I. ing a Spit. (Water colour by Goranson). (6) S/L O. C. Kallio, D.S.O., D.F.C., of Ironwood, Mich. (7) S/L H. J. Everard, D.F.C., of Timmins, Ont. (8) S/L W. B. Hay, D.F.C., of Millbrook, N.Y., and F/L D. L. G. Turvey, D.F.C., of Toronto. (9) F/L W. J. Whitside of Simcoe, Ont.

ricks, Everard, Johnson and Hale also inflicted damage on four enemy fighters in the same scrap. Horricks's and Everard's Huns were later confirmed by the Army as destroyed. On the 16th when Everard and Jack Daly were engaged with a formation of 190s, the latter disappeared and it was later learned that he had landed on the Anzio beachhead with shrapnel wounds in both legs. Everard scored a probable in this engagement, added a confirmed kill and a damaged on the 18th, and another probable on the 21st during his last patrol with the City of Windsor Squadron. On completion of his tour he was awarded the D.F.C. for his consistent good services. Houle, who was awarded a bar to his gong, in recognition of his eight confirmed kills, turned over the squadron to S/L K. L. Magee, who led his first patrol on February list. Owing to illness Magee was forced to relinquish his command on March 13th to S/L W. B. Hay.

Magee's tenure of office was a quiet period marked by several spells of bad weather, which gave the lie to "sunny Italy", and by one combat in which F/L L. A. Hall, while protecting an Auster doing artillery observation work, sent an Me. 109 down through the clouds in flames. Hay's arrival, however, coincided with the outbreak of renewed fighting both on the ground and in the air as the Allied forces opened another assault on the stubbornly-held Nazi position at Cassino. High above the battle area on the 15th four Windsor Spits intercepted a score of Me. 109s and, wading into the Nazi defensive circles, drove one down into the clouds streaming smoke as a result of F/O M. W. Bakkan's attack. On the following day F/L B. J. Ingalls and Jimmy O'Brian chased two FWs. from Anzio to the outskirts of Rome where they crashed both in flames to raise the squadron score to 21. Bruce Ingalls had just succeeded Everard as commander of "A" flight after a period of service with an R.A.F. squadron in Malta, Sicily and Italy, during which he had destroyed five enemy aircraft. In May he was awarded the D.F.C., the second successive "A" flight

commander to be decorated.

Ingalls won his seventh and the squadron's 22nd victory on March 19th by destroying another enemy fighter on the outskirts of Rome. The 109 crashed in flames after the pilot had baled out. In another action about the same time a Windsor patrol over Cassino forced a much larger formation of *Luftwaffe* fighters to withdraw with two of their number damaged. Then for ten days the enemy left the air free to Allied aircraft and their own flak gunners. The latter did some good shooting, hitting four Canadian Spitfires and forcing Jimmy O'Brian to take to his parachute over Anzio.

On March 29th, when Jerry again appeared over the battle area, the Canadian squadron achieved a success surpassed only by the victories of February 14th. Two sections of Spits caught a mixed formation of 20 fighter-bombers as they began their dive on Anzio and, while P/O J. J. Doyle's section tackled the bombers, F/L D. L. G. Turvey's pilots turned on the top cover of nine 190s. The fighters immediately high-tailed it for home leaving their charges at the mercy of the Canadian pilots. Turvey made the pilot of one FW. bale out and F/O C. B. Everett crashed another which was attempting to attack Doyle, while a third FW. headed for home after receiving a damaging burst near the cockpit from WO G. H. Hicks's guns. Meanwhile Doyle had been heavily engaged. He brought down an Me. 109 which our troops saw crash, but was himself attacked and shot up. Fire broke out in the Spitfire, but fortunately did not gain hold. Regardless of this, Doyle chased an FW. which passed in front of him diving through the flak barrage, and probably destroyed it with the last of his ammunition. Ack-ack bursts, however, hit Jack's Spitfire four times, damaging the engine and wounding the pilot in the right shoulder, side and leg. The Merlin cut out completely as Doyle crash-landed on the beach at Nettuno. During the combat Harry Morrow was shot down into the sea by two Me. 109s which came diving out of the sun.

By this time the attack on Cassino had ended in another stalemate and for the next few weeks there was only uninteresting patrol activity on the ground and in the air. Some variety and excitement were added to the routine by the introduction of readiness and dawn patrols from a landing strip at Nettuno. Pilots detailed to spend the night on the beachhead got little rest as the constant thunder of guns made sleep almost impossible.

In April the squadron moved to an airfield in the Volturno valley, just 12 miles behind the lines at Cassino. With an occasional shell or bomb bursting nearby the airmen needed no urging to dig slit trenches. Before leaving their base near Naples, from which they had been able to watch the eruption of Vesuvius in March, the pilots celebrated St. George's Day with two more victories. At midday WO J. Saphir, on patrol over Anzio, chased a lone Me. 109 from 17,000 feet down to the deck and finally crashed it behind a house in the suburbs of Rome. In the evening, during a scramble from Nettuno, Jimmy O'Brian repeated the story at the expense of an FW. 190 which he shot down into a field where "it was very completely destroyed", and scattered pieces over a wide area. Oil spurting from the FW. smeared the windshield and fuselage of Jimmy's Spit.

The Spring Offensive

After another interval of routine patrols, escorts, scrambles and sweeps, from one of which P/O T. Hough failed to return, an extremely active period began with the opening of the Allied spring offensive at 2300 hours on the night of May 11th. Preceded by an intense artillery barrage the Eighth and Fifth Armies struck with terrific force all along the Gustav Line from Cassino to the Tyrrhenian Sea. Yet despite the great number of sorties—and May established an all-time high for the Windsor Squadron—there were combats on only one day, May 14th, when Hay's lads again tangled with superior numbers of the *Luftwaffe* and emerged

victorious with two destroyed and three damaged to their credit. The dawn patrol over Cassino, led by Turvey, dived out of the sun to bounce 18 Mes. and FWs. and chase them beyond Frosinone. In the initial attack FS J. P. Hart was forced to bale out behind our lines after a 190 and a flak shell put his engine out of commission, but his comrades more than evened the score. Cam Everett crashed one Me. that blew up on a hillside and then fired his remaining ammo in short squirts at another which fled with smoke streaking from the fuselage. F/O G. I. Doyle also scored a destroyed and a damaged, when he tumbled one FW. down head over tail to crash north of Monte Cassino monastery and smashed cannon bursts into another. Turvey too was credited with a damaged. The skilful leadership, which Turvey had displayed on this and many previous occasions, won for him the D.F.C., the squadron's third gong. These victories, which raised the unit's score to 29 destroyed, eight probables and 25 damaged, of which 42 had been won over Anzio and Cassino, were the last tallies for many weeks.

Cassino fell on May 18th and the Allied armies drove forward in pursuit of the Nazis fleeing northwards to their new Gothic Line. The G.A.F. had virtually disappeared from the air and the Windsor pilots saw nary a Hun during the next three months as they did stooze patrols over the lines or escorted bombers. Unable to fight the enemy in the air the Spits again came down to the deck to join in the relentless badgering of the enemy retreat and for a month the Canadians carried on incessant cannon and machine-gun attacks on trucks, buses, cars and motorcycles. But as Jerry learned the danger of venturing upon the roads in daylight, targets became fewer and fewer and his ack-ack defences became stronger and stronger. Several Windsor pilots had narrow escapes, and Bruce Ingalls was killed as he led his patrol through an intense barrage of light flak to strafe several vehicles. Weeks later, when the squadron moved for-

ward, his crashed Spitfire was found near Perugia with the pilot's grave nearby. Ingalls had been a formidable fighter and able flight commander, destroying seven Huns and winning the D.F.C. before he met his death.

As the Eighth and Fifth Armies advanced, the Windsor Squadron followed, first to airfields near Rome, then to Perugia and finally, in August, to a station on the Adriatic coast below Ancona. Hay finished his tour of ops in June and handed over his command to S/L O. C. Kallio, who, as a flight commander in an R.A.F. squadron, had won the D.F.C. for fine leadership in breaking up superior formations of enemy bombers, thus forcing them to release their bombs prematurely on their own lines.

The Windsors Become Fighter-Bombers

Under Kallio the Windsor Squadron embarked upon a new role as fighter-bombers, carrying 500-lb. eggs. Throughout the remainder of the period covered by this narrative armed reconnaissances with bombs were the major activity of the Windsors. Day after day through July and August the pilots bombed crossroads and highways in the area between Bologna, Ravenna, Florence and Ancona, paying special attention to the coastal highway running from Ancona to Rimini and inland to Bologna, either by blowing up the surface or by collapsing houses in a heap of rubble across the roadway. Similar attacks were made on railroad lines, level crossings, junctions, bridges and culverts; locomotives and freight cars were strafed; special objectives—radar stations, gun posts, enemy strong points—were broken up and raked with fire. Spectacular results were rare. Instead, it was a methodical harassing of the enemy's lines of communication, which denied to him the use of roads and rail lines, by blocking this one by a landslide, by impeding another by smashing craters along it, by cutting rails at many points and by weakening bridges by direct hits or near misses.

Such attacks were usually carried out in the face of intense fire from the defences guarding the vital points and the squadron paid a price for its success in disrupting German traffic. On July 3rd, P/O R. W. McLaren was shot down during a dive-bombing attack on the road at Sansepolcro; on the following day Jack Daly was lost over Fano; four days later F/O G. S. Kimber crashed into the ground while strafing a truck; and on the 26th FS J. T. MacLeod was taken prisoner when flak set fire to his engine and forced him to hit the silk behind the enemy lines.

In addition to daily dive-bombing missions the Windsor Spitfires occasionally escorted Kittyhawks, Baltimores or Marauders as they dropped leaflets or attacked objectives in northern Italy. The odd weather recce provided more excitement than did these escort stooges. Once, late in June, De Larminat, one of the old-timers with the squadron, flew to Ancona to sniff the weather. When his engine suddenly cut the pilot jumped and drifted down into the Adriatic, twelve miles off the coast, where he calmly inflated his dinghy and waited for the rescue Walrus to arrive. F/O J. E. R. Locke was less fortunate when engine failure forced him to bale out over enemy territory beyond Florence during another weather recce. He has, however, since been reported safe. This was not the first time Junior Locke got himself out of a difficult situation. On another occasion landing at Perugia his Spitfire turned two handsprings and ended up on its back. He walked away from the wreck.

Two shows carried out by the squadron late in August were particularly noteworthy. Recce aircraft one day spotted five locomotives in a marshalling yards south-east of Imola on the Bologna-Rimini line and in the early evening the Windsors went out to attack. Kallio led his men in a dive across the target from 8,000 to 2,000 feet; then, after releasing their bombs, they streaked back and forth, hammering bursts into a flak post and strings of freight cars. Four times the flight beat up the area and when they finally

withdrew all five locomotives and 60 or more cars had been destroyed or damaged.

A few days later the Canadian Spits joined another squadron in the wing in an attack on a railroad tunnel which was being used as a rocket-gun emplacement. Dropping their bombs from a low altitude the pilots effectively blocked one end of the tunnel with two direct hits and tore up the tracks at the opposite end with others, equally well placed.

By the end of August the Nazis had been driven back to the Gothic Line stretching across the peninsula from Pisa to Pesaro and already the Polish forces were smashing at the eastern end. The battle to breach the Gothic Line was beginning and the Windsor Squadron, based once again on the Adriatic Coast, was in position to support the assault.

CHAPTER IX

BUZZBOMBS

AS the drizzle of winter and early spring gave way to sunnier days and starlit nights, activities of the United Nations Air Forces based in the United Kingdom quickened and the whole scale of the war assumed a new pattern. Invasion was in the air. It was no longer a case of "if" but "when", and the countryside of southern England became dotted with acre after acre of guns, ammunition, motor trucks and all the myriad items essential to the conduct of modern warfare.

In the past bomber crews had attacked targets the strategic or tactical importance of which was fully explained to them by the intelligence officers at briefing. But now many sorties were directed against objectives which the gen men described simply as "constructional works", a vague phrase covering what was to develop into a most serious threat long before the summer was past.

For months scraps of information had been received which, when correlated, pointed to the fact that a new secret weapon was being perfected. The exact nature of this weapon was not known but the persistence of the reports led the Allied High Command to undertake a more intensified campaign of photographic reconnaissance in an endeavour to locate the experimental stations involved. For months R.A.F. and U.S.A.A.F. photographic aircraft ranged

far and wide over Europe in this search. Finally pictures taken by a Spitfire pilot over Peenemunde on the Baltic coast disclosed a tiny aircraft-like object that seemed to be perched on an inclined ramp fitted with rails. Other photographs showed that the ground in the vicinity of this ramp had the appearance of scorched earth. These observations, combined with periodic reports about the concentration of Germany's best scientists at Peenemunde, removed all doubt as to the importance of the place and accordingly in August 1943 the opening salvoes of a new bombing campaign were released in a concentrated raid which has since been known as "the 45 minutes that changed the war".

Aside from the fact that the actual bombing results had a far-reaching effect on the flying bomb campaign, there was another important consideration. This was the introduction of a bombing Master of Ceremonies or, as he was later known, a Master Bomber. It was at Peenemunde that Johnny Fauquier, one of the R.C.A.F.'s greatest bombing leaders, further enhanced his reputation when for 45 minutes he circled the target exhorting his crews to more accurate bombing and closer concentration. From this raid, and an earlier one over Turin, sprang a whole new technique of bombing.

The successful attack on Peenemunde so dislocated the plans of the Nazis and so depleted the ranks of the scientists gathered there to perfect the new weapon, that the schedule was delayed materially, and the point of the forthcoming *Vergeltungswaffe* offensive was blunted before it could even begin. This attack was but the beginning of a campaign carried out by all branches of the United Nations Air Forces in the United Kingdom throughout the fall and winter of 1943 and the first eight months of 1944—a campaign that included photographic reconnaissances, attacks on the storage dumps, launching sites and communications by heavy and medium bombers, ground-strafting and dive-bombing by fighter and fighter-reconnaissance aircraft;

then, when the flying bombs made their first appearance on the night of June 12th, a concerted defence by the air forces, anti-aircraft and balloon commands in a campaign which lasted for 80 days. It was only brought to a close when the Army, in its triumphal sweep through France and the Lowlands, overran the launching sites and forced the enemy to adopt other methods of launching the doodlebugs.

The discovery in November that the Nazis were constructing in the Pas de Calais, the lower Somme valley and the Cherbourg peninsula a whole network of concrete structures of a type similar to the ramp at Peenemunde, all apparently pointed towards London, marked the second stage in the V-1 campaign. Further reconnaissance during the winter discovered over 100 of these sites. Attacks on the emplacements by the U.S.A.A.F., R.A.F., and R.C.A.F. began in December and before spring the original 100 had all been destroyed.

As a result, the Nazis in March started construction of new sites and by dint of impress labour were able to produce a whole new series. The earlier installations had paid little attention to camouflage, but so skilfully were these new ramps disguised that detection from the air was most difficult. It was, however, early summer before this second series of launching platforms was completed. After the rocket coast had been overrun in the late summer of 1944, it was discovered that actually their number had been in excess of 1300.

The fact that the new terror did appear on the night of June 12th would seem to mark the months' long attack upon the launching sites as a failure. True, the raids did not prevent the opening of the buzzbomb offensive, but they did delay and in considerable measure diminish the scale and effect of the V-1 campaign, and gave the High Command time to prepare counter-measures. From intelligence reports some indication of the dire possibilities of the new menace had been obtained and long before June 1944 cer-

tain flexible plans of defence had been drawn up. When, therefore, the first bomb fell near Liverpool Street Station in London, there was a board of strategy ready to take prompt action against the new danger.

Roughly the board's plan involved a triple defence—aircraft over the launching sites and the English Channel, anti-aircraft guns on the coast, and a balloon barrage immediately to the south of the metropolitan area.

There is little doubt that the Allied landing in Normandy accelerated the opening of the attack as the German High Command must have recognized that they were in imminent danger of having all their plans for the destruction of London nullified by the capture of the launching sites. So it is not surprising that within a week after D-Day the first flying bomb was launched. Had the Nazis been in a position to start a full-scale offensive on the first day, there could have been but one answer. London would without a doubt have been as devastated as Cologne, Hamburg and Berlin. But thanks to the persistent air attacks upon the rocket coast the Nazis were not yet ready to commence an all-out campaign and once again, as after Dunkirk in 1940, they lost their advantage.

When the first of the doodles broke on London it brought curiosity which, as the true nature of the bomb's lethal qualities manifested itself, was replaced by bewilderment. Judged as a tactical weapon the buzzbomb is valueless but as a means of intimidating the populace it has a certain definite value. Thousands who with stoical fortitude withstood the blitz of 1940 and the little blitz of 1944 now found themselves attacked by a weapon they could not understand—a bomb which, striking open ground, left little or no crater but striking a building reduced it to rubble. During the blitzes, the little people could look to the skies and see the Spits and Hurries turning and twisting in the vapour trails as they sought out and, in so many cases, shot down the marauders. But these doodles were something different,

something as inexorable as fate, launched in hate to land no one knew where.

The seriousness of the effect of the flying bombs both in casualties and damage and in effect upon civilian morale was immediately recognized and every means at the command of the Government was called into use to overcome the menace. In this they were greatly aided by the cooperation of the U.S.A. forces. The defeat of V-1 was given first priority by both nations and any weapon which might possibly be used as a defence was unhesitatingly placed at the disposal of the Flying Bomb Counter Measures Committee, under the Chairmanship of Mr. Duncan Sandys, M.P.

Almost immediately the anti-aircraft batteries, which early in the year had been drawn from all parts of the island and concentrated in a belt south of London, began taking a toll, which rose steadily until, by the last week of the campaign, they were bringing down 74 per cent. of the bombs entering their area.

The last line of defence, the balloon barrage which had originally numbered 500 balloons, was quadrupled when it was discovered that the doodles were flying lower than had originally been expected. That this increase was justified is proved by the fact that 15 per cent. of the bombs which reached the barrage fell victims to the cables of the tethered gasbags.

While the guns and balloons were the second and third line of defence, aircraft patrolling over the Channel and the coast of France were the first line and destroyed over 1000 flying bombs in the first few weeks. This was accomplished in the face of serious handicaps, as the speed of the bombs, from 300 to 400 miles an hour, precluded attack by any but our fastest fighters, and a diving start was necessary if even they were to overtake the robots. To make matters worse the buzzbombs were usually launched in salvos.

Added to this was the pilots' difficulty in spotting their

quarry by day and, when they had been spotted, the danger of approaching too close lest, in destroying the doodle, the flying debris claim their own aircraft as a victim. The last problem was solved, after various experiments, through the medium of a simple but most ingenious range-finder, invented specially for this work.

The pilots developed three methods of attack. The first and most successful was to dive from above and behind to destroy the doodle with gunfire. The second was to fly beneath and unbalance the bomb by tipping it over with their wing; the third, which was discovered accidentally, was to overshoot the robot in a dive and, by the slipstream, upset its equilibrium.

That these three lines of defences were successful cannot be denied when it is realized that of over 8,000 robots launched only some 2300 reached the London area. In the first week 30 per cent. of the projectiles were destroyed by one or other of the defensive measures and by the last week almost 70 per cent. were brought down with only nine per cent. reaching London. In one day, August 28th, of 101 launched only four got through.

R.C.A.F. Mosquitos Enter the V-1 Campaign

June 16th, four days after the first launching, marked the entrance of the R.C.A.F. Mosquitos into the campaign when the Nighthawk and Edmonton Squadrons began standing patrols over the Channel to intercept the robombs as they streaked through the night sky. Here was a new problem for the night fighters requiring the development of a new technique. Locating the doodlebugs was easy enough, thanks to the flaming reddish-orange wake of their exhaust. But how fast could they travel? What was the best way to attack them? What was a safe range to open fire? How was that range to be estimated? That these problems were soon solved is proved by the fact that on the very first night (June 16th) the Edmonton Squadron destroyed three

and damaged two, the first tallies of a score which by the end of August stood at 79½.¹ The Nighthawk Squadron, engaged on the doodlebug patrols for a much shorter period, brought down ten and the Winnipeg Bears, the only R.C.A.F. day fighter squadron employed on this work, accounted for five more.

The first buzzbombs destroyed by an R.C.A.F. aircrew were brought down by F/L D. A. MacFadyen and F/O J. D. Wright of the Edmontons who had sighted one four nights previously. Off Dungeness they set fire to a doodle which hit the sea and burned out; an hour later they caught a second in the same area and made it too dive into the water where it blew up on impact. A third was crashed a few miles inland from Hastings by F/L C. J. Evans and F/O S. Humblestone who saw eight leave the ground near St. Quentin and vainly chased three before they could overtake one. Their experience demonstrated that catching the bugs was the major problem.

The first night's story was typical of the next ten weeks. There were many successes and many vain chases. Some flying bombs exploded in mid-air with blinding flashes; others dived into the sea to explode as they struck; and yet others buzzed on their way despite wings punctured by gunfire. F/L S. H. R. Cotterill, who shot down four bombs, described the work for an R.C.A.F. Press Relations officer:

We used to stooze around just out from the launching area in France. We were the first line night fighter patrol. Sometimes we could see the actual launchings. A launching looks like a great half moon of brilliant explosion. Then, when the thing came up, and it could be spotted by the steady glow from the rear end, we dived down vertically at full throttle. Several kites would line up on one bomb and if the first one missed then the others would go down for a try. After our dive we would level out and let go with a quick burst. Then if you were too close you'd be thrown all over the sky by the explosion, or flying de-

¹ Full credit was allowed for a bomb brought down over the sea, half credit for one destroyed on land. The Edmontons actually shot down 82, five over land, the others over the Channel.

bris would damage the machine. Sometimes, from a distance, we weren't always sure whether there was a doodlebug or not so we used to line up the light with a star and then, if it moved, in we went.

On the 17th Evans and Humblestone destroyed their second bug and F/L Ross Gray and F/O F. D. Smith shot down another off the coast between Brighton and Hastings. The Nighthawks bagged their first the next night when F/O C. J. Preece and P/O W. H. Beaumont shot down a bug which crossed their path just after they had taken off on patrol. On the 19th S/L R. Bannock and F/O R. R. Bruce, who were to prove the most successful Edmonton team against the flying bombs, exploded their first in mid-air over the Channel and F/Ls C. M. Jasper and O. A. Martin blew up another. Two more went down the next night after attacks by P/O W. E. Bowhay and FS H. K. Naylor of the Edmontons and S/L R. S. Jephson and F/O J. M. Roberts of the Nighthawks. The doodle which F/Os S. P. Seid and D. N. McIntosh destroyed on June 21st blew up so close to the Mosquito that it burned all the paint off the night fighter.

On June 22nd five more crashed into the Channel between Beachy Head and Dieppe, two by F/Os S. N. May and J. D. Ritch, two more by F/L Cotterill and Sgt. E. H. McKenna and the fifth by W/C A. Barker and F/O W. A. R. Stewart. The Edmontons now had 14 to their credit and Bowhay and Naylor made it 15 on the following night. Their bug was flying on a different course, aimed apparently at the invasion beaches, when they crashed it a few miles north-west of Rouen. The 24th was another good night with four more credited to the Edmontons. Evans and Humblestone raised their own score to four by bagging a pair between Beachy Head and Dieppe, while S/L E. R. McGill and F/O F. D. Hendershot, and F/O J. Phillips and P/O B. Job exploded two more on the sea near the French coast. The last week of June was less fruitful, due in part to unfavourable weather, only one doodle being destroyed on the 27th by Cotterill and McKenna.

Hitherto the Nighthawks had devoted only part of their nightly effort to the robomb patrols but now, for two weeks, they joined with the Edmontons in a concentrated campaign. As a result the number destroyed jumped to 36 for the first two weeks of July.

The bad weather which had marred the last days of June continued through the early part of July and handicapped the Mosquitos. Nevertheless two buzzbombs were destroyed on the 2nd and three more the following night. Bannock and Bruce did the hat trick that night, catching three bugs as they soared up at 20-minute intervals from a site south-west of Abbeville. Many were seen on the 4th, at least 25 being spotted coming from around Le Treport, but only two could be brought down.

The next two nights, however, were much better. On the 5th six were brought down, two by F/L D. M. Forsyth and P/O R. T. Esam of the Edmontons who had accounted for one on the previous night, and two more by F/O H. S. Ellis and WO W. N. MacNaughton of the Nighthawks, while the others were credited to two Edmonton teams, Jasper and Martin and P/Os M. H. Sims and J. D. Sharples.

This record was shattered on the following night when the Edmontons destroyed twelve. Bannock and Bruce broke their own previous record by bagging four within an hour, three over the sea and the other just north of Hastings. Evans and Humblestone were close behind with three blown up in half an hour. Debris from the second spattered over their Mossie and put one engine out of action, but regardless of this Evans dived on and cracked down a third before coming home. On their first patrol that night MacFadyen and Wright destroyed two in mid-Channel and then went out again to bring down a third. Seid and Job and F/Ls C. S. Leggat and F. L. Cochrane shot down two more. Barker's squadron now had a total of 40 destroyed within three weeks.

On the following night, the 7th, Bannock and Bruce

bagged two more to raise their count to 9½ while other crews accounted for two more. On the 8th Cotterill and McKenna shot down their fourth which exploded in the sea with a blast that shook the Mosquito. One of the four flying bombs destroyed on the 9th fell to the guns of Jasper and Martin whose Mossie was damaged by flying debris. It was their third doodlebug. A few days later Martin, who had been with the squadron since December 1941 and was the Edmonton's oldest member, finished his second tour. Seven enemy aircraft destroyed and others damaged, in addition to the three buzzbombs, proved how successful a team Jas. and Martin had been.

For four nights bad weather intervened. Then on the 14th two more robombs were destroyed. May and Ritch won their third victory, while F/O A. S. MacPhail and P/O P. J. Smith, returning from a patrol over Normandy, shot down another to give the Nighthawks their tenth and last V-1 victory. Reid's squadron now resumed its beachhead patrols, leaving the Edmontons to continue pursuit of the doodlebug.

In addition to the crews mentioned the following had scored victories during the first half of July: from the Edmonton Squadron—F/Os J. J. Harvie and P. A. Alexander, S/L J. B. Kerr with F/O P. Clark, and F/Os P. R. Brook and A. D. McLaren; from the Nighthawks—WO R. F. Henke with Sgt. L. A. Emmerson, F/O H. F. Pearce with P/O P. J. Smith, F/Os A. W. Sterrenberg and J. P. Clarke, F/L E. G. L. Spiller with F/O J. E. Donoghue, and WO D. J. MacDonald with FS W. D. King.

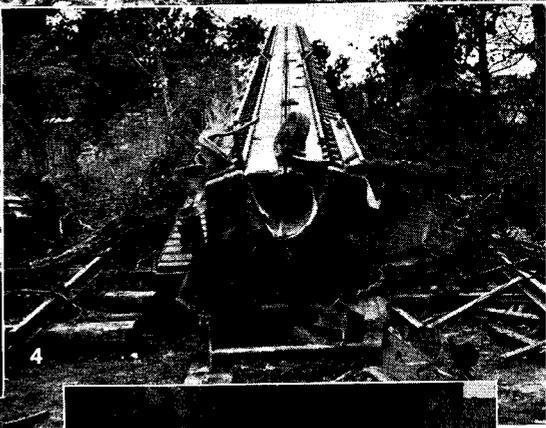
On the 19th Bannock and Bruce scored a double; four nights later they bagged two more, another on the 26th and yet another on the 27th. Evans and Humblestone also scored on the 26th while other crews destroyed five more during the last week of July, raising the Edmonton's bag to an even 60. Leggat and Cochrane accounted for two of these on the 30th; the others were credited to F/O J. S. Hill

and FS G. W. Roach (25th), Brook and McLaren (29th) and F/Os S. K. Woolley and W. A. Hastie (30th). One night a Mossie chased a doodlebug up to 10,000 feet. It was still climbing toward the moon when the night fighter broke away.

During the first two weeks of August the Edmontons continued their series of victories, and added 21 more to the total. Twice they blew up three in a single night and twice they accounted for four. In five successive nights they stopped 12 of Hitler's secret weapons.

On the 4th Bannock and Bruce downed two, while Harvie and Alexander finished off a third; the next night four went down after attacks by F/O H. Loriaux and F/L W. Sewell (two), May and Ritch, and Brook and McLaren. Three more were blown up on the 7th by Leggat and Cochrane, May and Ritch and F/O H. E. Miller and Sgt. W. Hooper. And on the 12th Bannock and Bruce downed one, S/L Ross Gray and F/O F. D. Smith a second, and Miller and Hooper a pair. These were the best nights but Leggat and Cochrane, Loriaux and Sewell, Forsyth and Esam, F/L F. M. Sawyer and F/O J. E. Howell, F/L L. E. Evans and P/O E. R. Blakley each destroyed one bug during this period while Seid and McIntosh brought down two.

Gray and Smith had quite an exciting time over the Channel one night trying to down a robomb. This bug, one of four which the Mossie crew saw shoot from around Le Treport, climbed to 3,000 feet when it was hit by their fire, then, diving toward the sea, righted itself, climbed and dived again, repeating this procedure several times. While Gray was watching the doodle's antics, an enemy night fighter gave chase to his Mossie but after a few minutes was shaken off. The bug which Bannock and Bruce destroyed on the 12th was a boomerang for the Nazis. They had just started their patrol when they saw five buzzbombs streak into the sky from the Dieppe area. One, which they caught and hit in mid-Channel, slowed up, wavered, righted



(1) Heavy metal dumb-bells used in launching. (2) Jet propulsion unit discovered near a storage blockhouse. (3) A launching site at Peenemunde experimental station. The arrow points to a V-1 bomb on ramp, ready to be launched. (4) A destroyed launching platform. (5) A compressed air container (component of a V-1 bomb) stored in ground. (6) Interior of concrete shed on flying bomb site.



(1) Propulsion unit of a buzzbomb that landed in France. (2) Another doodlebug that landed near launching site in France. (3) A damaged launching ramp near Amiens, France. (4) Examining tail assembly of a V.I. (5) The balloon barrage. A buzzbomb brought down by the balloon cable landed near barn in foreground. (6) Scrap heap of V.I bombs brought down by balloon barrage.

itself and then, turning about on its course, flew back to France where it crashed near Boulogne.

The six nights from August 14th to 19th were disappointingly quiet, ending in deluges of rain which washed out all flying on the last night. Finally, on the 10th, the squadron got one more crack at V-1 when F/O R. D. Thomas and F/L R. W. MacDonald shot down one that exploded on the sea. Their victory, the Edmontons' 82nd, was the last won by Barker's Mosquitos. Patrols continued until the end of the month but most of the rocket coast was now in the hands of the Allies and few buzzbombs winged their way across the Channel.

Among the Mosquito crews Bannock and Bruce stood well in the lead with 18½ to their credit. Other outstanding teams were C. J. Evans and Humblestone (7½), Leggat and Cochrane, MacFadyen and Wright (5 each), and Stuart May and John Ritch (4½). Between them these five teams had accounted for half their squadron's total. Three crews, Seid and McIntosh, Forsyth and Esam, and Cotterill and McKenna, had 4 credits each; three had 3, one had 2½, two had 2, one had 1½ and ten had 1. One crew was lost during the campaign, WO J. F. James and F/O D. W. MacFarlane who did not return from the first patrol on June 16th.

The Winnipeg Bears Destroy Five

While the Mosquitos patrolled the night sky on guard against the flying bombs, one R.C.A.F. day fighter squadron also had a crack at them for three weeks. This unit, the Winnipeg Bears led by S/L W. G. Dodd, D.F.C., had been re-equipped early in August with a new type Spitfire. Patrolling across the direct line between the rocket coast and London, the pilots were able to watch the bombs start out across the Channel. Squadron personnel on the ground also could watch the doodles approaching and marvel at the intensity and accuracy of the ack-ack barrage which met them at the English coast. On several occasions buzzbombs were

brought down near the airfield or exploded in mid-air, giving the station a good shaking, and showering it with fragments. Except for some broken glass there was no damage.

Five times during these three weeks pilots of the squadron intercepted and shot down flying bombs. The first success was credited to F/O E. A. H. Vickers who, on the 16th, chased a bug across the Channel from Gris Nez, through the ack-ack zone at Folkestone and finally crashed it near the squadron's dispersal area. A little later that morning F/O H. Cowan and F/L D. Sherk destroyed two more over the sea. On the 23rd FS W. G. Austin brought down another with a 5-second burst. Early the following morning F/O W. S. Harvey made an attack, hitting the port wing of a buzzbomb, when a Tempest pilot cut in and stole the kill. The same afternoon F/L J. A. de Niverville crashed another near Ashford.

Material damage inflicted by the bombs reaching London was most extensive and it is estimated that over 24,000 houses were destroyed, 52,000 rendered uninhabitable, and 900,000 damaged. Casualties also were heavy, with 5,800 killed, 17,000 seriously, and 23,000 slightly injured. In the early days, one person was killed for every bomb launched, but towards the end of the 80-day campaign this had been reduced to one person for every three doodles. Damage and casualties were caused almost entirely by blast as the penetration of the missiles was virtually nil and they carried with them little or no danger from fire.

With the increased efficiency of the defences and the threat that the Allied advance would soon engulf the launching sites, a new method of attack was introduced towards the end of the period covered by this narrative. By August 31, the rocket coast was almost overrun, and Heinkel 111 aircraft, carrying the buzzbombs pick-a-belly, would approach the British coast and release the flying monsters; but this never became a serious threat, either for quantity launched or for reliability.

CHAPTER X

SUMMER BOMBING OPERATIONS

ON all but four of the 29 main raids by the R.C.A.F. during invasion month the Canadian Group provided the total force, except for the small number of pathfinders who lead the way on virtually all bombing attacks nowadays. R.C.A.F. aircraft were also provided in small numbers for attacks on Trappes on the 2nd, Fort de Cerisy on the 7th, Rennes on the 9th, Tours on the 11th, and Amiens on the 12th. Other small contributions were made to Lens on the 15th, Renescure the following day, Coubronne on the 23rd, Middle Straete the 24th, and Villers-Bocage on the last day of the month.

The month's list of targets reads like a page from Baedeker as only three targets were visited more than once—Versailles-Matelots and Cambrai twice, and Oisemont-Neuville-au-Bois three times. The amazing feature of all operations was the extremely low casualty list. On 18 of the 29 raids, with a total of over 1700 sorties, not a single Canadian kite was lost. And, excepting two unfortunate raids on Arras and Cambrai on the 12th and a disastrous foray against Sterkrade on the 16th, the R.C.A.F. ratio of loss was lower than at any time in their history. It was in fact less than one per cent. as for approximately 2,400 sorties only 23 kites were lost.

In the attack on Trappes a veteran crew was lost in the

persons of S/L G. E. Coldrey, F/Ls G. L. Court and J. H. O'Neil, P/O N. Johnston, WO L. A. McCrea, FS J. M. Renaud and Sgt. D. A. Kelley. Court has since been reported a prisoner of war.

The attack on Tours cost us another experienced crew when P/O D. E. Melcombe's kite was lost. Melcome was first reported as a prisoner but is now safe. F/Os J. W. West and J. Clement were the other R.C.A.F. members in Melcombe's crew. The former is also safe. A third experienced crew was lost over Lens on the 15th. Skipped by F/O L. I. J. Keenan, the other members were F/Os H. A. Wickens and W. M. Crumbley, P/Os J. D. Hayes, R. O. Ellis and A. J. Retter, FS W. S. Marchant and Sgt. E. G. Smith.

The first raid of the month was on Neufchatel on the 2nd when, in weather conditions varying from nil to 7/10ths patchy cloud, a very good concentration of bombs was achieved. Three or four good-sized explosions shot smoke 3,000 feet in the air.

Two nights later when Calais was the objective heavy rain fell all over the United Kingdom but lessened to a mild drizzle over a lightly defended target. Despite the weather a successful attack was carried out. Serious damage was inflicted on two guns and all roads leading to the site were blocked.

On the 5th the R.C.A.F. Group staged two raids to Merville-Franceville and Houlgate and contributed aircraft to a combined attack on Longues, for the loss of one aircraft in the attack on Houlgate, a gun position directly in the line of invasion. The success of the attack on Merville is doubtful as the markers disappeared quickly in dense low-lying clouds. If the results of the raid on Merville were dubious, there was no doubt about that on Longues—the effort was disappointing. Fortunately no aircraft were lost.

The one bright spot in a drab evening was the sortie against Houlgate where our bombers made up for a somewhat scattered pattern of markers by precise well-

concentrated bombing and wrecked the battery which was their target. One aircraft from the Thunderbird Squadron did not return.

Coutances and Conde-sur-Noireau, also in the invasion area, were the targets for two attacks on the 6th, both of which were successful and incurred no loss. The raid on the rail crossing at Coutances was particularly brilliant and sticks dropped with deadly accuracy. Defences were very slight and no aircraft were lost, though one or two indecisive combats took place.

Selfe of the Thunderbirds was awarded the D.F.M. for this action. His kite was severely damaged over the target, both port engines being put u/s and a large part of one wing torn away. Despite difficulty in controlling the aircraft, he released his bombs and turned home. Unable to reach base and with his aircraft virtually out of control, Selfe on gaining the English coast ordered his crew to bale out. After they had all gone, he remained in the kite until he had turned the damaged machine out to sea before taking to his own broolly.

The attack on Conde-sur-Noireau lacked none of the brilliance of the raid on Coutances, and practically every building in the centre of the town was either gutted or demolished.

The 7th saw a solo attack on Acheres while a small number of aircraft joined a Bomber Command foray in the first of two attacks on Versailles-Matelots. Both of the night's raids achieved most satisfactory results, though five R.C.A.F. crews were posted as missing, four against Acheres and one on the raid on Versailles.

Heavy clouds did not interfere with the low-level attack on Acheres on the 7th as the crews, aided by coherent and intelligent instructions from the Master Bomber, dropped stick after stick across the markers and severed most of the railroad tracks. A few night fighters were in evidence and the gunners on the Alouette Squadron Halifax flown by

Kirk had an interesting time:

The mid-under gunner (Owen) first sighted an unidentified single-engined fighter on the port quarter down at 600 yds., gave the order corkscrew port at the same time opening fire with a short burst of 30 rounds. This e/a was last seen by Owen breaking away on the port quarter down. At the time of this attack the midupper gunner (Sgt. D. R. McEvoy) sighted an FW. 190 on the starboard beam level at 400 yds. The 190 opened fire and tracer was seen passing near the top of the bomber. The M/U immediately opened fire with a long burst of 500 rounds; direct hits were seen to register and the FW. 190 broke away in flames on the starboard quarter. The R/G (Collins) seeing the FW. on his starboard quarter in flames, fired a burst of 200 rounds. The engineer and mid-upper gunner saw this 190 burst into flames, and Collins saw it hit the ground and explode. There is reason to believe that these two e/a were working together, one acting as a decoy to attract the attention of the gunners while the other sneaked in to attack.

F/O W. J. Anderson of the Moose Squadron also had an encounter in which his gunners were successful:

The Ju. 88 was first sighted by both rear and mid-upper gunners (Sgts. W. F. Mann and P. Burton) on the starboard quarter up at a range of 1200 yds. E/a, which was well silhouetted right in the centre of the moon, came in to 700 yds., banked and commenced attack at great speed. At 600 yds. R/G gave corkscrew starboard. Both gunners opened fire at 500 yds. and tracer was seen to enter port wing. E/a continued to close in. R/G gave another short burst at 400 yds. E/a still pushed his attack when at 350 yds. both gunners gave a long burst and e/a was seen on the port quarter going down with sparks falling from it; then, bursting into flames, fell on the ground where it was seen to explode. All members of the crew, excepting navigator, confirm that e/a was destroyed.

Mann and Burton have both since been awarded the D.F.M.

P/O E. W. Kneen and Sgts. K. R. Adams and F. J. Ward, gunners in the Goose Squadron aircraft piloted by F/L J. F. Easton, were also successful when they attacked an Me. 410 and blew it up in mid-air.

The Bison Squadron aircraft captained by S/L W. B. Anderson was hit by heavy flak over the French coast and

the pilot mortally wounded. Anderson gave his crew orders to abandon aircraft. Three obeyed but Sgt. G. E. J. Steere, the flight engineer, realizing that his skipper would be unable to follow, disregarded the order. Going to Anderson's assistance, he, aided by advice from the dying pilot, regained control of the Halifax, and then discovered that Sgts. J. Mangione and G. J. M. Ritchie, mid-upper and rear gunners respectively, had also remained. Although Steere had had no previous flying experience he managed to get over an airfield in the United Kingdom, without the aid of a navigator. Realizing that it was impossible to land the heavy bomber safely he circled the field, while Mangione and Ritchie continued to give first aid to Anderson. Knowing that the inevitable crash would be fatal to the wounded pilot, they parachuted him out of the aircraft on a static line in a last endeavour to save his life. Steere then ordered Mangione and Ritchie to bale out and not until they had done so did he himself leave the aircraft. Unfortunately, Anderson died before aid could reach him. The other three landed without injury. Steere was awarded the C.G.M. and Mangione and Ritchie both received the D.F.M.

Sgts. M. R. Burnett and D. G. Harkness, gunners in the Thunderbird kite skippered by P/O L. A. Mann, also won the D.F.M. on this raid. The aircraft after being heavily damaged over the target dived steeply out of control, and the pilot ordered the crew to bale out. Neither of the gunners would jump but instead went to the aid of their skipper. As a result of their joint efforts the aircraft staggered back to the United Kingdom.

WO D. F. Foster, F/Os G. M. Waddell and T. W. Farr and Sgts. C. W. Ford, E. Carter-Edwards, M. Donnan and G. W. Philliskirk, all of whom had completed more than 20 raids, were members of the crew of a Lion Squadron aircraft that did not return. Farr and Ford have since been reported prisoners. Foster, Waddell and Donnan have been recategorized as safe. F/L J. Weis of the Goose Squadron

was also lost with his crew.

When the bombs dropped on Versailles-Matelots in a close concentration around the markers, all tracks near the locomotive shed were severed and the main Paris-Trappes line blocked with damaged rolling stock. Though a few enemy aircraft were in evidence, no decisive combats ensued.

Mayenne which was the R.C.A.F.'s only target on the 8th was attacked under good conditions and with excellent results, inflicting relatively heavy damage on both station and sidings.

As our bombers withdrew after a low-level attack on Le Mans the following night, bags of smoke and dust covered the very heavily cratered airfield while one hangar blazed away and smoke rose 3000 feet from the damaged Gnome-LeRhone engine factory nearby.

Versailles-Matelots was revisited on the 10th, and early arrivals were able to pin-point the locomotive depot and railway junction without difficulty. Explosion after explosion broke out ending in one terrific blast that rocked kites at 8000 and, when the smoke had cleared, all main-lines and most of the sidings had been severed and further new and serious damage inflicted on the buildings.

Engbrecht, gunner for Keys of the Tiger Squadron, repeated his double of May when with the assistance of Sgt. C. Gillanders, the rear gunner, he brought down an Me. 109 and an Me. 110. Engbrecht, who for this and the general excellence of his record was awarded the C.G.M., has since been commissioned.

Pleasance, the Moose Squadron C.O., was awarded a Bar to his D.F.C. and his flight engineer, P/O M. D. McGill, the D.F.C. for their work on this sortie. The official citation for the awards is given below:

One night in June 1944 these officers were pilot and flight engineer respectively of an aircraft detailed to attack the railway junction at Versailles. In the take-off both the port engines faltered at a time when the aircraft had barely left the ground. W/C Pleasance was unable to

climb but, by just clearing immediate obstacles and by taking advantage of low-lying ground, he flew on for 20 miles at a height of about 200 ft. By then P/O McGill had succeeded in restoring power to the engines and W/C Pleasance went on to the target and bombed it. Both these officers displayed great coolness and skill in a difficult and dangerous situation.

P/O B. Hughes, a veteran air bomber of the Bluenose Squadron, was lost when the aircraft piloted by P/O A. Doran did not return.

Railroads at Cambrai and Arras Are Bombed

Two nights later was black Monday as the raids against Cambrai and Arras, though they achieved moderate success, were unusually costly in aircraft and crews. Two thoroughly seasoned crews of the Goose Squadron, no member of which had done fewer than 20 trips, were lost over Cambrai: F/L F. T. S. Brice, F/Os A. Glendenning, M. J. McDonald, J. G. Gray, WO2 H. W. Wilson, FS A. Mabon and Sgt. E. G. Todd were in one crew; W. B. Stewart, Mallory, Burns, Bray, Ochsner and Varley, P/O G. J. B. J. LaPierre, D.F.C., and WO2 H. F. Murphy in the other. F/L T. O. Pledger, D.F.C., a wireless air gunner well advanced on his second tour, was lost in another crew from the same squadron. The Thunderbirds lost S/L I. M. McRobie and his crew of F/Os D. Murray and G. W. Bedford, WOs M. A. Bzowy and C. A. McLeod, FSs A. K. Hammond and M. Bemrose and Sgt. E. White. Burns, Bedford and Bzowy are prisoners of war and LaPierre, Murray and McLeod are safe.

The raid on the Cambrai rail junctions was made at low level and while bombing was scattered, heavy damage was done to business and residential property, and through rail traffic was temporarily stopped, every leg of a triangular junction being damaged. Hordes of night fighters were extremely active and many combats took place. Two crews of the Alouette Squadron and one from the Snowy Owls were

successful in destroying Jerries, to balance, at least partially, the heavy R.C.A.F. losses.

McEvoy and Owen, air gunners on Kirk's aircraft of the Alouette Squadron, repeated their performance of five nights earlier and destroyed a Jerry:

The mid-under gunner (Owen) first sighted two e/a at 700 yds. on the port quarter below, with white navigation lights in the nose. One passed out of view on the starboard quarter below. The other at 600 yds. was recognized as a Ju. 88. The order to corkscrew port was given by Owen who immediately opened fire. This e/a passed from his view at 200 yds. coming up level on the port quarter. The mid-upper gunner (McEvoy) opened fire with a long burst and hits were registered as the e/a burst into flames. This Ju. 88 was observed a few seconds later by the mid-upper gunner, engineer and bomb aimer, to hit the ground in flames and explode.

Sgt. J. Howell, rear gunner for Sgt. T. C. Barton, also destroyed a Hun:

The rear gunner (Howell) sighted an Me. 110 on the starboard quarter above at 150 yds.; just as the gunner sighted the e/a, it dropped a fighter flare. He immediately gave the order to corkscrew starboard and opened fire; direct hits were seen to register and flames came from the e/a as it broke away on the port quarter down. A few seconds later this e/a was seen by the rear gunner, mid-upper gunner and engineer to hit the ground in flames and explode.

WO2 J. R. McLeod, mid-upper gunner for P/O E. M. Aldred of the Snowy Owls, got another:

This e/a was first seen after tracer had been fired at our bombers from the starboard beam up, range 450 yds. The mid-upper gunner (McLeod) gave order to corkscrew starboard and opened fire at the same time with one long burst of 800 rounds. The e/a caught fire and was seen to explode in mid-air dead astern at 200 yds. range.

The attack on Arras, though slightly more successful, was also costly as three veteran crews of the Bluenose Squadron did not return. The personnel of these crews were: W/C C. S. Bartlett, who was well advanced on his

second tour, F/L D. Crawford, F/Os R. Kelso, J. Alexander and R. Learn, P/Os R. Campbell and C. Kyle in the first. The second aircraft carried F/O D. W. Robertson, P/Os W. Wood and G. A. Ovenden and Sgts. R. Buckman, J. Petsche, D.F.M., C. Nordin and T. Ely. F/O R. Hewitt, P/O F. Tandy, WO2 J. Swan, FS P. Legge and Sgts. A. Morgan, C. Dymond and T. Roberts made up the third crew. Petsche, Robertson and Ovenden are safe and Crawford is a prisoner. Petsche had been awarded his gong earlier in the year when, after he was wounded, and despite the fact that he was in much pain and had lost a considerable amount of blood, he did not tell his skipper of his injuries until after he had assisted in beating out a fire.

Two experienced crews from the Lion Squadron also did not return. F/Os R. C. Pearson and F. N. Beaton, P/O L. W. Cartwright, WO E. P. Duffin and Sgts. E. D. Dubeau, G. Parsons and K. G. Bulow made up one, and F/L L. B. Thistle, F/Os J. D. L. Fulton, K. Patrick and F. H. Lang, P/Os N. F. Fitton and E. L. Wilson and Sgt. D. A. Bristow were in the second kite. All except Bristow were on their second tour. Crawford is a prisoner of war while Fulton, Wilson and Patrick are safe.

But if Jerry brought down our kites, we were also successful when three fell to the guns of Iroquois kites and one to the Bluenoses. Successful gunners were Sgt. W. W. Chunick, piloted by WO2 F. M. Skeaff; Sgts. G. D. Brittain and A. C. Cleary in FS H. C. McVicar's machine; Sgt. J. B. Trout flown by F/O R. Harrison; and Sgts. R. Bannister and A. Forsyth of the Bluenoses, whose skipper was P/O M. Hawley.

F/O M. S. Strange and Sgt. J. B. Sullivan, pilot and rear gunner of a Lion Squadron kite, were awarded the D.S.O. and D.F.M. respectively. When nearing the target they were attacked by a fighter which wounded Sullivan and seriously damaged the aircraft. Despite his wounds, and partially blinded by blood, Sullivan stuck to his post and gave skilful

directions that enabled the pilot to outmanoeuvre his attacker. Strange continued on and successfully bombed his objective, following which he was again attacked by a fighter. Sullivan's turret was badly damaged and caught fire, but he succeeded in putting out the flames, and remained in the turret until well on the way to base where Strange safely landed the damaged kite.

Despite the fact that the Master Bomber's instructions were garbled by interference, a fair concentration of bursts was achieved and all railway lines to Douai, Lille, Amiens and Doullens were cut.

The mediocre success of these raids carried through to the efforts against St. Pol and Cambrai on the 14th, the raids on Boulogne on the 15th, Sterkrade on the 16th, and the double attack on Oisemont-Neuville-au-Bois on the 17th and 21st. On the St. Pol raid the clouds soon swallowed up the markers; the sticks of bombs, generally speaking, were haphazard and no concentration was achieved but about half the tracks were severed and one large warehouse burned. The same conditions prevailed over Cambrai and this attack was also disappointing. However, at Boulogne, where the dock area and the E-boat pens were the target, the weather was slightly more favourable, and a considerably better pattern of bursts was registered. Damage to shipping and port facilities was very severe, in all about 25 vessels being wrecked or sunk in the shallow water.

P/O J. G. M. Landry and WO A. V. J. Boyer, pilot and navigator of an Alouette kite, got their gongs for this raid. Despite the fact that their aircraft would not gain height and was later seriously damaged by flak they completed the mission. Though Boyer could not use instruments and was dependent on map reading for his course, the crippled machine was brought back to base.

At Sterkrade, though bombing conditions were unsatisfactory, our luck was better than usual under such circumstances and nine units of the synthetic oil plant were dam-

aged. Enemy aircraft were much more aggressive than ordinarily and several engagements were fought. One Jerry was destroyed when the aircraft flown by P/O R. F. Anthony of the Leaside Squadron was twice attacked by Ju. 88s. His gunners, P/O H. Quesnel and Sgts. W. Metcalfe and W. Dennis, drove off the first without damage and sent the second down out of control, to crash and explode on the ground. The victory was confirmed by the bomb aimer. Sgts. B. Guina and E. J. P. Rodesky, gunners in the Goose Squadron kite piloted by P/O W. J. McIntyre, caused a single-engined Jerry fighter to catch fire, break in two—and finally explode.

Sterkrade was the most costly raid of the month as an inordinately large number of aircraft, both R.C.A.F. and R.A.F., did not return. Fortunately indecisive results are seldom coupled with heavy losses.

Kirk, Collins and McEvoy of the Alouette Squadron, of whom we have spoken before, were lost on this raid. F/Os H. C. Facey, F. D. Hagen and D. Stubbs, and Sgts. C. Adams and R. U. Furneaux made up the balance of the crew. Furneaux, Hagen, Kirk and Collins successfully evaded capture and have returned to the U.K. The balance of the crew are still missing. Announcement of the award of the D.F.M. to McEvoy was made soon after he was posted as missing.

Losses were especially heavy for the Bluenose Squadron, as three of the four crews lost were veterans. P/Os W. M. McQueen, H. P. McAllister and P. A. Kingston, FS A. Warrinton and Sgts. M. Habiluk, C. T. Beech and W. G. Pearcey, all of whom had at least 29 operations to their credit, made up one crew. Only slightly less experienced were WOs M. Laffin and K. J. Donaldson, F/Os J. H. Martin and G. A. Chapman and Sgts. C. V. Soderstrom, C. W. Wentworth and E. J. Druett; while in the crew captained by P/O E. S. Dwyer, the wireless operator, WO A. R. Moorby, had completed 24 raids. Laffin, Donaldson, Martin and

Chapman are prisoners while Wentworth is safe.

If Sterkrade was an unfortunate expedition the effort against Sautrecourt was doubly successful in that the target was well bombed and there were no casualties. Admittedly, Sautrecourt was an easier objective than Sterkrade but it nevertheless is encouraging to find that our bombers grouped their bombs on and around the accurately-placed indicators.

The twin attacks on Oisemont-Neuville-au-Bois were carried out without loss. A double bombing such as this usually means that the first was unsuccessful. It was spoiled by cloud over the target and the fact that interference prevented the Master Bomber from directing the raid, while the second was completely abortive as only 20 per cent. of the aircraft even attempted to bomb. Unable to identify the aiming point clearly, the Master Bomber stopped the attack and the kites returned to base with their loads.

Attacks on Buzzbomb Sites

As was only to be expected robot bomb installations were the objectives for raids the latter part of the month when St. Martin l'Hortier was attacked on the 21st, Bientques on the 23rd, Bonnetot on the 24th, Bamieres the same night, Gorenflos on the 25th and Foret d'Eawy and Wizernes on the 27th. It is worthy of note that three of these targets were attacked by day, accompanied by fighter escort. The results of these forays were generally good with Bonnetot standing out as the most successful and Wizernes as the least, though even there a fairly good concentration was achieved.

The Master Bomber did a good job on the St. Martin l'Hortier raid and under his direction a well-concentrated pattern was placed. This was especially commendable as the ground markers were difficult to discern by day.

At Bientques our bombers dropped their eggs on the glow, the accuracy of which was checked by instruments.

Again the attack was effective in the face of only token resistance.

The following day an exceptionally good attack was carried out against Bonnetot with most of the bombing well within the target area. That night a fair attack was carried out at Bamieres though a great many of the sticks were wide of the aiming point.

Gorenflos was attacked on the 25th and again in the face of negligible defences a most successful result was obtained without loss.

Foret d'Eawy and Wizernes were twin attacks against launching platforms which were more than moderately successful. At Foret d'Eawy the weather was clear with some drifting cloud and the bombers got three fair patterns around the markers which were dropped in a triangle.

The attack on Wizernes, also completed without loss, was carried out in good weather and fair visibility. The markers were scattered at first but improved as the attack progressed and fairly accurate bombing produced some good fires.

Air Commodore A. D. Ross, O.B.E., one of the R.C.A.F. base commanders, was in the flying control tower watching his aircraft return from Foret d'Eawy. When all but four had landed he started for the interrogation room to listen in on the intelligence officers getting their reports and to get his own first-hand stories of the raid. Just as he was about to enter the debriefing room there was a great yellow flash on the airfield. Running to the scene, Ross found that Alouette Squadron aircraft A-Apple, returning from the operation on three engines, had crashed into U-Uncle which was bombed up. By the time he arrived, both aircraft were burning fiercely with petrol tanks and bombs in imminent danger of exploding.

Ross immediately took charge, assisted by FS J. R. M. St. Germain, the bomb aimer of C-Charlie which had just landed, Corporal M. Marquet, who was in charge of the

night ground crew, and LACs M. M. McKenzie and R. R. Wolfe of the station crash tender. Ross and Marquet had just extricated the pilot, when ten 500-lb. bombs exploded, and the rescuers were hurled to the ground. As the flying debris settled a cry was heard from the rear turret of A-Apple and the rescuers turned their attention to the imprisoned rear gunner, Sgt. C. G. Rochon. Undeterred by the flames which were rapidly approaching the tail, the Air Commodore, now assisted by St. Germain, McKenzie and Wolfe, hacked away at the perspex until a hole was made sufficiently large to allow them to pass an axe to Rochon. But a hole large enough to allow Rochon to escape could not be made from the inside and finally St. Germain and Marquet had to break the steel supports of the turret to extricate the gunner.

Just then another bomb explosion again threw the rescuers to the ground and St. Germain, rising quickly, hurled himself on one of the victims to protect him from flying debris. This blast caught the Air Commodore in the right arm, between the wrist and the elbow, and virtually cut off his hand. Turning the further rescues over to his assistants, Ross walked calmly to the ambulance and was taken to the station sick quarters where an emergency operation was performed and his right hand amputated. In the meantime Marquet, seeing the burning petrol endangering two other aircraft, superintended their removal while McKenzie and Wolfe continued their efforts to extinguish the fire.

As a result of this prompt action the entire crew of A-Apple was saved, the only member seriously injured being the pilot, Sgt. M. J. P. Lavoie. Sgt. R. Raper, the flight engineer, was admitted to hospital suffering from lacerations. Of the rescuers McKenzie and Wolfe were injured as well as Ross.

Air Commodore Ross was awarded the George Cross, St. Germain and Marquet the George Medal, while McKenzie and Wolfe received the B.E.M.

The last foray on which the Canadians had a large contingent was on a successful raid on Metz on the 28th, when every track in the south-east junction was cut and other important damage done. Though successful the attack was costly.

The Thunderbirds lost two experienced crews when F/L P. N. Logan with P/Os H. N. Birnie, G. D'Arcy, J. R. Willis, D. S. Jamieson and R. S. Kennedy, and Sgt. J. Docherty in one aircraft, and F/Os S. W. Gerard and W. Lastuk and P/Os E. J. Wilkie, K. Beeley, T. A. Rogers and D. L. Sam and FS D. MacInnes in another were posted missing. Logan and Kennedy and all of Lastuk's crew except Beeley and Rogers are safe. The Lions also lost a crew, every member of which had done at least 26 trips: WO A. J. King, F/O W. A. Wilson, P/O W. M. Poohkay, FSs R. E. Mowbray, S. K. Vallieres and D. N. Cotton, and Sgt. H. Morgan. King and Wilson are prisoners of war and Poohkay is safe. The Leasides lost a 28-trip crew, two members of which, F/L J. I. Williams and P/O R. McEwan, were half way through their second tour; the others were P/Os W. Fernyhough, J. V. Musser, H. J. Kennedy, P. B. Woolfenden and J. Hembry. Another most experienced crew was lost in F/O L. R. Stein, P/Os F. A. Smitton (pilot) and E. W. Stringham, FSs J. W. Shurvell and G. E. Moore and Sgts. J. M. Shaw and E. E. Thorn. Stringham is known to be a prisoner, while Shurvell, Stein and Smitton are safe.

Sgts. W. D. Robertson and A. W. Prosofsky, gunners for F/O A. G. Stein of the Porcupine Squadron, scored a victory:

Fighter was spotted by rear gunner in light from red flare as it closed in from starboard quarter. R/G fired a burst at navigation lights and corkscrew starboard was given.

With his first burst R/G set fighter afire. As e/a followed bomber into manoeuvre, R/G got in a long burst and mid-upper gunner a short burst at lights and flames.

At 300 yds. fighter burst into flames, dived down port and was seen to hit ground by both gunners and engineer.

P/Os A. L. Butler and W. MacKay, gunners on another Porcupine kite skippered by F/O J. D. R. Nixon, were also successful:

Fighter first seen by mid-upper gunner port quarter well up, dived down to level and closed in, opening fire. As e/a turned in from port quarter corkscrew port was given and R/G followed by M/U opened fire. At 400 yds. fighter burst into flames and dived down. Was seen to explode by both gunners and flight engineer.

McKay and Butler were both awarded the D.F.C. for this action and for general good work.

The mid-upper gunner on another kite piloted by F/L G. P. A. Yates, D.F.M., was also successful when he destroyed an FW. 190 which first burst into flames, then crashed to earth and exploded.

Another Porcupine crew also distinguished themselves:

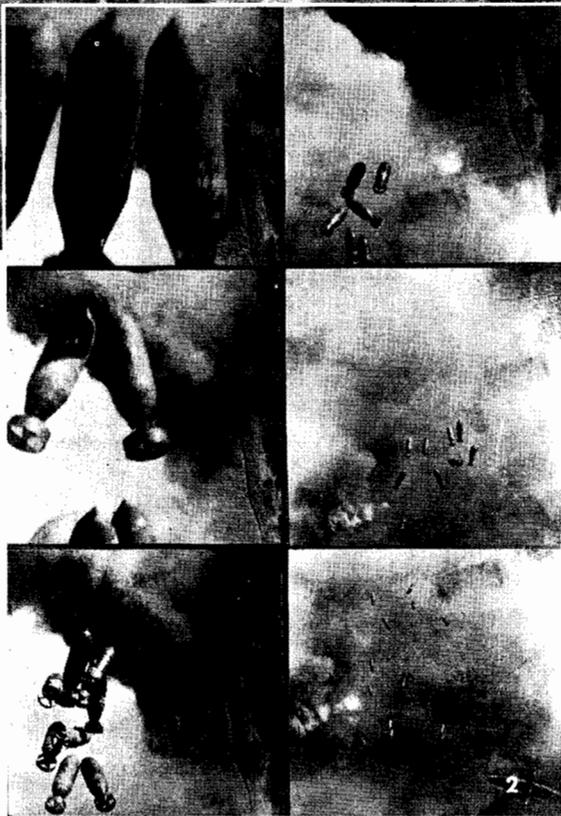
This night was marked by a wonderful bit of work by WO H. G. McVeigh who was captain of C-Charlie. He was attacked four times by fighters and evaded them all until finally hit while in a corkscrew. This resulted in the starboard fin and rudder being shot off, and the starboard elevator and aileron and wing tip smashed. The starboard flap and mainplane were also very badly damaged. The a/c went into a tight spin at 13,000 ft. and McVeigh told his crew to abandon aircraft. Two members of the crew had baled out when the captain got the a/c into a spiral dive and managed to level off at 6,000 ft. He had set course for England when his port inner engine packed up. However, he managed to reach . . . where he landed. A good thing it was this station with its long runways as it was necessary to land at 155 m.p.h. to hold the starboard wing up. A great piece of flying on WO McVeigh's part which undoubtedly saved the lives of most of his crew.

McVeigh was awarded the D.F.C. for this raid and was commissioned shortly after.

This attack closed a month of unprecedented activity for the R.C.A.F. Bomber Group.

July

During July there was not only a speeding up of activity



(1) Chateaudun, France, June 1944.
(2) Six photos of 1,000 lb. bombs being dropped from a Lancaster.



(1) S/L J. W. Bell, D.F.C., of Victoria. (2) F/O H. R. Farb, D.F.C., of Kapuskasing, Ont. and P/O A. L. Weaver of Toronto. (3) S/L D. M. Arnot, D.F.C., of Toronto. (4) Trappes, France. Rolling stock burned-out after heavy bomber raid.

in Bomber Command, which was only to be expected in view of the success of D-Day, but also a change in the role played by the heavy bombers. In June the long-threatened flying bomb had finally appeared. To combat the new weapon and, perhaps of even more importance, to reassure the civil population the role of Bomber Command underwent a drastic change. Twenty-two of the 33 targets attacked by the Canadians had direct connection with the robot bomb.

There was another innovation, one that "shook the crews rigid" but which, after one trial, was realized to be eminently successful. It involved virtual hedge-hopping over enemy-occupied territory, thereby increasing the flak menace but materially decreasing the danger of night fighters on which the Nazis had been concentrating in recent months. It is somewhat terrifying to fly a heavy bomber, none too responsive to controls even at a height, at 2000 feet or less, far into Germany—and it is little wonder that the crews took a dim view of these apparently suicidal tactics before they tried them. But on the raid to Wesseling they found that the change was beneficial and that the Jerry night fighters were completely foxed.

With the change-over from large targets to the small rocket objectives, the bombing results were not in every instance up to the standard of the Command. After all a buzzbomb launching site offers little that is really vulnerable to other than a direct hit and even then its vulnerability to any but the largest bombs is questionable. Constructed as they were of reinforced concrete, the platforms showed little or no effect from a very near miss. With these facts in mind it is easily understood why the site at Biennais was the objective for attacks on three different occasions. On Dominion Day a daylight effort under strong fighter cover produced very scattered results. Four days later another daylight attack was productive of no greater success. The third attempt was by night and, while no visible damage to

the installation resulted, there were many craters in the area, and the feeding railway line was cut in at least one place.

On the 6th there were two further daylight attacks on sites at Coquereaux and Siracourt, neither of which inflicted serious damage though at the latter the railway supply line was cut. In both instances an accurate grouping of bombs was achieved which against any other type of target would have guaranteed success.

Three days later the Canadians were airborne against installations at Ardouval and Mont Candon with similar results. On the 12th three targets, Thiverny, Bremont and Acquet were attacked. The daylight raid on Thiverny did but slight damage. Of the two night attacks, that against Acquet must be considered a failure, while that against Bremont was in every way successful and severe damage was inflicted. Two days later a night attack on a launching site at Anderbelck was moderately successful when one very near and two near misses wrecked the buildings and were thought to have damaged the ramp.

But it remained for the two attacks on the 15th to show real success. In the attack on Bois des Jardins, a robot on the ramp ready for launching was exploded by a bomb, and the result when the dust and smoke had cleared away was all that could be desired. At least one launching site could never be used again. A foray against the supply depot at Nucourt had less success but a considerable amount of damage was done.

It was five days before the Canadians returned to attacks on the doodlebugs when they dropped bombs on L'Hey, Ferme de Forrestal, Fermes du Grand Bois and Anderbelck in four daylight raids. Slight damage was inflicted on the first and second, rather less on the last, and none at all on the third. This bombing of launching sites is a discouraging business.

A night raid against the installation at Ferfay was abor-

tive as the attack was cancelled by the Master Bomber. On the same night the R.C.A.F. was back at L'Hey and again without success. The month closed with three simultaneous night attacks on Ouef-en-Ternois, Foret de Croc and Coquereaux, once again with meagre results.

If the many raids on the launching sites and supply depots had little apparent result in ruined installations, they did have one or two definite values. First they reassured the civilian populace and second, even if the raids did not demolish the apparatus, they at least disturbed the schedule.

There were three direct attacks against German strong-points, tanks, guns and armoured units holding up the Second Army at Caen, which were outstandingly successful. By daylight on the 7th, under perfect fighter cover, a large force gave an excellent demonstration of concentrated bombing on Bomber Command's first daylight operation in support of the ground troops. The bombing was directed by the Master Bomber who shifted the attack from time to time to give the effect of a creeping barrage. In appreciation of the Air Force's efforts the Second Army sent the following signal: "Heavy bomber attack just taken place. A wonderfully impressive show and was enormously appreciated by the Army. The Army would like their appreciation and thanks sent to all the crews".

At dawn on the 18th, the air forces again came to the aid of the stalemated Army and devastated the Caen area with over 1,000 heavies. As the van of the bombers arrived many of the earliest were able to pinpoint their objectives but five minutes after the first stick was dropped, the whole town lay under a thick bank of smoke and the Master Bomber took control. The steel works in Mondeville were most severely damaged; 160 out of 180 hutted barracks were destroyed and, in addition, the double-track railway bridge across the Orne had fallen in. No enemy fighters put in an appearance, no doubt in deference to our excellent fighter cover.

As in the earlier attack the R.C.A.F. lost four crews. P/O T. R. Kelly, F/O R. W. Blair, WO W. S. Haley, FS V. A. Unruh and Sgts. D. A. Carson, D. G. Willson and T. J. A. McFadden were members of a Lion crew lost. One of the kites missing from the Leaside Squadron was skippered by F/L J. H. Cooper, a veteran of 32 raids. His crew, all of whom had completed 29 sorties, included F/O R. P. Dryden, WOs A. Zacharuk and K. E. Elliott, Tech. Sgt. L. J. Butkewitz (U.S.A.A.F.), FS R. E. Burton and Sgt. H. E. Oakeby. Sgt. S. D. Wright, who was doing his second-dickey trip when the aircraft was lost, is a prisoner as are Cooper and Elliott.

For the third time a large force attacked the Caen district on the 30th, when three of the chosen aiming points were well plastered. The Master Bomber directed his a/c to go below the clouds to drop their bombs and, though some apparently did not hear his instructions, the majority of the R.C.A.F. came down before dropping their eggs on Amayeur-sur-Seulles and Villers-Bocage.

Aided by flares sent up by our own ground troops and the continued counselling of the Master Bomber, a very successful attack built up and photographic aircraft brought back evidence of a severely pock-marked target. Fighter cover again kept the Jerries at a respectful distance and no resistance was offered.

Two targets of the month were railway centres—Villeneuve St. Georges on the night of the 4th and a daylight raid on Vaires on the 18th. The small force which tried its luck against Villeneuve St. Georges was somewhat confused at the opening of the attack. But later arrivals achieved a good grouping and explosions followed in quick succession, each contributing its quota of heavy black smoke. The main railway line was cut in several places, engines and locomotive sheds were reduced to a smoking ruin and the whole centre of the target area badly mauled.

Between the target and Rouen enemy fighters in con-

siderable number were encountered and many combats ensued. Sgt. P. F. Hunt, rear gunner for skipper F/O D. A. McNaughton of the Bison Squadron, downed a Ju. 88 and FS E. A. Snider, rear gunner in the Tiger Squadron kite piloted by P/O H. A. Kirby, was equally successful. Our losses were heavy.

The marshalling yards at Vaires, south-west of Paris, were attacked by day on the 18th under excellent fighter cover. In the face of only moderate flak, the target was pranged most successfully, serious damage being done to tracks and buildings and a large quantity of rolling stock sent up in flames. The fighter cover discouraged Jerry defenders and only one R.C.A.F. aircraft did not return.

German Targets Are Attacked Again

The night following this attack on Vaires a moderate force set out against the synthetic oil plant at Wesseling, in Germany. After a hedge-hopping trip over occupied territory that drew lots of flak but completely fooled the hordes of night fighters usually encountered on that route, the main force found the aiming point well illuminated by flares despite a smoke screen thrown up by the Nazis. Bombing had to be done without the assistance of the Master Bomber as he was effectively jammed by the defenders. When our kites retired, flames and smoke were rising well over two miles, a storage tank had exploded and fires giving out oily black smoke dotted the target area. Only one of our aircraft was missing from a raid which was estimated to have stopped production completely for a time and before it could be resumed to more than one-half its original output very serious reconstruction would be required.

Kiel was the next German city to feel the weight of our bombs when on the night of the 23rd a major force, mainly from the R.A.F., attacked a cloud-covered city. On the same night, the Canadians provided the largest part of a raid on oil storage tanks at Donges that was signally suc-

cessful and carried out without casualties. Thirteen large and several smaller storage tanks were destroyed, the railroad cut in 12 and the road in ten places and a tanker capsized. When the bombers withdrew the plant was almost completely devastated and a death blow had been dealt that section of the rapidly diminishing oil stores of the Reich.

On the 24th the first of two heavy attacks, on successive nights, on Stuttgart took place. The R.C.A.F. had only a small part in the first when a fair concentration of bombs was dropped on somewhat scattered markers in the face of moderate ground defences. Enemy fighters were active over Orleans, Paris and on the homeward route and one FW. 190 was shot down. It is of interest to note that on this raid the kite skippered by F/O R. A. Clothier completed the Goose Squadron's 3,000th operational sortie. Clothier and F/Os S. J. Dezorzi, L. J. Corbeil, R. J. Austen and R. E. J. Fitzgerald of the crew were all second tour men. With them were F/O T. M. Murdoch, FS J. Jacques and Sgt. J. McCart.

R.C.A.F. aircraft made up a very much larger percentage of the second assault. But this time the Canadians had the misfortune to lose two squadron commanders when Dow of the Iroquois and MacDonald of the Leaside did not return. Dow has since been listed as a prisoner. His crew was composed of F/L R. M. Martin, F/Os K. W. Jones and D. J. Frauts, and P/Os H. J. Douglas, R. G. Carter and E. A. Parker, while MacDonald's companions were F/L J. S. K. Kemley, F/Os M. F. C. Grimsey, W. Calderwood and S. P. Wright, P/O H. Chamberlain and FS B. R. Justason. All were experienced men and Wright was well advanced on his second tour. MacDonald, after evading capture, returned to his squadron. Frauts is also safe while Jones and Martin are prisoners.

On this occasion the full weight of bombs fell on the city and its suburbs, the old section being completely devastated, chiefly by fire, and many public buildings, including the main and north railway stations, totally destroyed.

Defences, aside from a horde of night fighters, consisted principally of slight to moderate flak. P/O H. D. Egli skippered a Lion Squadron kite that was so severely damaged by flak over the target that the undercart dropped. Fuel consumption increased to such an extent that he could not make base so when over the French Coast he ordered his crew to bale out. Despite very intense flak as the crew jumped, Egli held the aircraft on a straight course and enabled them to leave safely. He was awarded the D.F.C.

Aldred was at the controls of a Snowy Owl kite whose gunners shot down a Ju. 88. The rear gunner, Robinson, had shot down Jerry night fighters on earlier raids.

The month's last raid on Germany by the R.C.A.F. was to Hamburg on the 28th. The attack was aimed directly at the dock area which suffered considerable damage. Our aircraft, however, met with considerable fighter opposition both over the target and throughout the homeward journey as far as Heligoland. Many combats took place by the light of fighter flares which lined the bombers' route and several Jerries were destroyed. Sgt. W. H. Murrell, rear gunner in the Moose Squadron kite skippered by FS A. G. Weston, was one of the winners, while Sgts. R. G. Kearns and A. N. Shaw, gunners for F/O G. E. Plyley of the Lions, also destroyed a fighter. FS D. B. Penney, rear gunner, and P/O G. E. Bullivant, mid-upper on the Leaside aircraft piloted by S/L M. Pettit, were awarded the D.F.M. and D.F.C. respectively:

This a/c was on the homeward journey from Hamburg, when the rear gunner observed a Ju. 88 on the fine port quarter slightly below at 200 yds. He immediately instructed the pilot to corkscrew port at same time firing at fighter and observing strikes on fuselage. E/a opened fire at 200 yds., scoring hits on Halifax starboard mainplane and elevator with cannon and machine-gun. E/a continued firing until breaking away at 150 yds. to starboard quarter up. Penney ceased firing and instructed Pettit to cork screw starboard. E/a began attack from starboard quarter up. Both mid-upper and rear gunners opened fire at 150 yds., observing strikes on e/a wings, fuselage and both engines 'which were seen to

burst into flames and throw off pieces. E/a broke off attack to port quarter down and was seen to dive through cloud in flames—a red glow on the sea was observed through cloud.

P/O F. J. Devine, a Porcupine skipper, got his gong on this raid when, despite very intensive flak and repeated fighter attacks, he pressed on to the target and dropped his bombs, with only three engines on his kite serviceable. F/O J. C. Hall, air bomber on the Bison kite skippered by P/O W. R. Stewart, also won his gong when after the aircraft had been badly damaged by flak and the navigator and pilot wounded he rendered first aid. Shortly thereafter the kite was again hit and fire broke out. Assisted by the flight engineer, Hall succeeded in extinguishing the flames and the aircraft was brought back to the United Kingdom. On this sortie and throughout his tour of operations, Hall's work was most noteworthy. Others in the news were F/O R. G. Holden and FS F. J. Clay, pilot and rear gunner on an Iroquois kite, who won the D.F.C. and D.F.M. respectively. Swept by cannon and machine-gun fire while over the target the aircraft became unmanageable and Clay was seriously wounded. Holden ordered the crew to jump and three members had complied before the pilot regained control and rescinded the order. Clay crawled to the nose of the kite and without telling Holden of his wounds assisted his skipper in bringing the badly crippled Halifax back to base.

It was a costly night for the Canadians, the percentage of loss being heavy and many highly-experienced crews did not return. Among those posted missing were four from the Goose Squadron, all with over 20 operations to their credit. F/O S. D. Coffey, P/O G. A. Boehmer (pilot), WO2 L. H. T. Phipps, FSs E. A. Goodwin and E. R. Wulf and Sgts. L. Rourke, A. J. Ducharme and B. M. Hofforth made up the first crew. P/Os J. H. A. McCaffrey, R. H. Mitchell and G. E. Cameron, WOs A. F. Marsden and L. F. Cassidy, FS A. E. Candling and Sgts. G. R. Harvey and F. Fearn were in the second kite. The third aircraft carried S/L G. B.

Latimer, F/Os Q. T. R. Grierson, J. T. Guthrie and C. F. McDougal, 2nd Lt. A. A. Hauzenberger (U.S.A.A.F.), WO J. Dingwall and Sgt. R. S. Westrope; and the fourth F/L G. Croucher, F/O D. T. Ryan (pilot), P/O A. H. Durmin, WO2 R. D. Whitson, FSs H. E. Truscott and J. A. K. Imrie and Sgts. D. Scott and J. L. A. Biais. Coffey, Wulff, Ducharme and Boehmer have been reported prisoners. An experienced crew of the Leasides also failed to return from this raid. Its members were P/Os E. A. Clarke, E. H. Bishop and F. A. Burgess, FSs W. Brown, H. D. Lewis and J. Cook and Sgt. G. W. Bradshaw.

W/C E. M. Mitchell succeeded Dow, lost on the second raid to Stuttgart, in command of the Iroquois Squadron.

August

In addition to attacks against buzzbomb launching sites on the first of the month, all of which were abortive due to the sudden closing down of the weather, R.C.A.F. aircraft attacked the Nazi stronghold 66 times in August. Thirteen of the 66 raids were carried out mainly by R.A.F. forces and had only a small contingent of Canadians. As in the previous month a large percentage of the attacks were against the doodlebugs, there being 24 against launching sites and six against supply depots.

The launching sites La Neuville, La Breteque, Anderbelck, L'Hey, and Bois St. Remy, were attacked twice and the following once each: Prouville, Foret du Croc, Coulouvillers, Acquet, Westrove, Marquise Mimoyecques, Oeuf-En-Ternois, Fermes du Grand Bois, Fresnoy, Fromental, Ferme du Forrestal and Noyelleen-Chaussee. F/O R. W. Kent, a Moose skipper, got his gong on the Acquet raid and for general good work throughout his tour. Shortly after take-off his port outer engine failed and as he crossed the English Coast the starboard inner also packed up. Rather than turn back he proceeded to the target and dropped his bombs after which he returned to base and landed safely

under most difficult conditions.

The most noteworthy difference between the August attacks and those made earlier was that where originally the assaults had been saturation raids on a large scale, by August new tactics of small forces attacking from a low level were fully developed. As a result we find multiple targets being attacked simultaneously. This was most notable on the 26th when 12 different launching sites were the objectives. It cannot, in all honesty, be said that these attacks against the launching platforms were any more effective than the earlier ones had been. Only a small number of the targets suffered serious damage, due rather to their smallness and the extremely heavy nature of the construction than to poor bombing efforts.

The attacks on the supply depots, of which there were 16 during the month, had a greater effect than had those on the launching platforms, since each depot supplied a series of sites. In addition they provided a larger and more vulnerable target. The attacks on Bois de Cassan on the 4th, St. Leu d'Esseren on the 5th, and Foret de Nieppe on the 9th were mainly Canadian efforts. Another attack on Foret de Nieppe on the 3rd was two-thirds Canadian, while raids on Bois de Cassan on the 3rd and Trossy St. Maximin on the 4th had smaller R.C.A.F. representations.

F/O L. E. J. Murphy, Lion skipper, got a D.F.C. for his coolness and skill on the attack on Foret de Nieppe on the 3rd. While over the target his kite was very seriously damaged by bombs dropped from another aircraft, and it was only by the exercise of the highest standard of airmanship that he was able to return to base. His work throughout his tour was most notable.

The raid on Bois de Cassan on the 4th was more successful than an attack on the same place the previous day and, when the raid was over, 56 storage bunkers had either been virtually or completely destroyed; there were 60 craters in the railroad tracks, the roads were almost all impass-

able, and considerable damage was done to buildings and flak towers. F/O R. H. Simpson, a pilot of the Porcupine Squadron, was awarded the D.F.C. and his gunners, Sgts. O. M. Brown and R. E. Budd, the D.F.M. for their work on this sortie. On leaving the target the kite, when heavily hit by flak, went into a steep dive, out of control, and Simpson ordered the crew to prepare to bale out. However, he regained control and directed the two gunners in the difficult repair work necessary to maintain flight. Through the efforts of the trio the Halifax was brought safely back to base.

WO2 J. A. Ryan of the Alouettes got his D.F.C. on the Foret de Nieppe raid on the 9th when two engines cut out over the French coast. He was forced to jettison his bombs and some equipment to bring his kite back to an emergency airfield. Before he could land one propellor had sheared off but despite this he brought the Hally down safely.

The attack on St. Leu d'Essoren, in which the R.C.A.F. Group was involved, was the first of two to the same objective. Bombing on this attack was somewhat scattered but there were concentrations of craters in several places in the area and the railway was cut in various places.

F/O J. F. Tees, a skipper of the Moose Squadron, had his kite hit by flak which put both starboard engines out of business and damaged the airframe. Under very great difficulties he carried on, dropped his cookies and returned to base. He was awarded the D.F.C.

Seven targets in Germany felt the weight of Canadian bombs on ten forays during the month, Kiel, Stettin and Bremen (twice each) and Brunswick, Russelsheim, Sterkrade and Hamburg. The attack on Brunswick was carried out on the night of the 12th and nine Canadian squadrons contributed aircraft. Generally speaking the block-busters were scattered over the business and residential section, with considerable damage throughout, though no section was completely devastated. Hordes of night fighters sought to bar the way and, as was only to be expected, many com-

bats took place. Two R.C.A.F. aircraft scored successes. Sgt. D. Hache, rear gunner in the Bluenose kite skippered by F/L B. Imrie, shot down an unidentified twin-engine Jerry that hit the ground and exploded, while FSs H. S. Smith and R. W. Pettigrew, gunners in F/O R. C. Penrose's aircraft of the Lion Squadron, served out a like fate to an Me. 410. That redoubtable pair Engbrecht and Gillanders, flying in Keys' Tiger Squadron kite, repeated their earlier successes when they crashed an Me. 410 and an Me. 109 in flames. Gillanders was awarded the D.F.M.

Our losses were heavy and included two experienced crews, made up of F/L P. H. Cronyn, F/Os J. F. G. Murray, R. J. Burns and J. Bilbe, FSs A. J. Dickinson and H. G. Davey and Sgt. S. Corran of the Lion Squadron, and F/Os D. G. Depew, K. Brayne and S. Avasiloff, P/O J. W. Walker, WO C. J. Dempster, FS O. F. Compton and Sgt. E. Newton of the Bisons.

Four nights later the R.C.A.F. contributed to two attacks, one on Kiel and the other on Stettin. In the Kiel raid, despite some wild aiming that scattered sticks over the whole city, a series of fires started around larger explosions which broke out where the main load of bombs fell.

FS E. J. Lafave, navigator for P/O N. C. Muir of the Bisons, got a D.F.M. for this raid. When over the target, the aircraft was hit by flak and Lafave was seriously injured in the abdomen and one leg. Despite very painful injuries, he continued to navigate and told no one of his condition until they had landed at base. F/O J. Wagman, of the Bluenose Squadron, also got a gong. As he reached enemy territory flak pierced his petrol tanks but despite loss of fuel he pressed home the attack and dropped his bombs. He was, however, unable to reach the United Kingdom and had to ditch 40 miles from the coast in a very rough sea.

A much smaller force of R.C.A.F. aircraft joined the heavy attack on Stettin on the same night which inflicted considerable damage on dock warehouses and nearby

buildings, principally by fire. Three large industrial establishments were severely damaged, nine warehouses gutted, a large area of the residential and business sections was devastated and severe damage inflicted on the quaysides.

Two nights later a moderate force went to Bremen in the culminating attack of a series against the Nazi port, which brought almost complete devastation to an area extending nearly three miles inwards from the north-west end of the city proper, over two-thirds of the suburban district of Deventer, and large areas in Utbremer and Herdentor. In addition very severe damage was inflicted on industrial premises and docks on the west side of the river, even as far as Woltmershauser. Sgt. J. R. Main, mid-upper gunner in the Swordfish kite flown by P/O J. W. Tims, claimed an Me. 109 damaged, but when all reports were received there was ample proof that the Hun had crashed.

A week later, on the 25th, a large contingent of Lancasters dropped a heavy concentration of bombs bang on the target indicators at Russelsheim, on the River Main ten miles east of Mainz. This was Bomber Command's second raid of the month on the town, the first having been on the 12th. Russelsheim is the home of the Opel works which in peacetime were the largest manufacturers of motor cars in Europe, but are now engaged in the manufacture of aircraft components and employ 40,000 workers.

The majority of the Lancs dropped their cookies square on the closely-grouped markers though a few bomb aimers were fooled by a decoy ten miles to the south. Before the end of the assault, a widespread conflagration had enveloped the town.

One R.C.A.F. pilot, FS R. B. Maxwell of the Ghost Squadron, put up an excellent show on his first trip as captain. Forty minutes before reaching Russelsheim his aircraft was hit by flak which set the starboard outer engine on fire, put the electrical system out, seriously wounded FS P. Recabarren, the flight engineer, and slightly wounded Max-

well himself. Feathering the u/s engine, Maxwell extinguished the fire and pressed on to the target. Unable to drop his bombs accurately due to the electrical failure, he jettisoned his load "live" and returned to base on three engines. Recabarren died shortly after the Lanc landed.

Four nights later the R.C.A.F.'s part in attacks on Germany closed with a second effort against Stettin, which resulted in a particularly large explosion, followed by great fires that destroyed a large area of the business and residential sections in the north central part of the city. Another area in the south was gutted. The fires were visible for 100 miles, and one was still burning three days later.

Raids on Oil Depots and Airfields

On seven occasions oil storage depots were sought out by Canadian heavies. In the attacks on L'Isle Adam on the 3rd and 4th, Bordeaux-Bassens on the 5th and Foret de Lu-cheux on the 8th, the R.C.A.F. contributed only small numbers of aircraft but had a major share in the other three. On the first of the heavy Canadian raids, a day attack on the Foret de Chantilly on the 8th, in which almost all the R.C.A.F. squadrons had a part, columns of black smoke arose in majestic if mute testimony of an effective attack. Photographs taken later showed a great concentration of craters around the aiming point.

An experienced crew from the Bison Squadron was lost when F/L D. B. Hall had to ditch his kite in the Channel. Other members were F/O T. A. Jackson, P/Os H. Glass, D.F.M. and L. B. Syme, FSs D. Murray and W. S. Philips. Only one member of the crew, FS R. U. Harrod was rescued, slightly injured.

Two days later the Canadian Group again sought out oil depots in a two-pronged night attack on La Pallice. On one of the aiming points fair-sized fires and considerable smoke were observed as the bombers withdrew. On the second where the bombing was concentrated due to the good work

of the Master Bomber, a considerable number of small fires and one very large red fire following an explosion were observed. There were no casualties and both attacks may be classified as moderately successful. The R.C.A.F. also contributed to an attack on La Pallice on the 12th, when the submarine pens were the objective.

The Foret de Montrichard was the target of a daylight raid on the 12th, when oil storage installations were again attacked. The Master Bomber directed his aircraft away from decoy fires on to the correct markers to achieve a nice cluster of bursts.

Bomber Command's greatest mid-month effort was a day assault involving more than 1,000 bombers and large fighter cover that was carried out under perfect weather conditions against nine airfields in France, Holland and Belgium. The R.C.A.F. Group took on complete responsibility for two of these, sending out goodsized forces against Melsbroeck, near Brussels and Soesterberg in Holland, and also contributed to the attack on Volkel. Other forces from Bomber Command struck at Le Culot, St. Trond, Eindhoven, Tirlmont, Gilze-Rijen and Deelen. Photographs showed all fields to have been well pranged.

In the Melsbroeck raid, due to unpredicted winds the bombers were late in arriving so that the attack started slowly but an excellent concentration was soon achieved and all runways, administration buildings, and the central dispersal area were peppered. The raid on Soesterberg was even more successful. Not only were the runways and dispersals well cratered but the perimeter buildings were set alight and fuel and ammunition dumps blown up.

During the month two raids on communications were carried out, one on the night of the 18th against Connantre, a railway centre east of Paris, and one by day on the 28th against shipping in Brest harbour.

At Connantre the full weight of bombs fell on the western group of through sidings and all tracks were torn up.

More than 20 coaches of a train standing in the yards and 50 freight cars were demolished.

Although the attack on Brest was carried out in clear weather, few crews were able to identify their allotted target. The majority took the dry docks as their aiming point and carried out a successful attack. The main weight of bombs fell on dry docks 8 and 9 in Rade Abri, where sticks straddled the docks, wrecked several surrounding buildings and scattered a large quantity of military stores on the quayside.

The night of the 25th saw the R.C.A.F. taking a major part in a widespread assault against eight small targets around Brest in an endeavour to soften up the port defences. Those allotted to the Canadians were light coastal batteries at Kervinou and Pointe Robert, a medium battery at Pointe de St. Mathieu, a heavy anti-aircraft battery at Fort des Cornouailles and a defended post at Kerandieu.

At Kervinou, the area was pitted by over 150 craters and though no direct hits were registered on the guns themselves, there were two near misses on two of the positions while cable trenches and roads were cut. Seventy-four craters were registered, with three near misses against unoccupied gun positions, and all roads were cut or blocked at Pointe Robert.

Pointe de St. Mathieu emplacements were not hit directly but many of the 150 craters cut the light railway, demolished buildings and scattered stores far and wide. Fort des Cornouailles was the most successful attack with 310 craters within a radius of 1000 feet, direct hits on the three west positions and the command post, and eight medium-sized buildings destroyed and four damaged. The main roads from north and south were blocked by eight direct hits.

The defended post at Kerandieu collected 150 craters with one direct hit and six near misses on a radar emplacement and on three light flak posts. Every building was ei-

ther destroyed or seriously damaged.

Ile de Cezembre, a small heavily-defended island off the French coast near St. Malo, was attacked twice, on the 28th and on the last day of the month. In the first attack a small contingent of R.C.A.F. aircraft followed up punctual and accurate markers and achieved a tight pattern of bursts, the majority of which were in the south-west end of the island, though a few bombs dropped in the sea. Three days later a much larger force, representing 11 R.C.A.F. squadrons, returned to the attack. This time bombing was carried out below low clouds without the aid of markers. An excellent concentration caused many explosions from which a cloud of smoke arose and enveloped the whole island.

There were three raids in direct support of the Army. On the night of the 7th the district south of Caen was bombed in preparation for an attack by the Canadian Army while the Falaise region was the objective on two occasions, by night on the 12th and by day on the 14th.

In the Caen attack over 1,000 heavy bombers were used to soften up the German defences. At La Hogue, one of the two spots bombed by the R.C.A.F., the markers were virtually blacked out by the accuracy of the bombing, which produced a heavy concentration of craters in the immediate vicinity of the aiming point and blasted all the main roads. Though fighter flares lighted the way from the target to the coast no enemy fighters ventured to try their luck.

The second Canadian aiming point was Mare de Magre and, aside from the fact that fighters were out in force, the same words might describe both attacks, with a great number of craters within a radius of 400 yards, and several roads blocked in each case. In one of many combats, WO F. A. Harrison, rear gunner for Ghost Squadron skipper F/O W. H. Janney, shot down an FW. 190, which hit the water and exploded. F/L M. G. Wilson, who was well advanced on his second tour, was lost when the Moose Squadron kite piloted by F/O B. D. Walker did not return.

An attack on Falaise took place five nights later in an effort to harass the Germans attempting to escape encirclement. The Engbrecht-Gillanders combination made the headlines again when they downed an Me. 410 and a 109, both of which burst into flames and exploded. Four nights later Gillanders claimed a probable.

For the third tactical target the R.C.A.F. took on two of seven aiming points in a daylight assault that saturated the whole Falaise area. Bons Tassilly and the Aisy-Potigny road, the specific Canadian objectives, were attacked through a slight haze and, despite a few cases of under-shooting, both areas were heavily cratered. Photographs taken both during and after the raid confirmed extensive damage, with many sticks astride the tracks at Aisy, considerable destruction in the marshalling yards, the railway bridge completely destroyed and tracks badly disrupted. At Bons Tassilly, the village was almost completely wiped out.

The R.C.A.F. hung up a record in August for number of sorties flown by any group in Bomber Command. In over 3700 sorties they dropped more than 13,000 tons—400 tons more than the Group dropped during the whole of 1943.

Newson and J. B. Millward, of the Iroquois and Vancouver Squadrons respectively, were awarded bars to their D.F.C.'s during the month, while three senior members of the Vancouver Squadron, S/Ls L. L. MacKinnon, D.F.C., G. B. Ellwood, D.F.C., and G. A. Sweany, D.F.C., received the D.S.O.



(1) P/O P. Engbrecht, C.G.M., of Whitewater, Man. (2) Sgt. W. H. Cardy, C.G.M., of Toronto. (3) WO J. T. Houston, D.F.C., of Carleton Place, Ont.
(4) World's Fair Buildings, Leipzig—Before.
(5) World's Fair Buildings, Leipzig—After.



(1) W/C J. P. McCarthy, D.F.C., of Toronto. (2) W/C W. H. Swetman, D.S.O., D.F.C., of Kapuskasing, Ont. (3) G/C C. R. Dunlap, C.B.E., of Vancouver. (4) W/C A. C. Mair, D.F.C., of Windsor. (5) W/C D. H. Burnside, D.F.C. (R.A.F.) (Sketch by F/O E. H. Holgate). (6) W/C W. A. G. McLeish, D.F.C., of Hamilton. (7) Berlin, February 1944. South of Unter den Linden.

CHAPTER XI

SUMMER FIGHTER OPERATIONS

A. Fighters and Fighter-Bombers

LATE in the evening of June 5th flying personnel of the R.C.A.F. fighter squadrons were summoned to emergency meetings to be informed that the invasion was under way; the great convoys which they had guarded throughout the day were now steaming across the Channel towards the beaches of Normandy; transport planes were dropping parachute troops; heavy bombers were heading for objectives in the invasion area; night fighters were patrolling over *Luftwaffe* airfields while coastal aircraft maintained a ceaseless vigil over the Bay of Biscay and the Channel.

It was 0130 in the morning before the pilots of G/C W. R. MacBrien's wings got to bed. Even those who were not flying, the ground personnel and others already in the concentration areas waiting to cross to France, found it difficult to sleep; everyone knew quite literally what was in the air. "During the early hours, most persons were awakened by a roar of planes overhead and the increased activity brought many from their beds. A great armada was passing overhead and by the light of the moon, which occasionally appeared between breaks in the cloud, we saw a scene to warm our hearts. There were heavy bombers and transport

planes and behind each the outline of a glider. There were hundreds, and they took over an hour to pass. All the aircraft were flying in formation, using their navigation lights, and the long line stretching across the sky as far as eye could see was one of the most magnificent and thrilling sights we had ever witnessed. The aircraft seemed to be climbing up the ridge north of us and, with their varied coloured lights, looked like slow light flak ascending into the heavens. All day long, great fleets of aircraft shuttling back and forth passed overhead. For days the steady stream continued—bombers, transports, gliders, fighters, every type of aircraft known to the R.A.F. and U.S.A.A.F. from the Lancaster down to the tiny Auster.

Reveille for the fighter squadrons on D-Day was 0315, and an hour and a quarter later, after a hurried breakfast, the pilots were at readiness, shivering in the cold of the pre-dawn, listening to the rain dripping on the tents, and eagerly awaiting the first call to action. S/L G. W. Northcott's pilots were the first R.C.A.F. fighter squadron airborne when they set out on a low-level patrol over the eastern beach area near Le Havre. Theirs too was the last patrol of the long day, with the aircraft touching down just at midnight. For Northcott's squadron it was a period of intense activity after months of comparative idleness. Day after day the pilots flew their Spitfire Vs on the early morning and late evening patrols over the beaches, leaving their airfield while it was still dark and returning from the last patrol long after sunset. They logged bags of flying time, but only once during the month did enemy machines flash across their sights.

While this squadron flew its routine dawn and twilight patrols Canadian fighter wings, mounted on Spit IXs, covered the beachheads during the long June days. At 0620 hours on D-Day, as Northcott was leading his squadron home from its first patrol to Le Havre, W/C L. V. Chadburn took his pilots into the air to make their first sweep

over Cherbourg and the western area where the American forces were landing. The scene was almost beyond description. Boats of all shapes and sizes, destroyers standing off from shore, pounding away at the Hun positions and giving covering fire for the landings. From the shore came answering fire and a cruiser and many small boats were hit by enemy shells and sunk. Rockets too streaked out against the vessels as they brought troops and vehicles in to the beaches. While the Channel was filled with shipping, the sky above was teeming with aircraft, thousands of machines—all Allied.

While Chadburn's squadrons patrolled the western sector W/C J. E. Johnson's and W/C G. C. Keefer's wings covered the eastern sector stretching along the Bay of the Seine as far as Le Havre. The landing forces there were meeting heavy opposition and the aircraft came under intense light ack-ack fire from five flak ships. During later patrols the pilots saw many trucks moving along the coast roads and a very long column of armoured fighting vehicles making its way westward from Lisieux to the battle area around Caen. In the evening, as they made their fourth patrol, Johnson's pilots sighted 30 or 40 tanks concentrated in a field while in another place ten Allied and 15 Nazi tanks were fighting it out, and all the while great numbers of gliders were landing under heavy fire.

It was a long and exciting day, but it had one disappointing feature. Again and again as the pilots trooped into their dispersal tents after a patrol they asked the same question "Where's Jerry?" Several times, to be sure, enemy aircraft had been reported and some Canadian Mustangs mixed it with half a dozen Focke-Wulfs but only one Spitfire squadron had caught sight of the Hun and those, two lonely 190s, fled before our pilots could open fire.

While the Canadian Spitfire wings covered the flanks of the invasion an R.C.A.F. Typhoon wing gave direct support to the landing forces by bombing enemy strong

points and strafing convoys of motor transport. Early in the morning S/L W. H. Pentland led his City of Ottawa Squadron to blast gun emplacements and shore batteries at the point where troops of the British Army were ready to go ashore. After bombing the beaches they strafed batteries of 88 mm. guns just inland. Two sections of the Wildcat Squadron led by W/C M. T. Judd and S/L F. G. Grant had an assignment to dive-bomb two concrete blockhouses overlooking the beach on which the British 50th Division was to land its tanks. The operation required very exact timing as the bombs were to come down just as the LCTs lowered their ramps. Low clouds forced the pilots to come down to 1500 or 2000 feet to release their 1000-lb. bombs, while a heavy smoke screen over the beach further impeded observation. Nevertheless one blockhouse received four direct hits and eight near misses, while the second was hit squarely at least twice.

At the same time S/L H. H. Norsworthy's Westmount Typhoon Squadron bombed other gun positions at Courseulles in support of the landing of the 3rd Canadian Division. Diving through billowing clouds of smoke and debris hurled up by the intense naval bombardment, the pilots attacked two enemy batteries and blew them sky-high, as tanks landed on the beach without opposition.

In the afternoon, as the three Typhoon squadrons made armed reconnaissances of the area around Caen, they bombed roads along which armoured cars and trucks were moving and strafed vehicles with cannon fire, destroying at least five and damaging others. On another sortie the Westmounts, led by F/L T. A. Dadson with the winco, Frankie Hillock, flying one of the Typhoons, surprised a long armoured column moving north toward Caen. Attacking individually, the pilots dropped their bombs along the length of the column and smashed cannon shells into the armour, seriously damaging at least a score of vehicles. A second cannon strafe by Grant's pilots destroyed

four troop-carriers in flames while at least ten more were damaged.

D+1 (June 7th)

D + 1 brought the action for which the fighter pilots had looked in vain on the previous day, but, by some strange stroke of fortune, all the luck went to Keefer's wing; the others scarcely saw a Hun. Of the day's 13 confirmed victories 12 were credited to the winco and his three squadrons, the Ram, Roaring and Falcon.

The first of the day's engagements occurred in the morning when Keefer and his pilots relieved Johnson's wing over the eastern sector. Back and forth the squadrons wheeled until, when the patrol period had almost ended, a Ju. 88 suddenly popped out of the low clouds over St. Aubin, hit a balloon cable and crashed near the beach. At least a dozen more followed, some diving on the congested beaches while others turned to regain the cover of the clouds as the Spitfires waded in. Few of the Junkers escaped; the wing destroyed eight, probably destroyed another, and damaged two. S/L L. M. Cameron, leading the Ram Squadron, won his fifth and sixth victories by shooting down two of the Junkers. F/L R. H. Cull and F/Os G. D. Billing and D. F. Husband each accounted for one, while F/L G. B. Murray and F/O W. A. Bishop shared a sixth. Cameron's pilots had had the best of the fighting but Keefer also got into the scrap, destroying one of the 88s as did F/O P. M. Charron of the Falcons.

Early in the afternoon Keefer's wing again relieved Johnson's over the beaches and once again mixed it with the G.A.F., adding two destroyed and two damaged to the morning score. Hardly had the pilots commenced their patrol when they saw six FW. 190 fighter-bombers approaching in a shallow dive from the direction of Le Havre. The Spits went into action just as the first section of Focke-Wulfs released their bombs, and Keefer and F/O W. T.

Klersy each destroyed one.

On the wing's third patrol S/L G. D. Robertson and F/L G. W. Johnson of the Roaring Squadron dived out of the sun on an FW. 190 and an Me. 109G which were chasing a Thunderbolt along the deck two miles north of Caen. Robertson followed the Focke-Wulf as it broke away and crashed it in a field. Meanwhile Johnson had pursued the Messerschmitt, firing bursts as the Jerry turned steeply. At first no results were visible, then when the 209 straightened out Johnson poured in a stream of shells and the enemy fighter crashed headlong into a farmhouse, to bring the wing's total for the day to 12 destroyed, one probably destroyed and four damaged.

A thirteenth Hun, an Me. 109, was destroyed by F/L H. Russell and F/O G. F. Ockenden of Johnny Johnson's wing, while another Me. was damaged by a third pilot. In addition to these victories, the Spitfires during the day shot up and fired a tank and 13 other vehicles. Our own losses were three pilots missing, F/L W. J. Drope, F/O R. J. Grigg and P/O N. Marshall, and one, F/L I. R. Maclellan, a prisoner. Another pilot, F/O D. W. Goodwin, was rescued from the Channel by a Polish destroyer while F/O R. B. Henderson crash-landed on the beachhead and thumbed a ride home.

Jerry's aggressiveness on D+1 was short-lived, however, and three weeks passed before the Canucks again encountered the *Luftwaffe* in any strength. Meanwhile the daily routine of dawn to dusk patrols over the beachheads continued, wing relieving wing throughout the day. Some variety was afforded by ground strafes on which the Spits shot up locomotives, petrol bowsers, buses and trucks.

Two Typhoon squadrons were in action on June 7th, bombing roads, motor transports, tanks and bridges in the face of terrific barrages of flak. On their first mission early that morning Norsworthy and his pilots were instructed to attend to a large number of enemy vehicles on a road running south-west from Caen. Dropping their 500-lb. bombs

on a cross-road the pilots effectively blocked the main highway and then made cannon attacks on the vehicles, destroying or immobilizing about 20 trucks and three tanks. On two later missions they definitely destroyed four and probably several more vehicles.

Pentland's Ottawa Squadron also made two sorties to divebomb and strafe a flak position and concentrations of MT and tanks. On a third sortie, in which both Hillock and Judd participated, the pilots dive-bombed and destroyed a bridge in the Caen area. F/O R. W. Doidge baled out, landing safely near our lines despite a badly torn parachute. Three days later he was back with his squadron.

On June 10th one of the hastily constructed landing strips between Ste. Croix and Ver-sur-Mer, just west of Courselles, was ready for operation. The first R.C.A.F. Pilots to use it belonged to Johnny Johnson's wing, which, after a sweep inland as far as Evreux, landed on the strip at 1400 hours to re-arm and refuel. For the first time since June 1940, four years almost to a day, British fighter squadrons operated from an airfield in France. That evening Keefer's wing, after sweeping over Evreux, Chartres and Argentan, also set down on the strip preparatory to making a second sweep two hours later.

For five days the landing strips were used as filling stations for the squadrons as they carried out routine patrols and sweeps over the beachheads and battle area. Enemy aircraft were rarely seen—F/Ls A. A. Williams and H. J. Nixon shot down an FW. 190 on the 10th—but the flak barrages were still most intense and inflicted casualties. June 13th was particularly unfortunate as it was on this day that W/C L. V. Chadburn was killed. Lloyd Chadburn's loss was a grievous blow to the R.C.A.F. A fine fighter pilot and an exceptionally able leader, two qualities which do not always go together, he was the inspiration of the men in his wing. To them and the crews of the bombers whose daylight raids into France, Belgium and Holland he had so of-

ten covered with his Spitfire shield Chad was indeed “a grand friend”. Three times he had been decorated for his services with the Distinguished Flying Cross, the Distinguished Service Order and Bar. His list of victories was impressive. Twenty-three times he had taken part in successful combats, personally destroying five enemy aircraft and sharing with his pilots in the destruction of four others; five more Jerries he had probably destroyed with a share in a sixth, while eight had been damaged by his fire. It is worth noting that twenty of these combats had been fought while Chadburn was leading his wing.

A special operation was carried out on the evening of the 14th when two wings took part in a great attack on Le Havre, escorting a strong force of Lancasters as they pounded the bases from which E-boats had been menacing Channel shipping. During this sortie S/L H. W. McLeod’s pilots caught sight of four German bombers, the first Huns they had seen in a week. Two of the Do. 217s escaped in the deepening dusk but the others crashed into the Channel. McLeod got one, his 16th, while the other, chased by P/O R. A. Hodgins, dived towards the sea with its starboard motor on fire and was later confirmed as destroyed.

Spitfire Wings Move to Normandy

On June 15th, just nine days after the invasion began, the first R.C.A.F. squadron, led by S/L B. D. Russel, moved to its new base on the strip at Ste. Croix-sur-Mer, and was followed later in the day by the other units of Johnson’s wing. On the following day Chadburn’s wing, now led by W/C R. A. Buckham, flew across to Normandy to a landing strip near Crepon, a few miles from Johnson’s airfield. When Keefer’s wing followed on the 18th, to Beny-sur-Mer, inland from Courseulles, all MacBrien’s squadrons were in Normandy, only 12 days after the beginning of the invasion.

Meanwhile the wings had added a few more victories to

their bags of Huns. Ever since D-Day, the Chadburn-Buckham wing had patrolled over the western beaches vainly searching the skies for enemy aircraft. At last on June 15th the monotony of the long uneventful patrols ended when the Red Indians, led by F/L J. F. McElroy, D.F.C., bounced 20 or more Messerschmitts and Focke-Wulfs to such good effect that ten Huns were destroyed and another damaged. F/O Jack Bamford headed the list with three kills and won the D.F.C.; F/L J. N. Paterson and F/O W. Warfield each bagged a pair, while the others fell to McElroy, F/L W. N. Stronach and F/O W. F. Cook. The "leadership of a high order" which he displayed in this engagement added a bar to McElroy's D.F.C.

On the following day Johnson's wing won its first victories from the new field in Normandy by destroying three enemy fighters. The winco got an FW. 190 for his 29th, McLeod bagged his 17th, an Me. 109, and F/L D. M. Walz crashed another Messerschmitt. Walz was reported missing from another combat later in the day but returned to his squadron two months later after hiding in France until American troops reached his area. WO A. B. Clenard, who did not come back from a sortie on the 17th, was able to evade capture and rejoin his unit within 24 hours. Crash landing near the enemy lines with a duff engine, he had been challenged by the Huns and sniped at by machine-guns but with luck reached our outposts where, after getting first aid, he was driven back to the airfield.

During these days the Tiffies were busy against bridges, supply dumps and other targets. Only once did they encounter enemy fighters. On the 16th, Grant and three of his Bombphoons had made a low attack on a railway tunnel south-west of Lisieux, landing four bombs square in the entrance and tearing up the tracks with others, when they were jumped by eight or more Me. 109s and F/O R. C. Getty was shot down. For two months Ron was missing; then late in August he returned to the squadron, thin but

well, with a remarkable story of perilous escapes. When his engine packed up Getty baled out and hid for several days near Pont l'Eveque. Then, believing that the search for him had ended, Ron began to make his way back towards the lines at Caen. For 16 days, 11 of which he spent hiding by a small stream, he had no food whatever. Taking a chance, the famished pilot called at a farmhouse and asked for something to eat. The French farmer hid him in a barn for three weeks, bringing his meals out three times a day. Many German soldiers were in the vicinity, hunting for the crews of aircraft which had been shot down. Getty finally had to hide out in an orchard where for nine days he lived on vegetables which he pulled out of the ground. He had nothing to drink. At last Canadian forces reached his orchard and Ron was safe. After shaving off his five weeks' growth of whiskers and stocking up with food and cigarettes he hitchhiked back to the airfield.

On the 18th the Tiffies made nine attacks against three bridges between Caen and Cabourg. One was destroyed with four direct hits by a formation of the Wildcat Squadron led by F/L J. R. Beirnes; a second was left bent and twisted, while the approaches to the third were badly damaged.

Then for three days the weather intervened and the Spitfire pilots had an opportunity to settle in their new homes. Landing on the Norman beachhead was an experience which none of them would forget for reasons quite apart from any historical significance. The landing-strips were inches deep in dust and whenever aircraft landed or took off tremendous clouds swirled up. The Spitfires were soon coated with dust while the pilots assumed an ashen pallor and, in their greyish-blue uniforms, looked like grey ghosts. When the rain fell, as it so often did during the summer months, the runways became stretches of sticky mud which suggested the name "Flounders Field".

The first duff day was welcomed by the pilots and

ground crews as it gave them a chance to complete their "funk holes". The first nights on the beaches had been noisier and even more exciting than the days. Under cover of low cloud Jerry came over to bomb the ships and landing area and ack-ack batteries hurled thousands of shells into the night sky. There was little loss, but spent flak peppering the tents and bombs bursting all around turned the airmen into ditch diggers. Parties scoured the countryside for wood and matting to line the slit trenches, some of which became architectural masterpieces.

The meals in Normandy were even less varied than the English war-time menu. For weeks the squadrons had to live on "compo" rations out of tins. Occasionally a pilot returning from England was able to bring a few delicacies for the mess, some fresh bread, or tomatoes, or a jet tank full of beer.

On the 19th, a wet, miserable day, there was only one scramble from the R.C.A.F. strips, but a Jerry provided some excitement. Early in the morning as the Wolf pilots were driving to dispersal to go on readiness, a roar was heard in the clouds and out came an FW. 190 less than 100 feet from the ground. Without waiting for the jeep to stop the pilots flattened themselves on the ground as two anti-personnel bombs exploded nearby. No one was injured but the Jerry pilot deserved credit for a good try.

On the afternoon of the 22nd the weather finally cleared and two Canadian fighter squadrons, on a scramble after bogies, caught some Huns. In one encounter with three FW.190s F/O J. W. Fleming destroyed one while F/Os W. W. Brown and W. R. Chowen and FS R. A. MacMillan finished off another. A little later Johnson and seven pilots of Dal Russel's Caribou Squadron became involved with a mixed formation of 109s and 190s on the deck just west of Argentan. When the dogfight ended all eight Spitfires were still flying but four Huns had crashed. The winco got a 190 for his 30th, F/L J. T. Marriott shot down another Focke-

Wulf and P/Os F. B. Young and W. R. Weeks each bagged a Messerschmitt.

The sun shone again on the 23rd and three squadrons which got a crack at Jerry destroyed eight enemy aircraft and damaged a like number for the best day's hunting in over a week. Late in the afternoon "B" flight of the Wolf Squadron flew head-on into 15 FW. 190 fighter-bombers east of Caen. The enemy pilots promptly jettisoned their bombs and two kites soon followed, shot down by F/Ls M. J. Gordon and P. Logan right into the British Second Army area. That evening the Red Indians, while heading down the Caen-Argentan road, encountered a flock of 15 Focke-Wulfs and eight Messerschmitts. Although outnumbered two to one S/L W. G. Conrad's pilots gave a good account of themselves. F/Ls P. G. Johnson, R. C. Wilson and McElroy, each crashed a 190, and F/O G. L. Mayson downed a fourth.

While Wally Conrad's squadron was mixing it with enemy fighters over the battle area another Spitfire formation led by Johnny Johnson found more Huns over Alencon. The pilots were patrolling above and below a thick layer of clouds when suddenly through a gap in the white blanket five Focke-Wulfs hove into view. Wally McLeod fired brief, deadly squirts as the enemy machines popped in and out, and with 26 shells from his 20 mm. cannons, brought down two which gave him first place among R.C.A.F. fighter pilots, with 19 victories.

There was some sporadic air-fighting during the next few days but the enemy were not aggressive, preferring as a rule to make good their escape into the ever-present banks of cloud. Early on the morning of the 25th, however, Keefer bagged an Me. 110 over Caen and in another brief scrap on the 26th three Me. 109s were crashed by F/Os G. R. Nadon, W. H. Rhodes and J. D. Orr of the Wolf Squadron.

If there was relatively little fighting in the air during

these days there was much on the ground as both Spitfires and Typhoons continued their relentless strafing of enemy communications by bomb, cannon and machine-gun. Bridges, freight yards and ammunition dumps were bombed and in three days, from the 22nd to 24th of June, 98 assorted vehicles were relegated to the junk heap or the repair shop.

On the 22nd, using long-range tanks, the Tiffies struck deeper than usual into enemy-held territory to dive-bomb the yards at Serquigny, St. Gauburge, Crulai and Randonnai and strafe vehicles on the roads. Similar long-range reces on the following day destroyed or damaged at least ten vehicles and four freight cars and blasted two railroad lines. In the evening pilots of the Ottawa Squadron saw seven of their eight bombs burst squarely on a concentration of trucks. On the 24th, after bombing a railroad junction, an embankment and a bridge, 24 Bombphoons led by Judd gave close support to our forces by successful attacks on enemy defences at Cheux, near Tilly, during which they smashed all but a few of their missiles bang on the objective and destroyed three buildings.

The Battle for Caen

To the west, in the Cotentin peninsula sector of the beachhead, the American forces entered Cherbourg on the 25th and captured the port two days later. In the east, where the British and Canadians had been heavily engaged pinning down the *Wehrmacht's* armour, progress had been slower, but on the day the Americans entered Cherbourg a new attack began around Tilly in an attempt to outflank Caen. To the Typhoons and Spitfires of the Canadian wings was assigned the task of bombing and strafing ground targets in support of the push.

The first day of the new offensive was overcast and showery. But despite the miserable weather the Spits patrolled over the beaches from dawn to dusk and reconnoi-

tred over the German rear areas to watch for any sign of life or movement on the roads below. Three tanks and an armoured fighting vehicle were damaged, in addition to 25 MT flamers, 24 smokers and 13 damaged, making a total for the day of 66 vehicles. The Falcon pilots alone claimed a bag of 17 flamers, nine smokers and 16 damaged. In addition to ground strafes the Spits took a hand in the day's fighting by dive-bombing enemy positions around Cheux and at Demouville to the east of Caen. Low clouds prevented the Typhoons, still based in England, from taking any effective part in the day's operations. Grant and three of his pilots, while making a weather recce far behind the enemy lines, had a brush with more than 30 enemy fighters which they evaded and then went on to destroy three vehicles, including the personnel in one staff car. But that was the only Tiffy action for the day.

If the weather was bad on the 25th it was even worse on the following day and scattered thundershowers converted the landing strips from dustbowls to mudholes. But conditions were better on the 27th and the Canadian Spitfire wings had a good day, fighting, strafing and bombing. In direct support of the troops fighting their way forward around the Caen-Villers-Bocage road, the Wolves, now led by S/L E. P. Wood, successfully dive-bombed gun emplacements north-east of Evrecy. On another show that day the Indians bombed an enemy column, destroying six MT and damaging two more. Jack Bamford's Spitfire apparently was hit by flak but his comrades saw him make a safe crash landing just behind the enemy lines.

Armed reconnaissances took a further toll of enemy tanks and transport. The Ram pilots turned in an exceptionally fine performance when, on one recce that morning, they bagged 12 flamers and 15 smokers. Three of the vehicles were troop-carriers with 25 or 30 soldiers each, most of whom were probably killed. Later in the day, in another attack on MT and tanks south of Caen, the Roaring Squad-

ron claimed 11 damaged or destroyed. Then the pilots flew head-on into a formation of 12 or more FW. 190s and scattered the enemy. Robertson drove one down in a vertical dive and saw it crash into some trees. Three more were damaged by the fire of other Spits.

In an attempt to counter these air attacks upon troops and vehicles the German fighter squadrons at long last appeared in some strength over the battle area and, for the first time since June 7th, displayed some willingness to stand and fight. Beginning at mid-day the Canadians were engaged in a series of actions over and behind the enemy lines, during which they destroyed six e/a and damaged three more for the loss of one pilot. In the first encounter, near Lisieux, Dal Russel's pilots crashed four of six Me. 109 fighter-bombers. F/O S. M. McClarty fired on three in quick succession, crashing the first and blowing up the third. F/L H. J. Dowding also scored a double to win his fourth and fifth victories. So close did the two pilots engage the enemy that both Spits were scorched when the German machines burst into flames. In another combat Keefer destroyed an Me. 109.

The Typhoon wing, which had been operating from England, flew across the Channel on the morning of the 27th to Lantheuil, about seven miles east of Bayeux. While two squadrons settled in their new home, the third went bombing bridges across the Orne, one of which was smashed twice with direct hits and others had their approaches damaged by near-misses.

A Record Day

June 28th was the busiest and certainly the most successful day for the Canucks since the beginning of the invasion. On the ground a great tank battle raged around Caen and in the air the *Jagdgeschwader* threw themselves into the struggle in greater strength than ever before. Of the 34 enemy aircraft destroyed over Normandy that day, 26 fell

to the Spitfire squadrons of MacBrien's sector, for the R.C.A.F.'s biggest bag in one day. In addition to the destroyed there were a dozen probables and damaged.

The Wolves opened the scoring early that morning when at 10,000 feet over Evreux F/L A. R. MacKenzie and three companions met up with two long-nosed 190s. MacKenzie, with three kills already to his credit, knew what to do and shortly one of the two Jerries burst into flames and crashed. Bill Rhodes became so engrossed in chasing the second one that before he realized it he was far into France. Then, with an asthmatic gasp, his engine coughed and stopped and he was forced to land in enemy territory.

But the major honours in the day's fighting went to the Ram and Roaring Squadrons each of which downed an even half dozen. Four Ram pilots were on patrol during the morning when they got stuck into a formation of 20 FWs with top cover of a like number of Mes. Notwithstanding the odds of ten to one against them the Rams waded in and F/Ls R. M. Stayner and A. F. Halcrow each destroyed one. Later in the day when the Rams were out again they were bounced by a dozen FWs. and two Spits went down. One of the pilots was Scotty Murray, who, with his customary insouciance, baled out and, escaping capture by hiding in a barn, in due course made his way back to our side. To balance our losses Klersy destroyed two of the enemy, while for good measure F/Ls W. R. Tew and I. F. Kennedy, D.F.C., each destroyed one. Kennedy had recently arrived in the squadron after service in the Middle East where he had knocked down ten aircraft and won his gong.

Robertson's Roaring Squadron was beating up enemy transport south of Le Havre at noon when they too met Jerry. Their little spot of bother was 15 Mes. and FWs. and, by the time the two formations broke free after a hectic dogfight, F/L H. C. Trainor had crashed an Me. and F/O T. R. Wheler had meted out the same fate to an FW. while two



(1) F/L R. S. Hyndman of Ottawa. (2) S/L H. J. Dowding, D.F.C., of Sarnia.
 (3) F/L H. P. M. Zary of New York. (4) F/L A. H. Sager, D.F.C., of Vancouver.
 (5) F/L R. C. McRoberts, D.F.C., of Calgary. (6) S/L T. A. Brannagan, D.F.C., of
 Windsor. (7) Fighter pilots in W/C Dal Russel's wing.



(1) S/L W. A. G. Conrad, D.F.C., of Richmond, Ont. (Sketch by F/O E. H. Holgate, R.C.A.). (2) F/L G. B. Murray, D.F.C., of Halifax. (3) S/L C. M. Magwood, D.F.C., of Toronto (Sketch by Holgate). (4) F/L D. C. Laubman, D.F.C., of Edmonton. (5) F/L R. I. A. Smith, D.F.C., of Regina. (6) F/O D. R. C. Jamieson of Toronto. (7) G/C W. R. MacBrien of Ottawa introduces the squadron commanders of his Spitfire wing to A/M Breadner.

other 190s had been damaged. Wheler got his the hard way by getting separated from the other Spitfires as they dived on the Jerries. However, he saw another formation of 15 a mile below and, diving out of the sun, knocked off the tail-end Charlie with his first burst. Their third sortie of the day, a routine patrol over the lines, brought the Roaring boys even with the Rams when they engaged 15 Huns west of Caen. F/L R. K. Hayward, who was awarded the D.F.C. at about this time, shot down two 190s which crashed and burned. Trainor got another, his second that day, and F/L G. W. Johnson shot a fourth to pieces. A fifth was damaged.

The Oshawas and Dal Russel's squadron shared second place with four confirmed victories each. The Oshawas got three on one patrol when they engaged five FWs. and 109s east of Caen. In the mix-up F/Ls D. E. Noonan and J. B. Rainville each destroyed a 190 and F/O G. H. Farquharson picked off a Messerschmitt. On a later patrol F/ L G. R. Patterson of the Oshawas shot down an FW. to close the squadron's books for the day. When Dal Russel's lads, led by Johnny Johnson, were diverted to intercept seven Me. 109 fighter-bombers near Villers-Bocage, the Spits chased the Jerries eastward and destroyed four, probably destroyed another and damaged a sixth. Johnson was credited with two and F/O J. G. L. Robillard, D.F.M., and D. W. Goodwin each with one.

Wally McLeod's boys and the Red Indians each destroyed two Jerries. F/Os G. R. Stephens and W. A. Gilbert of McLeod's squadron got two Focke-Wulfs in the morning while McElroy and F/L H. P. Zary of the Red Indians got theirs—Mes. in both cases—later in the afternoon.

In another scrap that morning, when the Falcons had been attacked by a mixed formation of eight FWs. and Mes., F/O W. J. Banks with three bursts sent a 109 spinning earthward, streaming black smoke and shedding large chunks of wing and fuselage before the pilot baled out.

All things considered, it had been a busy day from dawn until the last patrols touched down at midnight.

Most of the day's fighting had occurred while our pilots were hunting for targets on the ground. Two tanks as well as 13 other vehicles were set on fire, and well over 25 more trucks and cars were scored as smokers or damaged. The Westmount and Ottawa Bombphoons, after more or less unsuccessful attacks on two bridges, had destroyed a third near Thury-Harcourt, and a strong Wildcat formation led by Judd and Grant left the village of Verson in flames.

After their drubbing of the previous day the *Luftwaffe* showed little spirit on the 29th. Only two combats occurred during which Trainor shot the tail off an Me. and F/L J. D. Lindsay of the Wolves destroyed an FW. that had just shot down his squadron mate, WO R. C. Shannon. Shannon baled out, hid in a nearby town until he was liberated by the Americans and then returned to his unit.

If the Jerries took a rest on the 29th our boys did not and during a day spent in ground-strafig, destroyed 54 vehicles, set 30 smoking and damaged 65 others. The Typhoon squadrons, busy once again at bridge-busting, made two direct hits on one oft-bombed structure at Thury, five on another at Goupillieres and one, which blew a large crater in the middle of the structure, on a third bridge over the Orne.

June ended with another outstanding air victory for MacBrien's Spitfire squadrons when the Canadian pilots destroyed 19 Huns and damaged three, a record surpassed only by the slaughter of June 28th.

The scoring commenced when a morning patrol of Wally Conrad's Red Indians bounced a formation of 15 Me. 109s southwest of Bernay. In the ensuing dogfight P. G. Johnson and Wilson each destroyed one. Later in the day another patrol of Indians was stooging over the eastern beaches when it ran into a group of eight Messerschmitts and Paul Johnson got two more—and the D.F.C.—while F/O

R. C. (Scotty) McRoberts brought down another to give the Indians five for the day and second place among the successful squadrons.

Dal Russel's boys were the second to break into the scoring column when yellow section dived on four FWs. that were flying along the deck just north of Villers-Bocage. F/L A. W. Roseland knocked down two and Young finished off a third, so that only one of the Jerries was left to streak off home and spread the bad news. Dal's pilots repeated the performance in the afternoon when they met a mixed formation of four Jerries over Falaise. F/Ls D. H. Dover and D. E. Trott both accounted for a Focke-Wulf while P/O G. A. Costello crashed a Messerschmitt 109 to win the Caribou Squadron top place for the day with six confirmed kills.

S/L J. D. (Danny) Browne, leading his squadron for the last time before completing his tour, started off the afternoon's action by destroying one of ten FWs. east of Gace. The second section of his formation was even more successful when they took on a group of a dozen Me. 109s and shot down three and damaged a fourth. F/Ls G. E. Mott and A. Johnstone were the successful pilots while Johnny Johnson, flying with Browne's unit, got the third—which gave him 33 confirmed and first place among all R.A.F. fighter pilots.

The Roaring Squadron led by their C.O., Robertson, were out on a dive-bombing sortie aimed at a cross-roads south of Caen when they were attacked by a formation of six FW. 190s and had to jettison their bombs. Turning to meet the attack they chased the Jerries in and out of clouds until Robertson finally crashed one in flames. On another Roaring patrol in the evening Trainor riddled an Me. 109 and forced the pilot to bale out, for his fourth victory in three days. Trainor continued his winning streak on Dominion Day when he got a fifth and the D.F.C., and then added two and a half more on Independence Day.

Cameron's Rams were carrying out an armed reconnaissance between Falaise and Argentan, during which they destroyed eight vehicles in flames and damaged five more, when they ran into a dozen 190s and 109s near Caen. The Canadian pilots chased the Jerries into the clouds and Stayner brought down an Me. before it could escape. The nineteenth Hun of the day was accounted for by the Wolves when, on patrol over the western sector in the evening, the Spits intercepted 12 ferries and J. D. Orr knocked down an Me.

Since D-Day the Canadian Spitfire wings had destroyed 100 enemy aircraft and probably destroyed or damaged 37 more. Among the squadrons, the Red Indians led with 21 kills, followed by Russel's with 15, Cameron's with 14½ and Robertson's with 12½. Equally impressive was the total of tanks, armoured fighting vehicles and motor transport destroyed or damaged:

	<i>Tanks</i>	<i>A.F.Vs.</i>	<i>M. T.</i>
Flamers	1	5	215
Smokers	1	1	90
Damaged	4	7	185
	—	—	—
Total	6	13	490

During the twelve months ending June 30th the R.C.A.F. fighter units had destroyed 210 enemy aircraft and probably destroyed or damaged 96 more. In addition the Spitfire pilots had battered 52 locomotives and strafed well over 500 vehicles. On dive-bombing missions 336 tons of high explosives had been hurled earthwards to blast a great variety of targets—flying-bomb sites, gun posts, bridges, radar stations, railroad yards, troop and transport concentrations.

B. Tactical Reconnaissance over Normandy in June

With the opening of the invasion the fighter-reconnaissance units became even more than ever before

the eyes of the Army. For many months before D-Day they had been used to scout out and photograph the landscape of France in preparation for the attack but it was not until the actual landings were made and the bridgehead established that the work of Army co-operation in the fullest sense began.

The weather during June was not helpful. On few days were flying conditions really good; on most of the others there was cloud or rain, which severely handicapped the photographic squadrons, especially the high-flying Spitfires. Frequently the Mustangs were able to come in under the clouds and get pictures or visual information, but S/L R. A. Ellis's pilots were only able to complete successfully about two sorties out of five with possibly a third partially successful.

Before sunrise on D-Day, the first Mustangs rose from a rainsoaked field and set course across the Channel, some to spot for the naval bombardment of the coast from Le Havre to Cherbourg, others to reconnoitre the main roads in the Caen area. During one morning reconnaissance F/L J. Prendergast and F/O C. E. Butchart of the Sudbury Squadron discovered and photographed 60 tanks and armoured vehicles on roads leading to Caen. In the afternoon S/L F. H. Chesters, with W/C J. M. Godfrey and F/O J. S. Cox as cover, while reconnoitring roads east of the invasion area, from Montfort to Evreux, were intercepted by four FW. 190s. The Jerries, joined by two more fighters, shot down Cox but Godfrey and Chesters managed to break away and returned safely.

Day after day through the weeks that followed the Mustang pilots turned out at 0330 to go on readiness at first light and take off as soon as possible to observe and report overnight changes in the approaches to the battle area. Then there would be further routine reconnaissances and area searches or perhaps special tasks involving particular spots. Flying four or five miles above the Norman coast, the Spits

frequently took mosaics of the Caen area, *Luftwaffe* airfields or other pin-points.

Occasionally enemy aircraft were encountered. Once the Mustangs were the attackers when, on June 7th, F/O R. A. Bromley and F/L G. W. Burroughs of the Imperials destroyed a Ju. 52 over Mortagne. But ordinarily they were the attacked and were forced to beat off or evade low-flying FW. 190s. When F/L R. T. Hutchinson and F/O B. B. Mossing were jumped by eight Focke-Wulfs, Mossing put damaging bursts into one before Spitfires came to the rescue and shot down three of the enemy. But the Mustangs did not always escape. In an encounter with eight enemy fighters on the 17th F/L R. B. Moore of the Sudburys was shot down and 11 days later F/O F. H. Bryon was lost in a combat between two Mustangs and six Me. 109s. S/L C. H. Stover and F/L N. F. Rettie of the Imperials were roughly handled by seven FWs. on another occasion and both were wounded. Hutchinson succeeded Stover in command of the squadron. Enemy flak also took its toll. Both Butchart and F/O R. C. Brown were taken prisoner when archie brought them down behind the German lines, while F/L J. A. MacKelvie and F/Os Bromley and H. K. Jones were missing from other sorties in June.

On the 14th the pilots began using a landing strip near Bayeux as an advanced base, thereby saving much time on their sorties and establishing closer contact with the ground forces. At the end of the month the Sudbury Squadron moved to Normandy and in July the Toronto Spitfires followed. The Imperials remained in England for a time to convert to Spitfires, though they continued their recce work over Normandy throughout the conversion period.

C. Spits over Normandy in July

Weather conditions throughout July were no better than they had been in June. Day after day, morning mist or fog, haze, low cloud and rain hampered operations. Late in the

month a steady downpour kept virtually all aircraft grounded for three successive days. But despite the weather the Spitfire wings based in Normandy destroyed 122 enemy aircraft and probably destroyed or damaged 59 more. Most of the kills were scored on eight days of dog-fighting above Caen where the British and Canadian ground forces were pressing hard upon the German defences and pinning down the enemy's armour so that it could not be moved to meet the American thrust farther west.

On July 2nd, a cloudy, damp day, there were frequent encounters with enemy fighters and the *Luftwaffe* lost 22 machines over Normandy, 20 of which were shot down by R.C.A.F. Spitfires. The Canadians were also credited with 11 damaged. The high scoring squadron was the Wolf which, under the leadership of Wood, turned in a record count of six destroyed and six damaged from a single combat with an enemy formation which outnumbered it four to one. Just east of Caen the nine Spitfires tackled 35 Jerries in a dogfight during which Doug Lindsay brought down three Me. 109s within a minute to raise his personal score to six and win the D.F.C. Gordon and MacKenzie each destroyed one, while the sixth was shared by F/L W. J. Hill and F/O R. B. Greene.

The squadron commanded by S/L T. A. Brannagan, Danny Browne's successor, was also credited with six victories in one engagement when a four-kite section intercepted ten enemy fighters flying along the deck near Lisieux and carried out a diving attack from high above. F/L L. A. Moore, a veteran pilot who already had a number of successful combats to his credit, crashed two Me. 109s and shared a third with F/L R. G. Lake who also destroyed another Me. and an FW. The sixth victory was scored by F/O A. J. McDonald who was posted missing from the sortie. Brought down by flak, McDonald landed safely behind the enemy lines and evaded capture for seven weeks until he was able to rejoin his squadron.

The Falcons won third place for the day with four destroyed and five damaged. Near Lisieux the pilots, while providing escort for Mustangs, twice became mixed up with units of the G.A.F. In the first encounter F/O D. C. Laubman shot down two Focke-Wulfs in flames in quick succession. A third blew up in mid-air after an attack by S/L Jack Sheppard, the Falcon leader, and a fourth spun into the ground as the result of two bursts from P/O D. R. C. Jamieson. F/O H. W. (Bud) Bowker, an able and experienced fighter with at least five Jerries to his credit, did not return.

Some of the enemy aircraft diving through the clouds away from the scrap with Sheppard's pilots ran foul of another patrol of Canadian Spitfires and a Messerschmitt fell to the guns of Roseland of the Caribou Squadron. An original member of the unit, with which he had served in Alaska and the Aleutians before it was posted to the European theatre, Roseland had won three victories in as many days. He was reported missing after another combat later in the month.

The Roaring Squadron scored one success when F/O E. G. Lapp destroyed an FW. 190 during an early morning patrol over the eastern beachhead. WO J. S. Jeffrey was shot down in the same engagement but baled out and landed safely behind the enemy lines. There he met up with members of the French underground with whom he lived until he was able to rejoin his unit late in August.

The last action of the day involved the Rams, who were out on a dive-bombing show, led by their squadron leader, Lorne Cameron. Red section had just got their bombs away when a lone Me. 109 bounced blue section and forced them to jettison their load. That Jerry deserves commendation, for, having done his job, he ducked into a cloud and got clean away. The Rams then went looking for MT but found instead 24 Mes. and FWs. circling east of Caen. Klersy crashed an Me. in short order and Hap Kennedy pumped

lead at another until his guns jammed. When Kennedy flew alongside, the Jerry pilot waved frantically that he was crash landing and ploughed into a field where his kite was reduced to matchwood. This was Kennedy's twelfth victory and won him a bar to his gong.

On July 5th, another day of variable weather, there was again much activity in the air with the result that the Spits made their second good haul of the month and boosted their total of aircraft destroyed since Dominion Day to 41. Seven of the day's 11 kills were credited to the wing led by Johnny Johnson. That evening, while two of the squadrons were sweeping around Alencon, a dozen or more FW. 190s were sighted through a gap in the heavy banks of cloud. One squadron led by the winco and Tommy Brannagan dived to engage but the second group of Spits, flying high above the overcast, was unable to join in. In a furious dog-fight below the clouds the R.C.A.F. pilots made an almost clean sweep of the Jerry formation, destroying seven and damaging four. The winco got the first as it was putting a burst into the wing of a Spitfire, and then shot down a second to raise his score to 35. Brannagan, Mott and F/Os D. H. Kimball and J. W. Neil were each credited with an FW. destroyed. The seventh was brought down by Chowen who, in a collision, cut off the Focke-Wulf's tail but lost part of his own wing. The 190 crashed and Chowen did not return.

Earlier in the day F/O R. M. Davenport of the Rams and Don Laubman of the Falcons had each destroyed an FW. 190 west of Dreux. In another engagement north of Bernay the Wolf and Red Indian Squadrons dived out of the sun to bounce 20 Me. 109s at 20,000 feet. When the scrap ended two of the dark green and brown camouflaged Messerschmitts had been destroyed by Scotty McRoberts of the Indians. Other pilots probably destroyed one and damaged another. A few days later McRoberts was wounded in the face during a combat in which he scored a probable. He did a marvellous job of flying to bring home

his Spit, badly battered by cannon shells and flak.

The weather was fine on July 6th and the *Luftwaffe*, with little liking for clear skies, kept out of sight.¹ But the 7th was another day of "Hun weather"—low clouds with frequent rain showers and short periods of clear bright sunshine. Once again there were numerous chases and fleeting combats in which Keefer's wing destroyed nine and damaged three enemy fighters. Early in the morning the Falcons went to the assistance of some Mustangs which were engaged with a group of Messerschmitts and Focke-Wulfs near Bernay and knocked down two Jerries. An Me. 109, which Banks attacked, half-rolled into the deck and exploded before the pilot could bale out. The other, an FW. 190, caught fire after several bursts from Jamieson. This time the Jerry pilot was able to jump clear.

The Falcons won two more victories during an armed reconnaissance early that afternoon between Falaise and Argentan. Eight FW. 190s approached and a general mixup began as both Spits and FWs. jockeyed for position. F/L R. I. A. Smith saw a Jerry that he had been chasing for several minutes begin to smoke as his bursts struck home. With his cockpit in flames the enemy pilot jettisoned his hood and tried to bale out. For a few seconds he was caught half in and half out while the flames licked around his body; then he fell clear and plummeted earthwards. Meanwhile a second FW. which had attempted to attack Smith was shot down in flames by F/O G. T. Schwalm. Later in the sortie when the Canadian formation met very heavy flak fire, one Spit flown by F/L W. B. Needham was hit and badly damaged, forcing the pilot to take to his parachute over Hunland. Needham returned safely in August.

¹ During the first month of the invasion the Canadian Spitfire squadrons had destroyed 135 enemy aircraft, probably destroyed four and damaged 60. Honours were evenly divided between the three wings, Johnson's squadrons topping Keefer's by the slender margin of one Hun, with Buckham's close behind.

Four kites of the Ram Squadron were just finishing their morning stint over the beachhead when the pilots sighted a dozen Me. 109s near Cabourg and gave chase. F/L W. R. McRae caught and destroyed one. Then the relief patrol arrived in time to engage more Mes. near Lisieux. F/O A. L. Sinclair chivied three in and out of the clouds until one, taking evasive action, rolled into the ground before the Spit pilot could fire a single round. A score of FW. 190s had now joined in the dog-fight and Sinclair scored a second victory, shooting down in flames a 190 which attempted to attack him. Tew later brought down another Jerry to give the Rams four in twelve hours, while F/L G. W. Johnson of the Roaring Squadron destroyed his third Hun since D-Day and the last for the R.C.A.F. that day.

That evening Bomber Command, preparatory to a new offensive by the Army, carried out a devastating attack on Caen, using 700 Lancasters to smash the town into a heap of rubble. Some of the Canadian Spitfire squadrons provided fighter cover and support for the heavies while the personnel of others, gathered on their airfields, had grandstand seats for the terrific fireworks which accompanied the raid. Caen was a mass of flames after the Lancs had passed. The next day ambulances streaming southwards from the still smouldering town were mute evidence of the heavy casualties inflicted.

Caen fell on the 9th but, due to the weather, there was little air activity until the 13th when Tommy Brannagan's pilots scored a spectacular victory. West of Argentan, twelve Canadian Spitfires encountered an equal number of FW. 190s and only two of the enemy escaped. Brannagan raised his total of kills to six by destroying two, F/O W. J. Myers finished off three more, and F/Ls Mott and J. C. Copeland, and F/Os Kimball, L. A. Plummer and B. M. MacKenzie accounted for one each. The only casualty or damage suffered by the Spits was a cannon shell in the wing of Myers' kite.

Spitfire Wings are Reorganized

This battle marked a glorious finish for the wing led by Johnny Johnson. Formed in February 1944, it began operations late in March and in the course of less than four months destroyed 73 Huns, with 19 more probably destroyed or damaged. On July 14th, when the airfields were reorganized, this, the junior wing in the R.C.A.F. was split up and the squadrons allotted to other formations. They carried with them a record second to none among R.C.A.F. fighter units. As a result of the reorganization the two Canadian Spitfire wings passed under the command of G/Cs G. R. McGregor, O.B.E., D.F.C., and W. R. MacBrien. Both Keefer and Buckham had completed their operational tours and were succeeded as wincos flying by Dal Russel and Johnny Johnson.

Bastille Day, when the new organization became effective, was another bad time for Jerry. Taking advantage of the protective covering afforded by a 10/10ths layer of cloud at 3000 feet, the *Luftwaffe* pilots grew bold and made several attempts to strafe the beach areas. As a result ten were shot down, another was probably accounted for and four others limped home badly battered. In mid-afternoon four aircraft of the Roaring Squadron, flying a routine low defensive patrol over the eastern sector, intercepted a dozen or more FWs. Each Spit tackled a Jerry, and F/Os Wheler and N. L. Harrison destroyed their opponents while the others were each credited with a damaged.

At the same time a patrol from the City of Oshawa Squadron, that tangled with seven Me. 109s 7,000 feet above Lisieux, shot down two Jerries which fell to the guns of F/Os J. B. Gould and M. R. Sharun. A third was damaged. Three other pilots from the same unit, who had been scrambled to assist, added two more kills to the day's score, an Me. destroyed by Noonan and a second shared between Noonan and F/O A. J. Fraser, who also damaged one. In the evening the Oshawas again hit the jackpot when more Jer-

ries appeared over the beachhead. Four pilots led by F/L R. D. Forbes-Roberts encountered more than 50 Mes. and FWs. almost directly over their own airfield, and cracked down three to make the squadron's total seven for the day. Forbes-Roberts brought down one Focke-Wulf in full view of the ground crew; the machine crashed just off the end of the runway after the pilot had baled out. F/L G. R. Patterson and F/O A. G. Borland also collected a 190 each. The tenth victory on Bastille Day was won over Bayeux by F/O C. P. Wyman of the Rams who destroyed an Me. 109 while a comrade probably destroyed another.

There was scattered fighting in the air during the next five days as the British and Canadian Armies opened a new offensive below Caen, but the enemy pilots, taking advantage of the clouds and mist, showed little desire to mix it with our Spitfires and the total bag for the period was only 15 destroyed with another six probables or damaged. On the 20th, however, the usual fog cleared about mid-day, and in an afternoon of good hunting, the Canadian Spits touched the *Luftwaffe* for eight destroyed and one damaged. Of these six were credited to McGregor's wing led by Dal Russel.

Four pilots of Dowding's Caribous were on defensive patrol high above the beachhead when they were warned that a large number of bogies was approaching. Over St. Lo they encountered 40 plus FW. 190s and engaged them, while a formation from the Ram Squadron joined in the scrap as the enemy sought to escape. Five Huns went down, two finished off by F/L W. A. Olmsted and one each by F/O G. R. Blair of the Caribous and Halcrow and Stayner of the Rams. The last two raised the tally of kills credited to the Rams to an even century. Olmsted brought down his two victims at such close range that flying debris struck his Spitfire. Later in the day Falcon pilots gave chase to three FWs. as they fled along the deck near Caen. After Jamieson had fired several bursts at one and shot pieces off, the en-

emy pilot baled out. That made it three for Jamieson and 99 for the McGregor-Russel wing.

In another engagement over Bernay that afternoon Wally McLeod's squadron of the MacBrien-Johnson wing destroyed two Focke-Wulfs. When one section led by F/L J. G. L. Robillard mixed it with 30 FWs., Larry destroyed one for his seventh confirmed kill. At the same time his C.O. pursued another whose pilot, in terror, pulled up sharply to 1,000 feet and baled out before a single shot had been fired from the Spit. After scoring his 20th victory McLeod strafed and destroyed a vehicle. Wally was now the top scorer of the R.C.A.F. and on July 30th, a few days after being awarded the D.S.O., he raised his count to 21 by crashing an Me. 109 during a dog-fight east of Alencon.

Then for three days the rain came down. On the 24th, when the skies finally cleared, four pilots of the Falcon Squadron went up to sniff the weather, and won a spectacular victory. Over Lisieux they sighted an enemy formation of 20 and climbed to engage just as another group of 20 Huns joined in. F/L O. M. Linton, leading the small Canadian force, blew up one FW. which he saw crash near a road. He followed this with another that went into the deck after losing half its port wing. Neither pilot was seen to bale out. Jamieson won his fourth and fifth victories of the month by destroying two 109s. The first broke in two just behind the cockpit while the second exploded when it crashed near the cathedral in Lisieux. Two more 109s were destroyed by Banks who also shot down an FW. 190, to raise his score to six in less than four weeks. All three fell in flames. The four R.C.A.F. pilots despite odds of ten to one had destroyed seven of the enemy!

The *Luftwaffe* was much more active and aggressive than usual on the 27th and, in consequence, lost 13 aircraft certainly destroyed, two more probably and five damaged. The only R.C.A.F. casualty was superficial leg wounds suf-

fered by one pilot.

Early that morning while the Rams were returning from a recce around Mezidon, Laigle and Falaise they engaged in a real dog-fight with about 15 Messerschmitts and Focke-Wulfs southeast of Caen. Seven 109s and one FW. were destroyed, one Me. by the squadron's new C.O., Hugh Trainor, and the others by Halcrow, G. W. Johnson, McRae, and Wyman, F/O G. A. Bell and P/O H. M. Havers, and the FW. by F/L A. E. Morrison. That evening the Rams had another encounter when six pilots engaged twice their number of Focke-Wulfs in the same area below Caen. In contrast to the group with which the Spits had mixed it in the morning, these Jerries showed little desire to fight and dived to the deck after F/L R. R. Bouskill had destroyed one.

The City of Oshawa Squadron was out in the morning to take a look at two landing strips north-east of Alencon and promptly attacked three 190s which were attempting to land on one. J. F. McElroy, who had succeeded Freddy Green as C.O. late in June, destroyed one, and Noonan crashed another. The third was probably destroyed. To the north over Argentan a formation from Brannagan's squadron chased two more 190s down to the deck and crashed both with Mott getting the credit for his fifth victory and Kimball his fourth. These two Jerries made the squadron's total for the month 28; it had lost one pilot.

Armed Reconnaissances

But air fighting, spectacularly successful though its results were, did not comprise the whole of the month's activities. Day after day the Spitfires nibbled at the *Wehrmacht's* transport and armoured vehicles south of Caeri, from the Seine to the Vire. Though low cloud and haze hampered this work considerably, rarely a day passed that a few more flamers or smokers were not added to the record. On these armed reconnaissances some of the Spits

carried bombs to drop on suitable targets, crossroads, railroad junctions, bridges, vehicle concentrations or sidings filled with freight cars, in short, wherever they could disrupt the enemy's movements.

More than 600 tanks, armoured cars, trucks, petrol bowlers, troop carriers, staff cars, gun trucks, tank trailers and motorcycles were attacked and either destroyed or damaged during July, an average of approximately 20 MT a day. July 26th, the day on which the American forces broke through the German lines near St. Lo, was especially successful. The weather was reasonably good and the Spitfires, ranging from Mezidon and Lisieux to Falaise and Argentan, found much more movement than usual on the roads. Diving and zooming, blasting with cannon shells, raking with machine-gun bursts, the R.C.A.F. pilots rolled up a total of almost, 60 Nazi tanks and trucks.

Armed reces were much more costly than air combats and the Spits, coming down to low levels to beat up convoys or vehicles scattered along the roads, had to run a gauntlet of fire so intense that the pilots described it as 10/10ths flak. Twice during July the Rams lost a C.O. to the accurate ack-ack barrage. Early in the month Lorne Cameron was brought down while strafing a convoy of vehicles near Falaise. Three weeks later his successor, Hap Kennedy, was shot down over Dreux aerodrome. He descended safely by parachute and a month later regained our lines. Both were redoubtable air fighters; Cameron had a score of six destroyed and three damaged, while Kennedy was credited with at least 12 kills. F/L P. G. Johnson was lost on another low ground strafe when his Spit struck a tree. One of the best pilots in the Red Indian Squadron, Paul had destroyed five Huns and damaged four. Five other pilots, F/Ls. W. R. Tew, H. J. Nixon, J. L. Campbell, and D. H. Evans, and F/O H. W. Kramer, who were brought down by flak during this period were able to rejoin their units after a few weeks' absence. Nixon's Spit

was hit by return fire from five tanks, two of which he had set smoking. He crash-landed in Hunland, took shelter in a wood and evaded capture until early in September when Allied forces reached his hiding place. Campbell was taken prisoner when he baled out of his damaged kite but he was able to escape after a time and returned to his squadron in peasant's costume of blue jacket and patched trousers.

Early in July midget submarines made several attacks on Allied warships and transports massed off the Norman beachheads. When these attacks were renewed on the 8th, Dowding's Caribou Squadron spent a busy day. A patrol of four pilots, F/L Dean Dover, F/O D. M. McDuff and P/Os Costello and Young, destroyed five midgets heading for the shore between Cabourg and Le Havre. The pilots described them as fat cigar-shaped craft about 25 feet in length with a five-foot beam; the conning tower, five feet from the bow, was just big enough to admit a man. When sighted the subs were moving slowly with decks awash, leaving very little wake. On the next patrol, when F/L J. G. Wright and P/Os J. B. O'Sullivan, W. R. Weeks and N. A. Burns caught two more midgets in the Seine estuary, they destroyed one and damaged the other. Later in the morning Dean Dover's patrol found another off Le Havre and after making two attacks saw it sink.

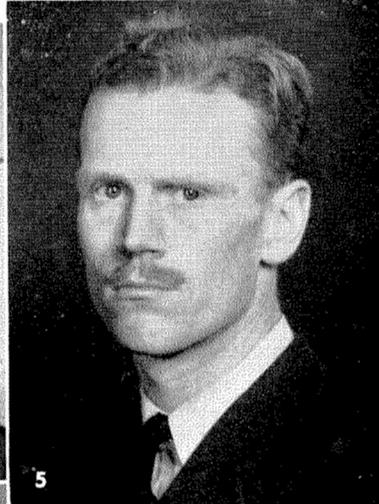
Life on the airfields was not pleasant. The heat, flies, wasps and menu of tinned food combined to produce an epidemic of dysentery. By day the fields were either a sea of mud or a swirling dust bowl and at night the din of flak barrages, bombs and artillery fire made rest difficult. Yet the ground crews maintained a surprisingly high state of aircraft serviceability. On one occasion a crew of three fitters under Sgt. De Long and Cpl. Stiles changed an engine in a Spitfire in 11 hours flat, an example of perfect team work and probably a record for an engine change under field conditions.

D. Tiffies over France in July

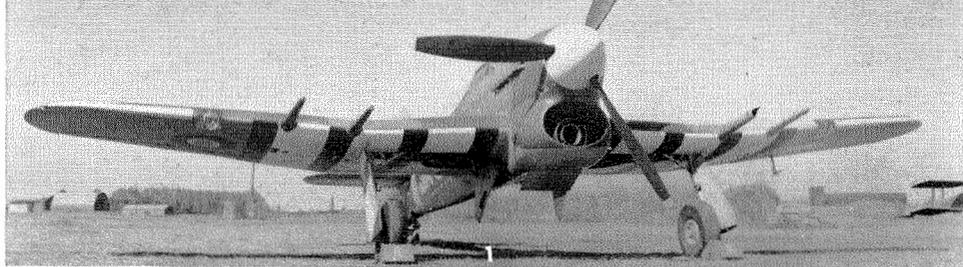
The Typhoon wing commanded by Hillock was taken over by G/C P. Y. Davoud, D.S.O., D.F.C., on July 15th, with Judd as winco flying, and played a noteworthy part in operations around Caen during the month. To an even greater extent than the Spitfire squadrons the work of the Typhoon fighter-bombers was dependent upon the weather. Cloud or haze made it difficult if not impossible to pinpoint the small targets upon which the 500 or 1000-lb. bombs were to be dropped. Sometimes the objective lay only a few hundred yards away from our own forward troops making accuracy doubly essential.

On July 4th, when Canadian ground forces were battling for Carpiquet aerodrome, the Ottawas successfully attacked a concentration of enemy tanks dug in on the field. Red smoke shells fired by ground batteries marked out the objective for our pilots who slammed their bombs well inside the target area. Again on the 8th and 9th, while the Canadian and British forces battled for and finally captured Caen, the Bombphoons gave close support as far as the weather permitted. On the 8th the Wildcats smashed a concentration of troops and MT, in and around the Chateau de Fontaine, so effectively that the Army signalled its congratulations to Grant's men. Late the next evening the Westmount pilots led by F/L K. J. Fiset dive-bombed another concentration of armoured fighting vehicles near St. Germain, south-west of Tilly. After grouping their bombs carefully, the pilots turned their cannons on tanks and other vehicles, and broke up an enemy counter attack before it could get started.

On July 18th the Allied air forces launched one of the greatest offensives of the war as the Canadian and British forces broke through the enemy lines south-east of Caen. For the Typhoon wing, toting 84 tons of high explosives to blast bridges, troop concentrations and gun positions, it was the busiest day to date. Three bridges were destroyed and



(1) F/L E. G. Lapp of Redcliffe, Alta. (2) "Ad Astra" by F/L C. Schaefer. (3) F/L J. G. L. Robillard, D.F.M., of Ottawa. (4) F/L J. D. Lindsay, D.F.C., of Arnprior, Ont. (5) S/L H. W. McLeod, D.S.O., D.F.C., of Regina. (6) F/L K. R. Linton, D.F.C., of Plaster Rock, N.B. (7) F/L A. F. Halcrow of Penticton. (8) F/O C. O. Servos of Hamilton, S/L G. D. Robertson of Toronto. (9) F/L G. Johnson of Hamilton.



(1) A Typhoon. (2) S/L H. H. Norsworthy, F/O R. N. MacDonald, F/O A. L. Henderson, F/O I. W. Smith, F/O W. J. Mahagan, F/O J. Kalen. (3) S/L F. G. Grant. (4) W/C R. T. P. Davidson, D.F.C. (5) S/L J. R. Beirnes. (6) F/L C. W. Hicks. (7) S/L W. H. Pentland. (8) S/L K. J. Fiset. (9) W/C F. W. Hillock.

two others damaged. Enemy mortar positions south-west and east of Caen were wiped out. The Ottawa Squadron on 44 sorties dropped 39½ tons of bombs on varied targets.

The following day flying conditions were much less favourable but nevertheless Norsworthy's Westmount pilots carried out a brilliant coup in close support of the ground forces. Detailed to attack the village of La Hogue, south-east of Bourguebus, where our troops were encountering stiff opposition, the pilots went down in a screaming dive from 6500 to 2000 feet, released their heavy bombs and saw all 18 burst squarely on the target. A great sheet of blue flame shot up from the village followed by tremendous billowing clouds of smoke and dust. Five minutes later the Allied forward troops entered unopposed.

Three Typhoons were lost during the all-out effort on the 18th. One of the pilots, WO Richard A. Watson, rejoined his unit the next day after an amazing series of adventures. When his aircraft was hit by the flak barrage Watson was hurled out of the cockpit, breaking his harness and the perspex cover.

I had just started my dive on the target when everything just seemed to explode with a terrific crash and the next thing I knew I was grabbing for my rip-cord. I must have been blown out of the cockpit. I was coming right down where the bombs were bursting so I side-slipped my chute and made a good landing in a wheat field. After I left my parachute, a German shell made a direct hit on it. I took refuge about 100 yards away in a shallow slit trench as shells were falling all around me both from our own and enemy artillery. After the shelling died down, I heard a vehicle coming and took a look; it was a German machine-gun carrier coming right at me. I crawled from my slit trench and the car ran right over it ruining it. I was only ten feet away. It passed and then the Germans opened up a retaliatory bombardment and I had to lie on my face through that. I heard another vehicle coming. I took a chance and got a good look at it. It was one of our own. The chaps after identifying me directed me to the rear and gave me custody of six German prisoners. After marching down the road a bit, I met up with two soldiers also bringing in prisoners. We joined forces and altogether brought in 120 prisoners.

July 25th, when the British and Canadians renewed their attack south-east of Caen, was another unusually busy day for the Typhoons. On nine sorties the wing hurled 75 tons of high-explosives against strongpoints, troop and MT concentrations, a gasoline dump, enemy defences in St. Sylvain village, railroad guns, a dump in a quarry and three battery positions. At one of the last a small ammunition dump was blown up.

On the 26th, a mortar position around Rocquancourt, due south of Caen, was blasted. Late in the afternoon when enemy troops were reported concentrating opposite the Canadian front, F/L C. W. Hicks led a formation of Ottawas to break up the attack with bombs. Two Tiffies caught a packet over the target, but both pilots got away safely in their parachutes. One, F/L D. C. Stults, suffered severe burns to face and hands and shrapnel wounds in back and wrist.

Again on the 29th the Bombphoons gave close support to the Army by knocking out mortars and defensive positions. One of these attacks, led by Norsworthy of the Westmounts and Beirnes of the Wildcats, was against a strongpoint in St. Martin de Fontenay just 500 yards ahead of our own troops. In an 80° dive from 6,000 feet to 1500 the pilots levelled all but two or three of the 16 buildings in the village.

One feature of the Bombphoons' work during July was a series of attacks upon German military headquarters housed in chateaux and other large buildings. On the 4th, for instance, the Wildcats made two attacks on one such target on the outskirts of Caen, making four direct hits on the building. On the 8th and 9th three more Nazi HQs were dive-bombed and demolished. Early on the morning of the 10th the Westmounts blasted another regimental HQ at Feuguerolles, south of Caen.

Five days later three sections of Pentland's pilots went out just before dark to attack three more chateaux which

were suspected of being military headquarters. Two were wiped out with direct hits and the third was probably destroyed. Yet another was hit and apparently demolished on the 26th and two more on the last day of the month, one a chateau just north of Aunay-sur-Odon and the other a Gestapo building concealed in a woods east of ThuryHarcourt.

Attacks on bridges were also frequent assignments during July. On the 5th two bridges were rendered impassable and on the following day each squadron in the Typhoon wing had a crack at one near Mezidon. Twice near misses damaged but did not destroy it, but on the third go F/Os J. Stelter and R. A. Johns of the Westmounts made direct hits with 1,000-lb. bombs, and collapsed the structure into the river. One of the most spectacular feats of the month was achieved by Jack Beirnes and four pilots of the Westmount and Wildcat Squadrons on July 11th when they destroyed another bridge near St. Andre de Fontenay, south of Caen. The target was obscured by an almost solid overcast but, after orbiting for some time, Beirnes found a small gap and led his pilots in a zig-zagging dive. The bridge span was smashed into the river with four direct hits, an amazing achievement considering the short dive which was possible. Yet another bridge over the Orne was destroyed by the Otawas on the 13th, while the Wildcats demolished an enemy concentration point at the Chateau de Demouville, east of Caen.

E. Fighter Reconnaissance in July

Through July the R.C.A.F. recce units in France operated with the British Second Army, supplying all the aerial photographs required for its operations. High altitude photographs were taken by the PRU Spitfires, flying now at heights of 20,000 to 25,000 feet, to give the strategic picture of the enemy's dispositions over the battle area. Tactical information in a narrower sense—the condition of a bridge, the location of an MT park, an ammunition dump, a

battery site, an enemy strongpoint, transport movements—was obtained by the Mustangs operating at levels from 200 to 6,000 feet. Vertical and oblique photographs of the territory immediately in front were invaluable to the advanced units of the infantry and tank corps as maps were frequently faulty and in many places the terrain had changed since the maps were prepared.

While the Mustangs were operating between the Seine and the Vire the Spitfires, in addition to daily sorties over the battle area, sometimes ranged farther afield checking on key-points in the more remote back areas. Important junctions in northeastern France and Belgium were frequently visited as well as the lower Seine and French ports.

Encounters with enemy fighters were less frequent than during June, partly because of the fact that whenever possible the tactical reconnaissances were tied in with our fighter patrols or armed reces behind the lines. Occasionally, however, there were brushes with Jerry. On Independence Day while F/Os L. F. May and J. L. Roussell, with F/O J. C. Younge acting as cover, were on a reconnaissance over Dreux, 12 FW. 190s and Me. 109s jumped May and Roussell. Younge in turn attacked the Jerries and shot down one FW. which Roussell saw explode. All three Mustangs completed their reconnaissance.

The next encounter with the *Luftwaffe* was less fortunate. Two Mustangs from the Imperials were on a mission over Gisors on the morning of July 26th when they were jumped by 16 FW. 190s. F/O D. C. McLeod was shot down but his companion evaded the enemy machines and returned. The same squadron lost a second pilot that evening when F/O J. A. Levi's Mustang was shot down near Verneuil. His companions saw Levi bale out. Weeks later they learned the sequel to the story. Levi landed safely, suffering from burns, and was taken by his German captors to a hospital in Paris. When the Allied advance approached that city the Nazis attempted to remove him but were pre-

vented by the F.F.I. who protected Levi until the American forces arrived.

On several occasions the Mustangs were able to take a direct part in the action on the ground, by ranging the fire of our guns on enemy batteries or other targets, or by strafing vehicles on roads behind the lines. F/Os V. C. Dohaney, F. C. Goring, E. J. Geddes and K. K. Charman carried out particularly good shoots on bridges and gun positions, while Younge, Roussell, May and F. T. Cooke between them accounted for seven trucks and staff cars.

F/L J. R. Manser and F/O J. A. Lowndes of the Sudburys won special commendation from the XII Corps commander for a sortie on which they located a number of enemy tanks, despite their straw camouflage, and brought back excellent photographs of enemy gun positions. Another sortie, by F/L G. H. Maloney, D.F.C., of the Toronto Squadron, also won high praise. For a period of seven days late in July weather conditions made it impossible to photograph one section of the front below Caen. At the first opportunity Maloney covered the sector and returned with excellent pictures from which invaluable information was derived. It was seen that the Nazis had been digging with extreme energy, preparing a continuous line of trenches and gun posts in front of Evrecy, and greatly strengthening the defences in other places. "The information derived from (such) photographs", wrote the Corps, "has been invaluable for the planning of future operations, and for counter-battery purposes."

CHAPTER XII

AUGUST FIGHTER OPERATIONS

OPERATIONS during August were highlighted by armed reconnaissances which wrought terrible destruction on columns of trucks, automobiles, armoured cars, tanks, troop-carriers and other vehicles fleeing from the Falaise pocket. This constant, relentless badgering of the Hun reached its culmination on August 18th, a day which will probably rank as one of the most important in the annals of air operations during the Battle for France, if not, indeed, of the whole war.

June and July had witnessed much heavy fighting in the air in the course of which the R.C.A.F. squadrons added considerably to their scores. August was a sharp contrast. Indeed, during the whole month the number of enemy aircraft destroyed exceeded by only nine the number shot down on one day in June. Shot out of the Air, bombed out of their airfields, the G.A.F. fighter squadrons seldom appeared.

Thirty-five enemy aircraft were destroyed by the Spitfire squadrons during the month. The first Jerry fell on August and, shot down by F/O T. M. Saunderson in the course of a combat near Argentan with 12 FW. 190s which had bounced a Canadian formation. During the dogfight, Sheppard, leader of the Falcons, was forced to crashland behind the enemy lines. He was captured, but escaped and

made his way back to free territory within ten days. In the interval Dean Dover had been appointed to command the squadron. Three more Hun fighters were destroyed on the 3rd when the Rams encountered 12 Me. 109s while making a long-range sweep south of Domfront. F/L G. W. Johnson won his fifth victory; the others were credited to F/Ls R. H. Cull and Bouskill. Later in the day Doug Lindsay triumphantly ended his tour with the Wolf Squadron by shooting down his seventh, an Me. 209, and damaging another.

A day or so later four pilots of McLeod's squadron were on patrol over Argentan when they saw an Me. 109 pass below. Diving down behind the Hun they were amazed to see the enemy pilot turn his machine on its back and bale out. On the 10th the Falcons led by Dal Russel were scrambled to intercept enemy aircraft near Alencon and destroyed three and damaged two. Laubman raised his score to five, when he crashed one single-handed and shared another with Saunderson. The third victor was F/O C. R. Symons who was himself brought down by flak nine days later.

Russel's pilots scored again on the 12th when a sweep by the Roaring and Falcon Squadrons fought two groups near Alencon and Argentan. Four Mes. were destroyed by Lapp, now a F/L, and F/Os G. F. Mercer, J. J. Boyle and H. A. Crawford, while two more were damaged.

During the critical days of mid-August when the Nazi army was attempting to escape from the trap at Falaise, there was some scattered air fighting in which the Ram Squadron enjoyed a virtual monopoly. Five FW. 190s were shot down and four damaged by this unit, while the City of Oshawa Squadron scored one kill and the Falcons two damaged. The successful pilots were F/Ls Bouskill, G. W. Johnson, J. C. Lee and D. R. Cuthbertson and F/Os Davenport and Husband.

Heretofore, Johnny Johnson's wing had had little luck in finding the Hun in the air, but on the 23rd it was able to

catch up to Russel's squadrons by scoring the outstanding air victory of the month. Early in the afternoon the winco led two squadrons of Spitfires on a sweep around Fontainebleau and Beauvais and flew into a large formation of FW. 190s with Me. 109s as top cover, near Senlis. The R.C.A.F. pilots were considerably outnumbered, and three, F/Os Neil, F. W. Taylor and R. W. Dunn, were missing at the end of the combat, but 12 of the enemy were definitely destroyed and three more were damaged. Johnson shot down two FWs., his 36th and 37th victories, and Larry Robillard downed another Hun to win his eighth. Both F/L E. S. Smith and F/O Ockenden scored doubles, while F/Ls T. H. Hoare and B. T. Gilmour and F/Os A. J. Horrell, R. E. Holness and Neil accounted for one each.

During the last days of the month there were only three encounters. On the 26th, Sharun, Warfield and J. D. Orr won their third victories since D-Day, while F/L D. W. Harling downed his first on the 28th.

Against 16 destroyed and ten damaged by the McGregor-Russel wing, added to 19 destroyed and five damaged by the MacBrien-Johnson wing, the R.C.A.F. squadrons suffered a loss of 25 pilots, of whom seven returned safely before the end of the month. Of these casualties the great majority were due to flak; only six were suffered in combat.

Operations of the Typhoon Wing

During the first two weeks of August the Bombphoons continued their day-by-day bombing of enemy armour, guns and troops just behind the lines. They were particularly busy on the 2nd, when they made four wing attacks within six hours. It had been reported that the 9th Panzers were attempting to pull out through the Conde-sur-Noireau area and the Typhoons were detailed to slow up the movement. After diving through the usual intense curtain of flak to release their bombs the pilots came down again to strafe.

One pilot pulled out of his dive so sharply that many rivets popped out of the Tiffy's mainplane. Another levelled out in a valley, looking up into the startled faces of flak gunners on the hill beside him.

On August 7th Judd led his wing against a strong enemy concentration in a small village east of Vire and, diving through layers of flak bursts, the three squadrons made a "beautifully" concentrated attack. Three hours later the Wildcat pilots dive-bombed a small wood near a dreaded flak centre, plunging earthwards for 8,000 feet with all guns blazing before releasing their high explosive charges.

On several occasions in July the Tiffies had blasted Nazi headquarters buildings. One more was blown to perdition on August 8th at Clair Tison on the Laize, southeast of Thury-Harcourt. At least 11 bombs, burst directly on the chateau, totally destroying it, while others smashed into the courtyard. Intense flak fire over the target made a direct hit on the Typhoon flown by Cliff Hicks, leading the Ottawa Squadron. Two evenings later the Westmount Squadron made a complete shambles of another group of buildings where an important conference had been held. On their first dive the pilots bombed, grouping their bursts well on the target, and then dived again to lace it with cannon fire. Flames roared from one building while 20 mm. slugs swept the entire area. As an example of the support rendered the troops on the ground by the Bombphoons the report may be cited of an attack, delivered by nine pilots of the Westmount unit led by F/L W. K. Scharff.

The objective was a troublesome, strongly-defended enemy position in the village of Jean Blanc. The aircraft, loaded with 500-lb. bombs, took off at 1915 hrs. on the 9th.

The heavy haze had dissipated somewhat by this time and the target was quite easily approached from the north-west at 6,000 feet. An almost vertical dive attack was carried out from the south-east, right down to 1000 feet. All bombs landed where they were aimed and the entire west half of the village seemed to rise in the air. F/L Scharff led

the boys back in a beautiful strafing attack from the south-west at 1,000 feet right down to the tree tops. All fields, bushes, and roads leading into the village of Jean Blanc from this direction were sprayed by cannon fire. At this point our own artillery dropped more red smoke-shells on the north-west corner of the target so we roared in again with cannon talking! This time the attack was pressed home until some of the aircraft were in danger of being hit by ricochets as they zoomed over the town. A small orchard at the north-west corner of the town was sprayed unmercifully. A large wooden house at the edge of the orchard was burning furiously and the entire village was cloaked in a mantle of smoke and dust.

August 11th was another successful day for the Tiffies who carried out so many missions that a Tac/R pilot on returning from one sortie reported the weather as 20/10ths Typhoons at 2-6,000 feet. Four times the Canadian wing took to the air. The results were not spectacular but the bombing was concentrated and accurate and the targets were thoroughly mauled. The first mission, led by Pentland, was against enemy armour in a small wood a few hundred yards in front of the position held by the Polish Division of the First Canadian Army at Estrees-la-Campagne. Attacking in turn the Tiffy squadrons concentrated their 1000-lb. bombs well on the target. Later the wing made a second attack. The first had left the northern half of the wood a shambles so this time the bombing was concentrated on the southern section.

Attacks on the 12th were directed primarily against three small bridges across the Orne along the escape route of the Nazi Seventh Army. The Tiffies ran a shuttle service hitting again and again at the bridges until two had been destroyed and the road approaches to all three badly cratered. The task was not completed without loss. Ack-ack batteries put up an intense barrage which brought down F/L T. A. Bugg, and F/Os Ernie Allen, R. O. Moen and J. F. Dewar.

Meanwhile, the Spitfire squadrons were flying armed reconnaissances over the area from Lisieux to Domfront,

taking a steady toll of the scattered vehicles which ventured upon the roads in daylight. Frequently too they went farther eastward to dive-bomb tugs, barges, wharves and locks on the Seine. In one of these strafes the City of Oshawa pilots bombed 20 barges, destroying two and damaging others, and then sank a motor launch. Another squadron destroyed one barge and damaged nine others on the same day.

On one armed reconnaissance Guy Mott was brought down by flak near Conde. For two days he was hidden by a French farmer until American troops reached the farm house and he was able to rejoin his squadron. Wheler also came back from the wrong side of the lines after an archie burst had caught his kite.

Steadily, as the crisis confronting the Nazi army increased, the toll of MT rose. The McGregor-Russel wing led on the 13th with a tally of 119 trucks and cars, 14 tanks and armoured vehicles pranged; and again the following day, when they contributed 217 destroyed or damaged MT to the day's total of 274. On both occasions the pilots led by Dowding set the pace, accounting for half the first day's total and 77 trucks, five tanks and 11 A.F.Vs. on the second day. Outstanding among the pilots was Goodwin who was top-scorer on both days and shot up 17 vehicles on the 14th. Another pilot attacked a vehicle which exploded with such force that it damaged the Spitfire's wing.

From D-Day to August 14th the McGregor-Russel wing had scored 467 MT flamers, 187 smokers and 521 damaged, a total of 1175 trucks and cars rendered permanently or temporarily useless. In addition the wing had strafed 25 tanks, over 50 A.F.V.s and several trains, had destroyed 99 enemy aircraft, probably destroyed three, and damaged 39.

The Falaise Pocket

Late in July the Americans had broken through between St. Lo and Coutances and, sweeping southward towards the Loire, fanned out westward into Brittany and eastward to-

wards the Seine, cutting in behind the German Seventh Army. On August 13th they entered Argentan. Meanwhile, the British and Canadian forces had launched an attack on the 7th, driving southward from Caen towards Falaise across the line of retreat of von Kluge's army. By the 15th the Canadian Army was within a mile of Falaise; on the 17th the town was captured. The American forces pushing up from Argentan were closing the narrow gap and trapping the Nazi army in a steel-ringed pocket. As the entrapped Nazis sought to escape through the narrow neck between Falaise and Argentan, Allied air strength cracked down with all its might.

In the late afternoon and evening of the 17th sorties by the fighter-reconnaissance squadrons reported hundreds of vehicles, tanks and staff cars streaming eastward from Falaise. Large convoys of 100 to 300 vehicles were on the move, running the gauntlet of Spits and Tiffies in their desperate effort to get out of the Falaise trap. When darkness finally intervened the MacBrien-W Johnson wing had amassed a total of 196 flaming, smoking and damaged vehicles and three battered tanks. One sortie in particular, carried out by Wood's and McLeod's pilots around Trun, had wrought destruction in masses of over 400 vehicles; 29 were set on fire, 40 began to smoke and 36 others were damaged. The Wolves leading with 105 MT and two tanks, lost three pilots to the intense barrage of light flak. F/O G. R. Weber returned ten days later; F/O M. L. Garland also subsequently rejoined his unit, but F/O H. V. Boyle is still missing. In the meantime, the Tiffies were pranging barges and boats on the lower Seine; four barges were sunk, another was set ablaze, at least two more and a dredger were damaged, while a river boat was damaged and probably destroyed by a direct hit from a 1,000-lb. bomb.

At dawn on the 18th the work was continued and the destruction reached unprecedented heights. From the first light to nightfall the Spits flew an almost continuous armed

reconnaissance over the roads running eastward from Falaise and Argentan to the Seine. At midday reconnaissance Mustangs reported all roads leading into Vimoutiers from the south and south-west jammed with vehicle. At 1500 hrs. Dean Dover and F/L C. W. Fox of the Falcons, on a special mission to spot MT, located 1000-1500 vehicles jammed bumper to bumper in a large wooded area near Argentan. When night interrupted the destruction, the roads were lined with blazing, smoking, shattered trucks, tanks and cars, the wreckage of an army in full flight. The Spitfire wings accounted for almost 1200 vehicles. The McGregor-Russell squadrons claimed 701 vehicles and the MacBrien-Johnson 495, with one locomotive destroyed into the bargain.

Every serviceable aircraft was put into the air on these operations. No attempt was made to fly large formations; two, four or six aircraft would go out together, dive and fire until their ammunition was gone and then return for more. The Roaring Squadron led the others with 81 flamers, 44 smokers and 98 damaged MT, plus 21 tanks and armoured vehicles destroyed or damaged. Other outstanding scores were:

	<i>Flamers</i>	<i>Smokers</i>	<i>Damaged</i>
Ram	61	44	62
Dowding's	59	26	81
Oshawa	54	28	30
McLeod's	51	47	30

Our losses were only three pilots missing and two of them returned within a week. Halcrow was forced to bale out near Vimoutiers and was captured. He persuaded his captors, however, "that they didn't have a chance so they let him go on the understanding he would arrange to have Allied troops come back and take the Germans into custody." Hugh Trainor of the Rams was also brought down by flak behind the lines, but evaded capture and returned to

his unit. F/O C. E. Fairfield's aircraft was seen to crash after a direct hit from an anti-aircraft shell. Another pilot joined the Caterpillar and Goldfish Clubs after an exciting experience when F/O J. P. Lumsden baled out from his flakbattered Spit near the coast only to find that his dinghy would not inflate. One of his comrades dropped him another which became tangled in the shrouds of his parachute. Finally a third pilot dropped a dinghy; this one Lumsden was able to inflate. After floating about while coastal gun posts took a few pot shots at him, he was finally rescued by an A/S/R launch.

The Typhoons too had a full share in the day's work. The wing lost three pilots, F/L G. P. Edington and F/Os G. H. Sharpe and J. S. Colville, but in the Lisieux, Orbec, Bernay, Vimoutiers sector it had added 125 flammers, 75 smokers and over 100 damaged trucks, tanks, gun-carriers, staff cars, motorcycles, half-tracks and other vehicles to the day's carnage.

On the 19th the Spits and Tiffies renewed their reconnaissances, chiefly over the Bernay area, as they followed the flight of the Huns to the Seine. Except in the early morning, however, there was less movement and as a result the scores were considerably lower than on the previous day. The MacBrien-Johnson wing collected 60 flammers, 78 smokers and 84 damaged MT and six damaged tanks during the day, and the McGregor-Russel 138 flammers, 61 smokers and 191 damaged MT and 18 tanks and A.F.V.s as well as two barges, a tug and a gun post. The whole area between Orbec, Bernay and Broglie was a litter of wrecked and burning transport.

F/L McDuff and F/O Symons did not return from sorties that day. McDuff was captured when he baled out, but made his escape during the night while being led back with other prisoners. He hid in barns and was aided by French farmers until the British Army's advance freed him later in the month.

During one reconnaissance that morning F/O B. E. Middleton, overshot a vehicle which he was attacking and saw his bursts strike the edge of a wood by the roadside, causing large explosions and flames. Returning to the scene on a later sortie, he found that an acre had been burned out, exposing many petrol drums and five ruined vehicles.

The Tiffies too continued to strafe the retreating Hun and despite the relative lack of targets claimed 61 flammers, 50 smokers and 40 damaged, with three tanks in addition. Three more pilots were lost, F/L Ken Scharff, F/O R. A. Porritt and F/O R. H. Milne.

For the fourth day the squadrons scoured the area between Orbec, Broglie, Beaumont and Thiberville, but movement had now definitely tapered off and results were meagre. One Spitfire wing claimed 17 flammers, 31 smokers, 31 damaged and four tanks smoking or damaged while the Typhoon wing shot up 26 MT. During the four critical days of the Falaise pocket the R.C.A.F. wings had attacked and destroyed or damaged over 2600 enemy vehicles.

The weather which had interfered with operations on the 19th and 10th stopped all flying on the list. When, on the 22nd, operations were resumed, the chase had moved eastward to the area between Bernay and Elbeuf on the Seine. Little movement was seen, but over 175 scattered vehicles were clobbered by R.C.A.F. Spitfires and Typhoons.

Paris was liberated on the 25th, while British troops in the Canadian Army entered Honfleur at the mouth of the Seine. By the 27th the British and Canadian troops had established four bridgeheads across the Seine and were moving on to Rouen, which fell on the 30th; the Canadian Army swept onward towards Dieppe. To the east, the British Second Army took Amiens on the last day of August and crossed the Somme.

Meanwhile, the Typhoons and Spitfires had continued their attacks on the fleeing Nazi forces. All the bridges

across the lower reaches of the Seine had been destroyed and any attempt to cross by ferry or barge had to run a gauntlet of cannon, machine-gun and bomb attack from the air. For several days our Spitfires, keeping watch over the river between Rouen and Le Havre, were busy strafing tugs, barges and rafts, while the Tiffies, resuming their dive-bombing role, sought targets for their eggs. The City of Ottawa pilots made two direct hits on a large river ferry and set it on fire. On another occasion the whole Typhoon wing dive-bombed a concentration of vehicles by a jetty at Mailleraye-sur-Seine, below Rouen. In the first attack the Westmount pilots, despite an intense ack-ack barrage, hit a petrol dump or van from which flames and black smoke gushed. Then the Wildcat and Ottawa Squadrons set off more explosions.

After moving forward from Lantheuil to an airfield near St. Andre de l'Eure, the Tiffies got in one more show on the last day of the month. In an attack on transports and wagons in the vicinity of Hornoy, west of Amiens, they set fire to six MT, made four others smoke and shot up and probably destroyed 50 horsedrawn vehicles.

Day by day the Spitfire squadrons penetrated farther eastward, from the Seine and Rouen to Fleury and Gisors, to Forges, Gournay and Beauvais and on towards the Somme; with long-range tanks they even swept as far as Amiens. But results were meagre. The rapid retreat of the enemy had left the Spitfire airfields far out of range so that the pilots had difficulty in making contact with the foe and little time to hunt for targets along the roads before diminishing fuel supplies forced them to return. Occasionally some scattered vehicles were found, scurrying along the roads between Rouen and Beauvais, and in two days' hunting the Spitfire wings were able to collect 62 flamers, 30 smokers and 45 damaged. F/O L. A. Plummer and P/O S. Bregman accounted for eight flamers in one attack. The Winnipeg Bears, who were still flying from their base in

England, were able to join in this work, and blew up two locomotives, stopped a third and strafed a number of vehicles.

By this time the MacBrien-Johnson wing had moved forward from Crepon on the Norman coast to a former German airfield north-west of Dreux and only 40 miles from Paris. When first captured by the Allied forces the field was pitted with bomb craters, but repairs were quickly effected and the aerodrome was soon operating "under new management". The McGregor-Russel wing also prepared to move from Cristot to a new base near Evreux—when the rain stopped.

August ended with a day of fine weather but the MacBrien-Johnson wing found even its new base almost out of range of the front lines. Little transport could be seen in the Albert-Arras-Bapaume sector, nor was there time or fuel to spare to hunt far; 38 vehicles was the sum total for the day.

Fighter-Reconnaissance Operations

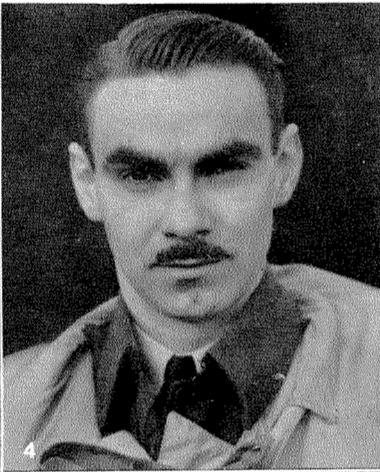
Through August the Mustangs and Spitfires continued their reconnaissance missions over the battle area below Caumont, Tilly and Caen and eastward to the Seine. The importance of their work may be illustrated by citing one sortie on August 1st for which F/O R. H. Rohmer of the City of Sudbury Squadron received commendation. While making a tactical reconnaissance that evening with F/O C. P. St. Paul as cover, Rohmer photographed a concentration of tanks in a wood near the front lines. At first the army thought that the tanks were their own, but, on closer investigation, found that they were enemy units and directed artillery fire on the target. On the following day F/O T. H. Lambros, with St. Paul again acting as escort, returned with photographs which revealed a long column of 60 tanks and about 20 MT north, of Conde. Typhoons were despatched, with the result that 37 tanks and most of the vehicles were

destroyed. Lambros spotted yet another concentration of MT in the Vassy area on August 4th and sent out an R/T call. Once again Typhoons responded immediately and blasted the column.

Even the Spitfire pilots flying several miles above the battle area were sometimes able to spot fleeting targets on the countryside far below. Especially noteworthy was the case of F/L M. G. Brown, D.F.C., of the City of Toronto Squadron, who, returning from a photo mission on August 9th at 22,000 feet, noticed a small convoy of vehicles on a road behind the enemy lines. On this occasion too, aircraft called up by R/T report made a successful attack.



(1) W/C M. W. Beveridge, D.F.C., of Montreal. (2) S/L J. A. Hatch, D.F.C., of Toronto. (3) S/L I. A. March, D.F.C., of St. John's, Nfld. (4) W/C G. H. Elms of Whitby, Ont., with Nicky. (5) F/L K. M. Eyolfson, D.F.C., of Leslie, Sask. (6) Lt. A. A. Harrington, D.F.C., D.F.C. (U.S.A.), of Atlantic City, N.J. (7) S/L H. D. Cleveland, D.F.C., of Vancouver. (8) F/L W. G. Dinsdale of Brandon.



(1) F/O H. E. Jones of Salmon Arm, B.C. (2) F/O D. N. McIntosh of Stanstead, P.Q.
(3) F/L A. J. Eckert of Seaforth, Ont. (4) F/L D. A. MacFadyen, D.F.C., of Toronto.
(5) F/O S. P. Seid of San Francisco. (6) F/L C. M. Jasper, D.F.C., of Long Beach,
Calif. (7) W/C R. Bannock, D.F.C., of Edmonton (Portrait sketch by F/O M. Reinblatt).
(8) F/L O. A. J. Martin, D.F.C., of Ottawa.

The days from August 12th to 19th, when the German Seventh Army tried desperately to escape from the Falaise-Argentan pocket, were particularly active and important for the recce units. The flight of the Nazi army reached a climax on the 17th, 18th and 19th—three days on which the A.E.A.F. had a field-day bowling over the tanks and trucks of von Kluge's army as it scurried eastwards towards the Seine.

On one of the first missions on August 17th, F/Ls G. W. Wonnacott and M. J. McRaef of the Imperials located an enemy tank and MT concentration in the Vimoutiers area which two wings of Spitfires successfully pranged during the evening, destroying or damaging 13 tanks and approximately 200 vehicles. On the 18th, when the attempt to escape from the Falaise pocket was at its height, the Tac/R pilots found the roads south and south-west of Vimoutiers jammed with enemy vehicles. During the day Hutch Hutchinson, Manser, F/Os F. S. Gilbertson and E. Winiarz returned with particularly valuable photographs and reports. An evening sortie saw many vehicles burning fiercely between Vimoutiers and Bernay; further east Allied armour was entering Mantes Gassicourt.

On the 19th Dick Ellis found one column of 200 vehicles moving bumper to bumper along a two-mile stretch of road between Vimoutiers and Bernay while pilots of the Imperial Squadron reported 5000 vehicles and 120 tanks, the columns in some cases moving three abreast.

During the next few days the pilots worked in close touch with the forward ground forces. But after the battering of the 17th, 18th and 19th the Hun was again hiding by day and moving only under cover of darkness. By the end of the month the recce pilots were flying over Amiens and the battlefields of the last war. On the last day of August the Imperial Squadron was particularly busy, reporting much enemy activity, chiefly around Amiens, Gournay, Poix, Neufchatel and Beauvais where thousands of tanks

and trucks were on the run.

By this time the rapid advance of the army had put our aircraft almost out of operational range of the fighting zone. For several weeks, while the photo aircraft methodically covered the Caen-Flers-Argentan sector, they had been based at Sommervieu, just east of Bayeux. Then, to keep in touch with the rapid flow of battle on the ground, the wing moved forward in the middle of August to a new airfield at St. Honorine de Ducy, a few miles north of Caumont. It was at this time that the Imperials, who had remained in England to convert to Spitfires, rejoined Moncrieff's wing. But this base was soon left far behind and at the end of the month the squadrons were preparing to move forward again to airfields in the Evreux area.

During August G.A.F. fighter opposition was as rarely encountered by the low-flying Mustangs as by the high-flying Spitfires. There was only one casualty, F/O F. C. Goring, who was missing from a sortie on the 12th. On the first of the rare occasions on which the Tac/R pilots did meet enemy fighters, on August 9th, F/Ls R. F. Gill and W. J. M. Iverson of the City of Sudbury Squadron were attacked by 40 FW. 190s. Despite the odds the Mustangs got away scot-free after Gill had hit and damaged one of the enemy. On another occasion F/Os Geddes and K. G. Gilimor emerged unscathed from an attack by 20 FW. 190s. In a third encounter late in the month the Mustangs scored a victory. Lowndes and Charman of the Sudburys were surveying the area around Vernon, to the usual accompaniment of intense flak, when they saw two FW. 190s and at once attacked. Lowndes saw his bursts hit one which dived away steeply. The second FW. then fled in panic. Unable to see the fate of the first, Lowndes claimed only a probable, but an officer of another squadron, on forward duty with advanced units of our armour, was able to confirm its destruction.

In describing the work achieved during August the dia-

rist of the R.C.A.F. Recce Wing commented: "The Army has repeatedly expressed its appreciation for the prompt and complete work being done by our pilots. This applied not only during the more static fighting around Caen and down the Falaise road, but also during the phase of the Argentan-Falaise pocket and subsequent wholesale retreat of the German army eastward. This manifestation of the importance of our work has been most gratifying, not only to the pilots, but to the men who have serviced the a/c, done the cooking, and handled the paper work." Special thanks were due to the men of the engineering section, who maintained serviceability of the aircraft at a very high level despite the great number of operations, and to the personnel of the photographic sections who worked almost continuously during the month to break all previous records. On several occasions during August more than 40,000 prints were produced in a single day from the negatives which the recce pilots brought home in their Mustangs and Spitfires. The number one day exceeded 44,000, while the daily average for a two-week period was 32,000 prints.

CHAPTER XIII

SUMMER NIGHT FIGHTER OPERATIONS

D-DAY opened the most successful period in the history of the R.C.A.F. night fighter squadrons. At the end of May 1944 the Lynx, Nighthawk and Cougar Squadrons had a total of 53¼ enemy aircraft destroyed and 38 probables and damaged over a period of 33 months. At the close of August 1944 the total was 117¼ destroyed plus 56 probables and damaged. During the same period the City of Edmonton (Intruder) Squadron ran its score from 122 kills and 70 others to 140 plus 82. In other words, in a period of three months the four squadrons destroyed 82 Huns and probably destroyed or damaged 30 others. In addition, they destroyed 92 flying-bombs.

With the opening of the Second Front the night fighter units were released from their defensive duties over Britain to fly protective patrols over the convoys and beachheads and keep a weather eye open for the approach of hostile aircraft which might interfere with the vitally important airborne traffic. While these units took on more and more the character of intruders, the Edmontons continued their former role and ranged far and wide inland from the beach-head.

The first four nights, June 5th to 8th, were comparatively quiet as R.C.A.F. Mosquitos patrolled from dusk to dawn over the great armadas massed off the Norman coast,

but found only one Hun, a Ju. 188, which F/Os H. F. Pearce and G. W. Moores of the Nighthawks probably destroyed. Further inland, where the Edmontons were strafing flak posts, trains, bridges, junctions and airfields in a great arc from Brest to Laon, there was some enemy air activity and on the night of the 6th W/C Barker's Mosquitos scored five kills. F/L S. H. R. Cotterill and Sgt. E. H. McKenna hit the jackpot when they destroyed three Ju. 52s and a Ju. 188 over Chateaudun and Orleans, and bombed the Orleans airfield all in 20 minutes, a feat which won the D.F.C. for Stan Cotterill. A fourth Ju. 52 transport plane was shot down in flames near Coulommiers by F/L D. A. MacFadyen and F/O J. D. Wright, while a fifth was destroyed on the following night by F/L J. B. Kerr and F/O P. Clark.

Night after night Barker's squadron continued its work, bombing bridges and trains and, enemy airfields. A week after Kerr's victory two Edmonton Mossies penetrated by daylight to the western Baltic where S/L R. A. Kipp and F/O P. Huletsky crashed an He. 111 and P/Os M. H. Sims and J. D. Sharples blew up a Ju. 34. The latter victory, their sixth, won the D.F.C. for Merv Sims and Junior Sharples. That night S/L R. Bannock and F/O R. R. Bruce, while patrolling over Avord, destroyed an Me. 110 in flames and then bombed the airfield.

Two days later the Edmontons had to curtail their offensive sorties to engage in the campaign against V-1, but later in the month were able to make two more daylight forays, damaging four FW. 190s on the airfield at Pau and destroying a Ju. 88 near Rostock. F/Ls C. M. Jasper and O. A. Martin chased the Junkers as it sought the protection of flak batteries on a large liner in Mecklenburg Bay and blew it to pieces at such close range that flames seared the Mossie. It was their seventh Hun.

Over the Channel and beachheads the strange dearth of hostile air-activity, which had marked the first few nights, ended on the 9th when the Nighthawks and Cougars scored

the first victories in a long series by cracking down two Ju. 188s. The Nighthawk victory, won by S/L R. S. Jephson, a Canadian in the R.A.F., with F/O C. D. Sibbett, was that unit's first confirmed Hun in over a year. The successful Cougar team was F/O R. L. Snowdon and Lt. L. A. Wilde (R.N.).

After these initial victories there was rarely a night in June that the R.C.A.F. Mosquitos did not fight at least one successful combat. On the 10th the Nighthawks did the hat trick when they destroyed three 188s, a pair by F/O C. J. Preece with P/O W. H. Beaumont, and one by F/Os R. L. Fullerton and P. Castellan. Continuing their winning streak, the squadron bagged yet another 188 and a Do. 217E on the following night, which were credited to F/Os K. G. Livingstone and J. F. G. Bloomer and F/Os A. W. Sterrenberg and J. P. Clarke. On the 13th, the Nighthawk C.O., W/C J. W. Reid, with his observer, F/L J. W. Peacock, destroyed an He. 177 near Le Havre.

Then the Cougars broke into the scoring column again, and equalled the Nighthawks' record with six kills in three nights. Four were shot down on the 12th, two Do. 217s by WO W. F. Price with P/O J. G. Costello, an He. 177 by P/O L. J. Kearney with F/O N. W. Bradford, and a Ju. 88 (or 188) by Snowdon and Wilde. Another 88 was shot down into the sea, a flaming ball of fire, by S/L I. A. March with F/L K. M. Eyolfson on the following night. The sixth in the series of Cougar victories, won by F/L W. G. Dinsdale and P/O J. E. Dunn on the 14th, was a victory of more than passing interest, as it was the first time one of the new "pick-a-back" flying-bombs had been destroyed. Walter and Jack caught sight of the cumbersome machine as it lumbered along at 11,000 feet some miles inland from Caen. It appeared to be a Ju. 88 with a glider bomb attached above the fuselage; actually the 88, its fuselage packed with explosives, was the bomb, while the "glider" was an Me. 109 carrying the pilot. One short burst from the Mossie sent

the whole contraption diving like a meteor, with a long trail of flames and sparks, to crash behind the German lines with a terrific explosion that lit up the whole countryside.

The appearance of the "pick-a-back" bomb coincided with the beginning of the doodlebug campaign to counter which much of the night fighter activity was diverted for the next ten weeks. The Nighthawks, who now added standing patrols over the Channel to their nightly routine of beachhead patrols, had fewer opportunities to engage enemy raiders and as a result their string of victories was temporarily interrupted. But the Cougars continued to add to their score, chiefly at the expense of Junkers 88s and 188s, with five falling to their Mosquitos on the three nights, June 16th to 18th. The victors were F/O I. S. Girvan with Lt. M. Cardwell (R.N.), F/L C. E. Edinger with F/O C. L. Vaessen, March with Eyolfson, F/O G. T. Edwards with FS W. Georges, and Lt. A. A. Harrington (U.S.A.A.F.) with Sgt. D. G. Tongue. After a break of five nights WOs R. G. Jones and L. W. Gregory destroyed another Junkers to raise the Cougar total to the 33 mark.

On the same night, June 23rd, the Nighthawks scored again with a Ju. 188 which F/O W. H. Vincent and F/L D. A. Thorpe shot down over the Channel. Before the month ended the squadron bag had gone up to 17 thanks to three more 188s destroyed by WOs W. G. Kirkwood and C. N. Matheson (two) and F/L D. T. Steele and F/O W. M. Storrs. Several of these Junkers were carrying two large bombs on external racks between the engines and fuselage, which exploded when the Mossies' cannon shells struck home. The 88 which Harrington and Tongue brought down on the 18th blew up in masses of debris and burning oil that struck all over the Mosquito, punching holes in the wings and smearing the fuselage. Jones and Gregory too were showered with oil from their victim.

The Lynx Squadron had little share in the joy of the June nights. Their routine patrols over the Channel proved

uneventful and uninteresting, and their Beaufighters were too slow to chase the doodlebugs which buzzed across the Channel. Occasionally, however, the crews were able to make a free-lance thrust into enemy-occupied territory. On one such mission, on the 7th, P/Os R. L. Green and A. W. Hillyer, flying one of the Lynx Mosquitos, shot down a Do. 217 in flames. After seeing the bomber explode, they followed it down, taking cine-shots, until the blazing wreckage plunged into the sea off Lannion. On other intruder sorties, both by day and by night during June, Lynx crews strafed three trains and destroyed or damaged an armoured car and eight military trucks.

During the first week of July W/C Fumerton's squadron took a further toll of Nazi rolling stock on daylight intrusions which came as a welcome relief from their essential but colourless Channel patrols. On the afternoon of July 4th two Mossies took advantage of cloudy, showery weather to visit the Brest peninsula. There, sweeping along the railways and roads, S/L D. J. Williams and F/O C. J. Kirkpatrick damaged one engine, while Green and F/O M. Kazakoff blew up another, and exploded one truck and damaged two more in a convoy of 14 vehicles.

Six crews took off the following afternoon on a record day sweep which netted a full two dozen locomotives as well as other targets. They flew in formation across France from Mont St. Michel to Angers on the Loire where two Mossies, crewed by Williams and Kirkpatrick and F/Os J. F. Lawless and P. T. Reid, turned eastward toward Tours. Flying up the Loire, Williams blew the stern off a barge and farther up the river set a second on fire. Lawless beat up a train, causing a terrific fire, and went on to strafe a second train, damaging the locomotive, two freight cars, a flak car and a signal box. Williams also attacked this train, blowing up two oil tank cars from which smoke billowed 2,000 feet in the air.

Meanwhile, the four Beaufighters had flown on to

Rochefort and Angouleme before turning back. All along their route they strafed trains. P/O R. W. Donovan with FS V. M. Grant made 18 attacks, F/L H. D. McNabb with P/O B. F. Tindall and Green with Hillyer 16 each, and Lt. J. H. Holden (U.S.A.A.F.) with F/O K. MacKenzie eight—a total of 58 attacks on railroad rolling stock. Many were made in formation on the same target so that individual assessments were impossible, but altogether 24 trains were shot up, at least eight locomotives exploded, many tank cars and freight cars set ablaze, and one complete train wrecked. In addition a barge was set on fire and a lorry, a water tower and, two power houses were damaged. Throughout the long sortie the crews flew at very low level enabling them to make close observation of events on the ground. Some reported with considerable amusement that a bargee fell off his horse into the river as the British aircraft shot by. Others brought back vivid descriptions of a ravishing brunette in a flaming red dress. It is amazing how much detail the trained eye can discern, even when travelling at over 300 m.p.h. The only item overlooked was the telephone number.

Two Lynx Mosquitos visited the Loire again the following afternoon to damage two more trains; and again on the 7th, for the fourth successive day, to bag another pair. The total for these four days was 32 locomotives exploded or damaged, in addition to a considerable quantity of rolling stock, trucks and barges.

July

Doodlebug patrols continued to dominate the operations of the Nighthawks until the middle of July, and of the Edmontons until the close of the month. The Cougars, however, were still free to devote the whole of their effort to defensive patrols over the Norman beaches. The *Luftwaffe* was less active than it had been in June and Ab Hiltz's crews, who had destroyed 13 Huns during invasion month,

were able to add only six to their bag during July.

Edinger and Vaessen opened the month's scoring on July 3rd with a Ju. 188 which spun down into the sea minus its port wing. Four nights later March and Eyolfson won their third victory and the Cougar Squadron's 35th by shooting down an Me. 410 on the outskirts of Paris after a long chase. F/L S. B. Huppert and F/O J. S. Christie won their third victory at the same time with a Ju. 88 Flamer off the Norman coast. March, Eyolfson and Christie were all three awarded the D.F.C., but Red Huppert was lost in the Channel after his victory that night. Christie was able to bale out of the Mossie after it had been damaged by the exploding Junkers, and was rescued by the A/S/R.

The next three weeks were luckless until, in the last days of July, the Allied armies delivered the hammer blows which led to a break-through in Western Normandy and the virtual collapse of Nazi resistance in Northern France. Vainly the weakening German bomber force sought to impede the Allied attack. Three Ju. 88s in a row fell to the Cougars: one on the 28th, which F/L W. A.

Dexter and Lt. R. M. Richardson (R.N.) crashed over the Cherbourg peninsula despite the Junkers' violent evasive action; another, shot down the following night by P/Os D. MacKenzie and G. P. A. Bodard; and yet another obsolescent 88 on the last night of the month, crashed after three short squirts by P/O J. Maday and F/O J. R. Walsh.

The Nighthawks too, returning to the beachhead after a two weeks' diversion to buzzbomb patrols, were able to take a hand in the late July activities. Earlier in the month, when the squadron had an opportunity to make a few intruder sorties, Pearce and P/O P. J. Smith scored a double with two Junkers, one of the old 88s and one of the newer 188s. Eleven nights later, on the 18th, the Nighthawks brought down two more over the beaches. F/O A. S. MacPhail with P/O P. J. Smith finished off a Do. 217, while Kirkwood and Matheson destroyed a Ju. 88 to win

their third victory and the D.F.C. Then in the last days of July the squadron got four of a kind, one 88 shot down by WO D. J. MacDonald with FS W. D. King on the 24th, another by Windy Reid and John Peacock on the 25th, a third by Jephson and F/O J. M. Roberts on the 26th, and one more hapless 88 by Kirkwood with F/O W. A. Ward as his observer on the 30th. The last of the series was Kirkwood's fourth kill and the Nighthawks' 25th.

Although the City of Edmonton Squadron had been concentrating on defensive patrols against the doodlebugs as they streaked across the night sky towards London, the pilots found time occasionally to take their Mossies deep into enemy-occupied territory and even into the *Reich* itself, with the result that, in addition to two locomotives, six Huns were destroyed and three probably destroyed or damaged. The engines were bagged by F/O S. N. May and P/O J. D. Story in the early morning of July 4th between Melun and Bretigny; one locomotive blew up and the second was damaged. The following night Kerr and Clark shot down a Ju. 88 in flames near Chateaudun airfield. F/L F. M. Sawyer and F/O J. E. Howell added another blazing Junkers to the score while intruding near Munich on the 7th.

These night successes were followed by a daylight sortie on the 11th when F/Os J. J. Harvie and P. A. Alexander with F/L C. J. Evans and F/O S. Humblestone flew up the Elbe towards Brandenburg. Near Gardelegen they attacked an Me. 110 as it circled an airfield and crashed it into the ground.

Russ Bannock and his observer, Bruce, made another deep penetration into the *Reich* on the night of the 17th. At Altenburg, south of Leipzig, the Mosquito broke into a searchlight co-operation exercise and chased one Jerry for over 75 miles before it escaped, battered by shells and bullets. Returning to the airfield, Bannock and Bruce shot down a second enemy aircraft in flames. J. B. Kerr and Butch Clark, who had destroyed three Huns, shared two,

and damaged several and blown up a buzzbomb while serving with the Edmontons, were missing from another intruder mission that night.

A pair of FW. 190s, which were probably destroyed on the 18th and 19th, and a brace of Ju. 52s crashed over the Baltic completed the Edmontons' scoring for July. The two transport machines were destroyed on the 21st when C. J. Evans and Humblestone accompanied by P/Os W. E. Bowhay and H. K. Naylor made another daylight trip to the Ribnitz area where in the past the squadron had made several good strikes. Seeing two Junkers crossing Saaler Bay under scattered cloud each Mossie engaged and crashed one. As he flashed by his victim Evans struck the port wing of the Junkers, slicing off a six-foot section with only slight damage to the high fin and rudder of his Mosquito.

On July 10th Moose Fumerton's Lynx Squadron was finally released from the tedious "bind" of uneventful Channel patrols and received a new assignment to guard Allied destroyers operating off Ushant and Brest. The initial day at this new work brought the squadron its first victories in over six weeks.

Four British destroyers sailing in broad daylight close to the Breton coast on July 21st offered a most attractive target to the *Luftwaffe* which sent seven Do. 217s to make a torpedo attack. But the Jerries did not reckon on the presence of British fighter aircraft. Blackie Williams and Kirkpatrick, flying a Mosquito, were patrolling over the destroyers, when they sighted two Do. 217s approaching on the deck. But let Williams tell what happened:

I closed to 1,000 yards and noticed what, appeared to be torpedoes slung beneath the fuselages of both enemy aircraft. I opened fire at this distance to distract their attention. They were flying in echelon starboard and both opened fire on me. I closed on the starboard one and attacked, striking his port engine which caught fire and exploded. The Dornier turned on its back and crashed into the sea. Just then we noticed our starboard engine streaming white smoke and radiator temperature went off the clock. The starboard engine was immediately feath-

ered and we found one Dornier still ahead of us. As we were going home anyway I closed on my one engine and opened fire. His port engine also exploded and he started diving steeply to starboard. As my starboard engine was u/s I was unable to follow but noticed one of the crew bale out and the rest starting to climb out on the wings. Just before the Dornier crashed and when it was at about 100 feet another Mosquito attacked causing the enemy aircraft to disintegrate and hit the sea in flames.

These victories increased to five the number of enemy aircraft which Williams and Kirkpatrick had destroyed in four months, and raised the Lynx Squadron's total to 30.

Meanwhile F/Os W. H. Meakin and A. H. Naden, on a Beaufighter, had destroyed a third Do. 217, after making an unsuccessful attack on the two which Williams and Kirkpatrick later destroyed. Their Dornier, like the others, crashed into the sea in flames, scattering debris that slightly damaged the Beau. R.A.F. Mosquitos shot down two more and probably a third, so that only one of the seven Dorniers escaped.

Blackie Williams added the D.S.O. to his row of ribbons and his observer received the D.F.C. A few days later Williams succeeded Moose Fumerton in command of the Lynx Squadron. Under Moose's leadership the squadron, despite its out-dated aircraft, had destroyed 17 Huns and probably destroyed or damaged four, in addition to strafing trains and other targets.

August

The string of night fighter victories which had started in the last week of July continued through the first two weeks in August until the eastward flight of the Nazi armies introduced a new era of operations. Between July 24th and August 19th R.C.A.F. Mosquitos amassed a total of 29 Huns in 27 nights. Of these, 16 were credited to the Nighthawks, now under the command of W/C M. W. Beveridge who succeeded Reid late in July, and the remaining 13 to the Cougars led by Ab Hiltz. In addition to the destroyed, three

probables and four damaged were chalked up.

S/L J. D. Somerville with F/O G. D. Robinson scored the Cougars' 40th victory on the first night of August when they caught a Ju. 188 silhouetted against the light of some flares and shot the port wing to pieces. The same team scored again the following night. This is what happened, in Somerville's own words:

I closed in to 1000 feet and identified it as a Do. 217 by pulling off to starboard and getting a silhouette against the bright northern sky. I pulled back into line astern and opened fire at approx. 800 feet. It appeared the e/a must have seen me at the exact split second that I opened fire, for it started a fairly hard starboard turn. On the first burst half of the e/a port tail plane and rudder flew off and evidently I must have holed his oil tank, because my windscreen became smothered in oil. E/a started doing a steady starboard turn, losing height rapidly as if the pilot had been killed or was having difficulty in controlling his a/c. After the first burst the combat developed into a dog fight as return fire was experienced from the dorsal and ventral guns of the e/a. No hits appeared to register although the fire seemed uncomfortably close. I re-opened fire every time I got close enough to see the e/a through oil, which was gradually clearing due to the slipstream; all the time the e/a kept firing back at me. It appeared that the e/a dived vertically into the ground at the precise moment that I used up all my ammunition. I orbited port and saw the e/a strike the ground and burn furiously. Position approx. 8 miles N.W. Pontorson.

The same night F/L B. E. Plummer and F/O V. W. Evans of the Cougars caught a Ju. 188 carrying two large bombs under its wings and sent it earthwards in a long streak of flame. On the 3rd Dinsdale and Dunn scored a probable in a combat that carried them down almost to the deck, and two Nighthawk crews were credited with the destruction of a pair of Ju. 188s, of which one was shot down by F/L E. G. L. Spiller and F/O J. E. Donoghue, the other by WOs D. MacDonald and, L. M. Colborne. A third 188 was destroyed by WOs N. Joss and P. C. Lailey of the Nighthawks on the 4th while the Cougars added an Hs. 126 to their tally when Dinsdale and Dunn sighted the Henschel near Tours, outlined against the moon. Two short squirts

exploded the observation machine in a mass of flames.

On the 6th Somerville and Robinson scored again. Despite a faltering engine, the Mossie overhauled a Ju. 88, and sent it down in a wide sweeping spiral with one engine on fire. When the Junkers crashed, its two external bombs exploded and scattered debris over a wide area. But the Nighthawks had bad luck when one of their Mossies was shot down. Massey Beveridge, the pilot, was able to bale out, but John Peacock, his observer, was killed in the crash. Peacock had long been a member of the squadron and as observer leader had flown for many months with the previous C.O., Windy Reid. The changeover from Beaus to Mossies had been disastrous for Peacock's six feet three inches. While escape from a Beau was difficult for the pilot, it was comparatively simple for the observer, even one of as great length as John. But in a Mossie it was a different story and after helping the winco out, John was unable to extricate himself.

Two more 88s fell on the 7th, one to WO R. F. Henke and FS L. A. Emmerson of the Nighthawks, the other to F/L R. M. Currie and F/O A. H. Rose of the Cougars. On the 10th, an FW. 190 which S/L J. A. Hatch and F/O J. Eames destroyed boosted the Nighthawks' score to 30, and before the night ended P/O F. K. Collins and F/O P. S. Lee made it 31 with a Do. 217. Hiltz, the Cougar C.O., with his observer Walsh, scored a third victory by blowing up a Ju. 88 over the French coast and returned to base with his windscreen and cockpit cover streaked with oil. On the next night Henke and Emmerson crashed an FW. 190 for the Nighthawks.

Two more 88s were whittled off the Nazis' bomber force on the 14th by Collins and Lee of the Nighthawks. and by Somerville and Robinson of the Cougars who won their fifth victory. A 188 was shot down by D. MacDonald and Colborne on the 16th; and another by Hatch and Eames on the 18th who also crashed one of the older 88s.

On the 19th S/L R. F. Hatton and F/L R. N. Rivers destroyed a Do. 217 during a raid over Normandy, to give the Nighthawks 37 confirmed victories, of which 31 had been chalked up in the eleven weeks since D-Day. Other victories were won that night by F/Os J. Fullerton and B. E. Gallagher of the Cougars who were free-lancing on one of their new Mosquitos. Breaking into a group of raiders over the beach area they sent a Ju. 88 down in flames after a brief combat and then intercepted a second. It was some time before Fullerton could get his sights on the jinking target, but patiently he waited until the enemy pilot, satisfied that he was clear of the danger zone, settled down to a steady course. Then the Mossie's guns spoke briefly. The Junkers crashed, blew up and burned. The Cougars now had 49 enemy aircraft to their credit, 29 of them since the invasion began.

The last nights of August were joyless as the tide of battle flowed rapidly eastward far from the Norman beaches. On the 24th and 25th the Nighthawks flew from England to an airfield at Carpiquet, near Caen, to become the first R.C.A.F. night fighter squadron to operate from liberated France.

During the month the Edmontons had continued their doodlebug patrols with a number of intruder and bomber support missions, the majority of which were uneventful. One night a truck was blown to pieces by one Mosquito crew; on another a Ju. 88 was damaged. The 13th was rather more fruitful as three intruders, making special sorties to harass roads along which the Nazis were trying to retreat, strafed a number of vehicles, destroying at least five and damaging several more. F/Os S. P. Seid and D. N. McIntosh made two sorties that night; on the first they destroyed a buzzbomb as they crossed the English coast and then blew up two trucks and damaged a third between Dreux and Poix. After refuelling and re-arming they flew to Dieppe where they destroyed another vehicle and dam-

aged four. The other Mosquitos exploded one truck each and beat up several more.

On the 28th, F/O R. D. Thomas and F/L R. W. MacDonald strafed three long convoys rolling through Luxembourg and eastern France. Two nights later a freight train and a number of barges were given a raking. The month ended with a burst of activity when, in the Metz area, F/L H. E. Miller and Sgt. W. Hooper, after damaging one truck, attacked a column of vehicles. The leading truck blew up and the explosion, carrying on down the line, set fire to approximately ten more, all of which burned furiously. Later in the sortie they destroyed four more vehicles and made three attacks on a freight train: In northwestern Germany between Bremen, Osnabruck, Hanover and Hamburg three other Mosquitos ranged. F/O W. R. Zeller and P/O H. R. Tribbeck shot up four trains around Dummer See and set fire to a station. F/O S. K. Woolley and P/O W. A. Hastie beat up four more around Oldenburg and Hanover, and then blew up a truck. And finally S/L D. B. Annan and F/O A. M. MacIntosh poured bursts into two locomotives south-east of Bremen.

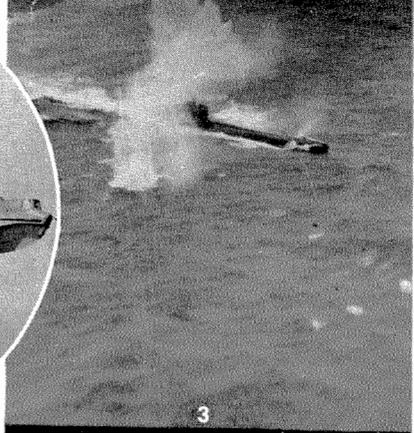
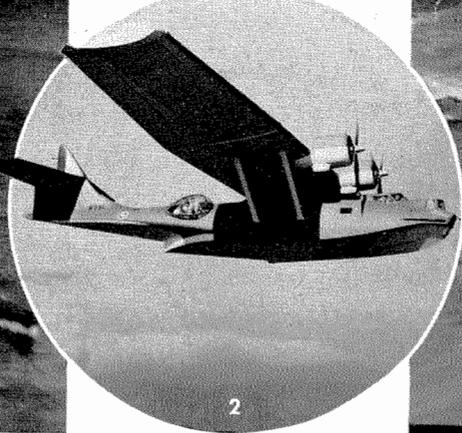
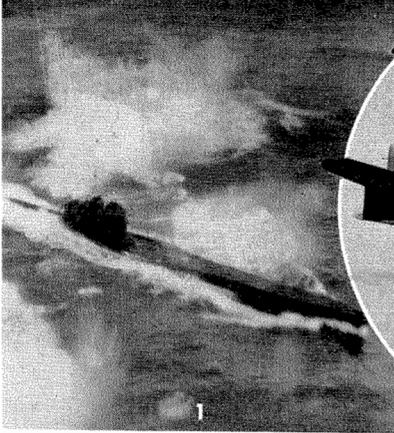
There was less opportunity now for daylight intrusions, but late in August, on the 29th, there was one good sortie by Bannock with Bruce and Seid with D. N. McIntosh. In the face of heavy defensive fire from flak posts dotted around the airfield at Vaerlose, north-west of Copenhagen, Bannock streaked across the field, setting fire to a Ju. 88 parked on the perimeter track and an Me. 110 standing in a blast bay; at the same time Seid damaged an FW. 190 and another Me. 220. The two victories scored by Bannock and Bruce boosted the total bag of the Edmontons to 140 enemy kites destroyed in the air and on the ground.

Since D-Day the R.C.A.F. Mosquitos and Beaufighters had destroyed 82 enemy aircraft with 30 more counted as probables or damaged. Of the confirmed kills 60 were credited to the Nighthawks and Cougars. The Edmontons, al-

though they were diverted in large measure from their regular duties to buzzbomb patrols, were nevertheless able to contribute 18 Huns to the night fighters' bag. The remaining four were accounted for by the Lynx Squadron whose defensive patrols in quiet sectors had given few opportunities for action.



(1) F/L F. G. Fellows of Sarnia. (2) F/L A. R. B. Bellis, D.F.C., of Prince Albert.
(3) F/L J. A. H. De Le Paulle, D.F.C., of Washington, D.C. (4) F/L P. T. Sargent
of Toronto. (5) A Sunderland taxiing. (6) Attack on U-boat—Spring 1944.
(7) Survivors from same attack.



(1) and (3) Attack on submarine by Canso—early summer 1944. (2) Canso in flight. (4) Sgt. R. Cromarty of Blissville, N.B. (5) W/C C. G. W. Chapman, D.S.O., of Fredericton, N.B. (6) WO J. Bergevin of Cochrane, Ont. (7) F/O J. M. McRae of Huxley, Alta. (8) F/L T. C. Cooke, D.F.C., of Dauphin, Man. (9) F/O D. J. C. Waterbury, D.F.C., of Wolfville, N.S.

COASTAL COMMAND

COASTAL COMMAND operates in close association with the Royal Navy and, because of the secrecy which necessarily enshrouds naval dispositions and merchant shipping movements, the work of this branch of the air force receives much less publicity than that of the other Commands. A smashing attack on Berlin by our bombers, or the rout of a *Luftwaffe* formation by the fighter boys, is immediate front-page news; but the shepherding safely to port, through sub-infested waters, of a convoy of 50 or more ships laden with the very life-blood of Allied existence is all in the day's work for Coastal crews.

It requires no great imagination to realize that had the U-boat threat in the Atlantic succeeded, the Allies would not today be hammering at the gates of Germany. At best, we should have been forced to accept a stalemate and a negotiated peace, leaving the Nazis in control of conquered Europe; for with Britain isolated by sea we should have been unable either to invade the Continent or to send material assistance to Russia. The defeat of the submarine offensive, an offensive on which the enemy pinned such hopes that for a long time he diverted to it his major industrial effort and best manpower, will surely rank with the turning back of the *Luftwaffe* in the Battle of Britain not only as the foundation but also as a substantial part of the fabric of Allied victory in World War II.

In the past five years many U-boats have been sunk by

aircraft operating under Coastal Command, the long-range Sunderland and Catalina flying-boats, Liberators, Halifaxes and Fortresses, and the medium-range Wellingtons, Hudsons and Venturas, whose crews maintained patrols by day or night over the U-boat transit areas in the Bay of Biscay and in the far north, or provided close escort for convoys on their way across the Atlantic.

What is not so generally realized is that for every sighting and attack on an enemy submarine, Coastal Command crews spend thousands of hours in the air. They cover millions of miles over the trackless sea on uneventful patrols—uneventful, that is, in the sense of contact with U-boats, but frequently epics of courage, endurance and skill in the face of their greatest enemy, the weather. In no branch of flying operations are team-work, individual efficiency, keenness, patience and physical fitness more essential than in convoy escort and anti-submarine patrol work.

While giving protection to our own shipping, Coastal Command has struck powerful blows at that of the enemy, particularly in the North Sea and in Norwegian coastal waters. Not only has substantial tonnage been sunk or damaged by the versatile Beaufighters, the Wellington bombers and Albacore torpedo-bombers, but long before the invasion of France the Nazis were forced to abandon Rotterdam, the gateway to the Ruhr, as their principal import terminal and divert to convoy escort duties large numbers of war vessels and aircraft.

Another branch of the Command with a magnificent record is the Air-Sea Rescue Service which, with its Walrus amphibian and other aircraft and its fleet of high-speed launches, in 1943 alone saved the lives of approximately 1,700 Allied aircrew who had been forced down onto the sea.

Men of the R.C.A.F., whether serving with R.A.F. units or in our own squadrons, have played a worthy part in the many-sided activities of this great command.

CHAPTER XIV

ANTI-SUBMARINE OPERATIONS

IN the long, and still continuing struggle with the under-sea fleet of the German Navy four squadrons of the R.C.A.F. Overseas have played a noteworthy part. For reasons of security many of the details of their work cannot as yet be revealed. The "Silent Service", with which Coastal Command works in closest cooperation in the anti-submarine campaign, is, quite understandably, most taciturn about this phase of its varied activities on, below and above the seas. Defeating the U-boat is much more a contest of brains than brawn and the greatest care must be taken to keep from the enemy any clue as to weapons and methods of attack, or any tactical or strategical information which might enable him to elude the vessels and aircraft which guard our shipping routes. In this narrative, therefore, it has not been possible to give dates and various other details of the attacks carried out by the Sunderlands, Canos, Wellingtons and Catalinas of the R.C.A.F. The omission of dates is particularly important. True, the enemy knows, after the lapse of time, that so many of his U-boats are missing and must be presumed lost; but he rarely knows when, where or how they met their fate. And this uncertainty about overdue comrades is a vital factor in undermining the morale of other crews in the submarine fleet.

When September 1943 opened, there had been a lull of

several weeks in U-boat aggressiveness in the North Atlantic-for the very good reason that, after losing an average of 30 subs a month from May to the beginning of August, the Hun had been forced to call in the remnants of his wolf packs for reconsideration of tactics and installation of more formidable anti-aircraft armament. Later in September they attempted a come-back in the Canadian convoy escort area using acoustic torpedoes, but this effort was smashed by the combined work of escort ships and aircraft, particularly the Newfoundland-based Liberators of Eastern Air Command. After severe losses in this area the U-boat packs retreated eastward and in October resumed their activities in the northern sea approaches to the British Isles, where many spirited engagements were fought with Coastal Command aircraft operating from Iceland and Northern Ireland. Apart from this, the U-boat policy appeared to have switched from the offensive to the defensive, as the commanders were more concerned with avoiding detection by Allied aircraft than with attacking shipping. Ports on the Biscay Coast were still being used as the principal bases for U-boats operating in the Atlantic, but so effectively were the waters of the Bay patrolled and so heavy had the enemy losses been, that subs in transit to and from those havens very rarely risked exposure by day. When forced to surface at night, to charge their batteries and renew their air supply, they frequently found themselves confronted by powerful Leigh Lights and beset by lethal depth charges.

R.C.A.F. Coastal units took a prominent part in these operations. The famous Demons, in their Leigh Light-equipped Wellingtons, patrolled the Bay during the hours of darkness, while our Sunderland flying-boat squadrons escorted convoys and swept the wide expanse of waters from the Faeroes to Gibraltar by daylight. At the end of January 1944 a Canso "A" (Catalina amphibian) squadron arrived in Iceland on detachment from Eastern Air Command and quickly demonstrated both efficiency and skill at

U-boat hunting equal to the best in Coastal Command—which is saying a great deal. This is the unit with which the late F/L D. E. Hornell won the Victoria Cross.

The Flying-Boat Squadrons

In September 1943, a month memorable for the surrender of the Italian fleet with 25 submarines and for the defeat of the German U-boats in the western North Atlantic, the R.C.A.F. Sunderland squadrons were operating in the same general area. The Flying Yachtsmen, commanded by W/C L. W. Skey, D.F.C., were based on one of the Western Isles of Scotland, and another squadron, commanded by W/C L. G. G. J. Archambault, was stationed in Northern Ireland. Later in the year Larry Skey, a Canadian in the R.A.F. who had commanded the Flying Yachtsmen since their formation in mid-1942, handed over his command to W/C J. R. Frizzle, and about the same time the squadron moved to Northern Ireland. Skey later went to Canada for a tour of instructional duty and has since transferred to the R.C.A.F.

The long patrols by the Sunderlands are more often than not entirely without excitement. But no matter how empty the skies and seas may appear to be, vigilance can never be relaxed. Eyes must still search carefully, methodically, ahead, behind, below, above and all around. Each spot on the sea, each distant speck in the sky, may mark the presence of an enemy. Apart from hostile activity there is the possibility of a sudden closing in of the weather or of engine trouble. An incident may be cited which is illustrative of the hazards encountered and of the calibre of the young men on whose shoulders rests the responsibility for the safety of aircraft and crews. A Flying Yachtsman Sunderland, captained by F/L J. A. H. De Le Paulle, was patrolling the Bay of Biscay when the starboard outer engine suddenly caught fire and dropped into the sea, taking the float and part of the wing with it. As the fuel lines had been

broken the starboard inner also failed, and the aircraft became unmanageable. By the combined efforts of De Le Paille and F/O R. H. Freer, the second pilot, it was just possible to keep the big flying-boat circling long enough to enable three S.O.S. signals to be sent as hasty preparations were made to abandon the aircraft.

The Sunderland was landed on very rough seas, without injury to the crew, and although she sank within two minutes all members managed to scramble out with the dinghies. The flight engineer had removed the astrodome and one of the dinghies was forced through that aperture. It fell into the sea and took the captain with it. After four members of the crew had climbed in, De Le Paille swam after and recovered the ration pack, which had drifted away. Disaster threatened, however, for the skipper's dinghy had been punctured by a jagged piece of metal as it slid over the damaged mainplane, and once in the water it deflated very quickly, forcing the occupants to swim to the second and hang on while De Le Paille plugged the hole and reinflated his dinghy with a hand-bellows. The two were then tied together, clothing was dried, rations apportioned and sails improvised.

They drifted for 3½ days before being sighted by a U.S. Liberator which caused a patrolling Sunderland to be diverted to the position. The dinghies' crews waved the Sunderland away, as they knew the extreme danger of attempting a landing on the rough sea, but the captain of the R.A.F. aircraft was not to be deterred and after two attempts managed to land safely, taxi to the dinghies and take all aboard. On its take-off run the heavily loaded Sunderland was bounced 50 feet in the air by a heavy swell, but somehow managed to remain airborne as the engines picked up and all were brought home safely, in excellent spirits. When, in the following April, De Le Paille was cited as having "completed a tour of operational duty throughout which he has displayed fine leadership, great courage and fortitude"

and was awarded the D.F.C., the citation mentioned that during the experience referred to "his cheerfulness and confidence did much to sustain the high morale maintained by his crew in the dinghies".

De Le Paulle, a Franco-American in the R.C.A.F., who had won the Croix de Guerre as an ambulance driver in France in 1940, made news again in August 1944 when, having been given ten days leave, he:

Crossed to Normandy;

Borrowed a bicycle and rode to his family hunting lodge 60 miles from Paris.

Pedalling alone on a country road, accepted the surrender of four armed Germans who emerged from a wood, and turned them over to the military authorities;

Entered Paris with the liberating U.S. forces; was ordered to leave a hotel because the roof was occupied by Nazi snipers;

Slept for the night in an armoured car in a Paris side street, and arrived back in Britain on completion of his leave and in time to be invested with his D.F.C.

To return to the story of the Sunderlands, two outstanding engagements occurred in the autumn of 1943 as a result of which each of the Sunderland squadrons added another to their tally of U-boats destroyed or seriously damaged.

The first encounter took place when an aircraft of Archambault's squadron, captained by F/O A. H. Russell on a convoy escort, came out of low cloud and sighted a U-boat dead ahead. As the aircraft flew on over the sub, machine-gun fire from the Sunderland's rear turret drew answering bursts. Russell turned and came in for an attack, during which the front gunner silenced the Jerry's flak. Depth charges were dropped, two of which straddled the conning tower, and lifted the sub 15 to 20 feet. When the disturbance had subsided the U-boat had disappeared but 15 members of the crew were swimming in a rapidly spreading oil patch and a large quantity of wreckage. For his

“great skill and determination” on this occasion, as well as for his record as captain of aircraft on a large number of operational sorties, Russell was awarded the D.F.C. Other members of the crew were F/Os A. Menaul and H. Forrest, WO F. R. Haar, Sgts W. Alexander, R. G. Locke, W. J. Lancaster, D. T. Bromhead, D. C. Douglas and A. R. Carterham. Also flying with them was W/C Frizzle, who was actually at the controls when the sub was first sighted but, obeying the unwritten law of Coastal Command, relinquished his post to the captain and had a grandstand view of the proceedings as he stood between the two pilots.

The other attack was carried out by one of the Flying Yachtsmen crews in an epic flight against unusual odds. Sunderland S-Sugar captained by F/L P. T. Sargent, with F/Os A. R. B. Bellis and C. B. Steeves, WOs W. F. Beals, J. H. Shand and J. D. Stafford and FSs B. Campbell, L. T. Needham, J. Y. Rutherford and D. Mesney, and F/L P. A. S. Woodwark, group gunnery officer who was manning one of the front guns, was on patrol in mid-Atlantic when two U-boats were sighted about five miles off, heading towards a convoy. Paul Sargent immediately turned in to attack. As the Sunderland approached the target, it was caught between heavy, concentrated flak from both submarines, but by evasive action coupled with accurate fire from the aircraft's front guns, which momentarily cleared the decks of the sub selected for attack, few hits were sustained on the first run over. After releasing depth charges, which under-shot, Paul circled tightly to port for a second run and, in the words of Art Bellis: “This time no evasive action was taken; only two depth charges were left and the skipper apparently determined that the attack had to be successful. On the run in, ack-ack hits were numerous, both front gunners (Needham and Woodwark) and the navigator (Steeves) being hit, as well as some damage being caused to the engine controls in the cockpit. In spite of this, Sargent continued his attack and, according to the report of the rear gunner,

obtained a perfect straddle with the two depth charges." The U-boat was lifted by the force of the explosions and then disappeared beneath the waves.

The Sunderland was in no condition to stay longer on the scene as her hull had been riddled by flak, the wing dinghy blown out and the automatic pilot, R/T, W/T, front turret recuperator, throttle and pitch prop-exacters destroyed. So severe was the damage that the aircraft was almost unmanageable. Both front gunners were dead and Steeves, standing at the navigator's table, had had his left leg completely blown away by a shell. In spite of his wounds, Steeves refused to lie down and, before he collapsed and died, succeeded in giving the D.R. position and the course to steer to the nearest convoy. Sargent headed for the convoy, and, after circling one of the escort ships, made a skilful crash landing in the rough water. In the heaving seas the Sunderland's riddled hull began to disintegrate almost immediately, and water poured in. Rutherford, suffering from concussion and lacerations, and Mesney, with a leg fractured in four places and his left arm temporarily paralyzed, were miraculously able to leave the sinking craft through the open stern of the fuselage where the tail assembly had been torn away. Bellis was saved by the heroic action of a seaman from the rescuing frigate who swam to the aircraft, disentangled the wounded and unconscious officer from the radio aerials and brought him aboard ship. Artificial respiration was applied for almost two hours before Bellis revived. Altogether, seven members of the crew were saved. Three others had already been killed or died of wounds. The skipper, Paul Sargent, who had shown such courage in pressing home the attack in the face of very heavy fire from the two U-boats and whose final act had been to land the aircraft coolly and skilfully near the warship, was not among the rescued. To quote Bellis again: "Crew discipline throughout the attack and ditching was exemplary and was due, it is felt, to a very large

extent to the calm, unexcited yet decisive and aggressive spirit of the skipper". Sargent was subsequently mentioned in despatches, as was Steeves, who had shown such exceptional devotion to duty even though mortally wounded. There can be no question that, had they survived, their gallantry would have been recognized by the award of suitable decorations. Bellis and Beals each received the D.F.C. It remains only to be added that, while the Sunderland's survivors were being picked up by one naval escort vessel, another was racing to the scene of the encounter with the submarines and within a short time the second U-boat was sent to the bottom.

In December both Sunderland units shared in the events leading to the destruction of a 2,700-ton German blockade runner in the Bay of Biscay. The fast enemy vessel, inward bound with raw materials from the Far East, was first sighted and reported on the 27th by an R.A.F. Sunderland which, after shadowing the ship for some time, made an attack, but due to cloud could not observe the results. Then, within 20 minutes of each other, two R.C.A.F. Sunderlands appeared on the scene and joined the patrol. F/L W. Y. Martin and crew, of the Yachtsmen, attacked out of cloud, but overshot on the first run, though the enemy's decks were raked with machine-gun fire. On a second run two bombs were dropped and the decks again well sprayed with fire. Only one bomb was seen to explode and this was a near miss. The attack was made in the face of considerable flak, and damage to the aircraft included a hit by a 4-lb. shell in the port wing. Some two hours later the other Canadian flying boat, skippered by F/L H. C. Jackson, essayed an attack, but was forced to break off owing to intense flak and lack of cloud cover. However, the sighting reports sent out by the Sunderlands brought other Coastal Command aircraft to the scene and in due course an attack by a powerfully-armed Liberator proved fatal to the blockade runner. When last seen she was ablaze from, stem to

stern and had been abandoned. It is of interest to record that on the following day a strong force of German destroyers, which had put to sea in expectation of escorting the blockade runner, was intercepted by two cruisers and very severely mauled.

In the course of other routine operations during the last weeks of the year, an experienced Flying Yachtsmen crew was lost, the Canadian members of which were F/Os J. D. B. Ulrichsen (pilot), W. S. Johnson and R. H. Strauss, P/O C. G. Gorrie and FS N. Barrett.

1944

Following the defeat of their concentrated attacks on Atlantic convoys during 1943, the battered U-boat forces were withdrawn to the safety of their home ports or sent out in small, widely-scattered units. This, of course, meant that our large convoys of material for the projected invasion of Europe went practically unmolested; and by the same token our aircraft on outer convoy patrol were offered few chances for attack. However, in the early months of 1944 there were indications that U-boats were on the prowl in the immediate approaches to the United Kingdom, as part of the enemy's efforts to reconnoitre our preparations for the Second Front. The vigilance of Coastal Command forces, which now included a squadron detached from the R.C.A.F.'s Eastern Air Command, soon began to take a toll of these marauders.

The Cansos Arrive from Canada

As a result of the losses inflicted upon the U-boats in September 1943, submarine activity in Canadian operational waters was reduced to mere nuisance proportions. Therefore, when later in the year the United Kingdom authorities enquired whether one of our long-range bomber reconnaissance squadrons could be despatched to Iceland, to work with Coastal Command on antisubmarine opera-

tions over the northern shipping routes, an affirmative answer was given. It was stipulated; however, that the squadron should remain under the administrative control of Eastern Air Command, R.C.A.F., and be subject to immediate recall if the war situation in the west Atlantic made this necessary.

The unit selected was one which had been formed in Eastern Air Command in May 1942 and equipped with Canso amphibians. Commanded by W/C C. G. W. Chapman, an officer of the permanent R.C.A.F., its personnel were fully experienced not only in actual sub-hunting, but also in meeting the problems of aircraft maintenance while operating under northern weather conditions. At the beginning of December, personnel and aircraft had just returned to their home base from detachment at widely separated points in Newfoundland, Labrador and the Gulf of St. Lawrence. The task of re-conditioning the aircraft and generally reorganizing the squadron had been in progress only a week when word was received that the entire unit was to be ready to move to Iceland by air in the middle of January and be fully operational upon arrival. As no squadron had ever before been transferred intact from Canada to the European theatre by air, all features of the move had to be planned in great detail. Routes to be flown, stopovers and accommodation, arrangements for servicing and supply, modification of aircraft armament and equipment for overseas service, preparation of personnel and provision of transportation for ground crews, workshops and maintenance equipment, etc., were but a few of the problems which had to be considered. Unit personnel, stimulated by the prospect of going overseas, and doubtless also by the hope of 144 days leave if their job was done in time, worked at a feverish pace to get the aircraft ready. So effectively did they go about it that the target date for departure of the first group of Cansos was moved forward to January 3rd.

Between January 4th and 13th, the Cansos took off on the first leg of the flight from Dartmouth to Goose Bay, Labrador. As they were to be more or less self-sufficient en route and ready for operations upon arrival in Iceland, each aircraft carried close to the maximum permissible weight. Not only had many spare parts to be transported, but also, in addition to its regular crew and sufficient fuel and oil for the longest hop, each Canso took on board four ground crew passengers, selected by trades for their possible usefulness in transit.

The second stage of the flight, from Goose Bay to Greenland, called for the most careful planning, because of the weather conditions and the navigational problems involved in finding an air base tucked away between mountains in the rugged and forbidding coast of Greenland. The first of the crews to complete the journey was captained by F/O A. Hildebrand and landed at Reykjavik on January 6th, only two days after leaving Dartmouth. Two others arrived the following day, and the remainder at intervals up to the end of the month, after delays due to weather or mechanical trouble caused by the extremely low temperatures. In the meantime, R.C.A.F. Dakotas and Liberators commenced the ferrying of ground personnel while two sturdy R.C.A.F. marine craft, "Eskimo" and "Beaver", sailed with operational equipment, baggage and general supplies. On January 24th, the first anti-submarine patrol from the Icelandic base was carried out by F/O C. W. Leech and crew.

It speaks volumes for the efficiency and enthusiasm of the squadron that, despite the wind, rain, hail and snowflurries which are part and parcel of an Icelandic winter, and the fact that personnel and equipment were still arriving at irregular and unpredictable intervals, the Canso crews were able to put in a full month's operational flying in February. Serviceability of aircraft was maintained at a surprisingly high level, and during one five-day period approximately 250 hours were flown on anti-submarine patrols.

F/O C. C. Cunningham and crew logged the first U-boat sighting and attack made by the unit from its new base. As the aircraft came in to attack, Jerry adopted the customary tactics of turning sharply and sending up a hail of cannon and machine-gun fire. For the next ten minutes both aircraft and U-boat circled until Cunningham found himself directly astern of the enemy, and dived in to drop his depth charges. During the run in, the Canso's front guns raked the U-boat's deck and hit the conning tower, where at least three men were seen to fall. No further flak was experienced. After a second machine-gun attack the enemy submerged and made off, leaving an oil slick on the surface to mark his course for two miles. On the watch for further signs of the damaged U-boat, the Canso remained in the area for six hours before handing over to a Liberator. Cunningham was subsequently awarded the D.F.C., as was his front gunner, F/O J. E. V. Banning.

Several weeks later the Canso squadron made a second attack on a U-boat—this time almost certainly a kill. F/O T. C. Cooke and crew were flying at 800 ft. on a combined anti-submarine patrol and met flight, when they sighted the submarine and went in to attack. The enemy opened fire at 3,000 yards, but Cooke took successful evasive action while closing the range to 1,200 yards, at which point he turned in for a beam attack and the Canso's nose guns sprayed the U-boat's conning tower to such good effect that at 300 yards all enemy flak ceased. Passing over the target, the Canso dropped depth charges in a straddle, one close to starboard and the others to port. Following the attack the U-boat was noticeably lower in the water and nine minutes later, with a violent explosion forward of the conning tower, the Hun sank. Immediately afterwards quantities of wreckage came to the surface followed by a continuous stream of large air bubbles and traces of oil. Three hours later a patch of heavy dark oil measuring 600 to 250 yards was observed, and an hour and a half after that the patch

had increased to 3,000 by 600 yards. For this exploit Cooke was granted an immediate award of the D.F.C. Other members of the crew were F/L E. W. Wiskin, F/Os B. F. Hunter and P. P. Ficek, WO G. R. McMacken, FS E. N. C. Tiplander, Sgts. E. S. Hill and T. E. Hooson, and an R.A.F. met observer, FS E. A. Johnson.

The Sunderland Squadrons

Meanwhile, the Sunderlands, after a long period of no sightings, came back into the news when aircraft U-Uncle of the Yachtsmen carried out a skilful and persistent attack which was rewarded by complete success. The skipper, WO W. F. Morton, was on his first operational sortie as a captain and on this patrol F/L S. W. Butler was at the controls. Other members of the crew were F/L A. Ormerod, F/O R. J. Simard, P/O J. E. Nesper, FSs C. L. Holland, F. W. Gallaher and W. E. Roberts, and Sgts. E. E. Higgins and J. F. Rushton. While they were proceeding to the patrol area at 1,000 ft., a U-boat travelling at 12-15 knots was sighted on the port beam. Butler immediately turned in to attack, but as he turned the enemy opened fire at a distance of about five miles and began to take evasive action, first by zigzagging and then circling so as to keep stern-on to the aircraft. After trying for some ten minutes to get into position for a bow attack while dodging, the flak, Butler decided to try a diving approach from a position 1,000 yards away on the U-boat's starboard beam. Levelling off when 400 yards from the target, the flying-boat flew through a curtain of flak, one shell piercing the hull below the waterline, but the front guns replied to such effect that finally only one enemy gunner appeared to be in action. Depth charges were dropped, some of which were seen to straddle the conning tower. Three minutes later the U-boat submerged, but resurfaced almost immediately and moved off very slowly in a gentle turn to starboard. An hour and a half later the submarine flashed to its victors the tribute

“Fine Bombish” (*sic*) and the crew abandoned ship, taking to their dinghies. Ten minutes later the sub sank by the stern. The aircraft sent out position reports and stayed over the survivors, approximately 40 in number, until relieved an hour later by one of Archambault’s Sunderlands, piloted by S/L P. J. Grant. U-Uncle then set course for base, the crew making temporary repairs to the damaged, hull en route, and a safe landing was made.

A month later a determined attack was made by one of Archambault’s crews when F/L F. G. Fellows sighted a U-boat for which he had been despatched to search. Fellows started to manoeuvre for a beam attack and the U-boat began the familiar tactics of turning stern-on and putting up a barrage of flak. When the aircraft had turned through 180°, the sub momentarily retarded its rate of turn and Fellows took quick advantage of the opportunity offered. The front gunners opened fire at 1,200 yards, raking the submarine’s deck and conning tower with more than 1,500 rounds to such effect that no return fire was experienced during the last 300 yards of the run-in. Up to this point the aircraft had received numerous hits, but the pilot pressed home his attack with a minimum of evasive action. As the Sunderland tracked right over the U-boat from starboard quarter to port bow, depth charges were released and a moment later there was a violent explosion in the *Unterseeboot*. The force of this explosion, in the words of the crew report, “was such as to throw up the entire moveable contents of the aircraft-floorboards, crockery, eggs and crew forming a new variety of omelette, on the edge of which the rear gunner was knocked unconscious and the wireless operator mechanic thrown from his perch in the astrodome. All electrical circuits became unserviceable, the R/T cable was severed, wing seams opened and port flaps rendered u/s; but the principal damage was to the elevator, which required all the skill and strength of the captain, assisted by the second pilot, to counteract. The aircraft being full tail-heavy started

to climb and although trimmed full nose-heavy still required great pressure on the controls. All the crew were eventually stationed forward of the main spar to assist in maintaining trim”.

While it is a safe assumption that the U-boat was damaged, if not sunk, this contretemps unfortunately deprived the Sunderland's crew of the opportunity of obtaining conclusive evidence. When the aircraft was 300 yards from the scene the front gunner saw a brownish pool with blue smoke hanging above it, astern of the sub. While efforts were being made to get the big flying-boat under control the rear gunner, who had regained consciousness, saw the enemy stern down and listing; this was confirmed by three other members of the crew. Continuous observation was impossible for the next few minutes while the aircraft was brought round in a cautious turn and when the position was again traversed all that was visible was a patch of oil 300 ft. by 100, with streaks 200 yards long pointing towards the depth charge pool. After remaining in the vicinity for another half-hour, Fellows brought the Sunderland back safely to base—no mean achievement, considering the damage caused by flak and the explosion. With him in the aircraft were F/Os R. G. Scott, H. Niblett and H. M. Calvert, WOs J. Caslake and S. Cowan, and Sgts. E. G. Dyer, R. Guiver, T. H. Edwards, R. Oliver and G. Stevenson.

In sub-hunting, as in other highly technical team operations, success is the reward of continuous, painstaking training. Crews must be on top line at all times, with each and every member ready and able to do his part with split-second efficiency. As the number of U-boats at sea decreases and opportunities for real action become fewer, efficiency is maintained by still greater concentration on training, both in the air and on the ground. To quote an entry in the diary of one of the R.C.A.F. Sunderland squadrons:

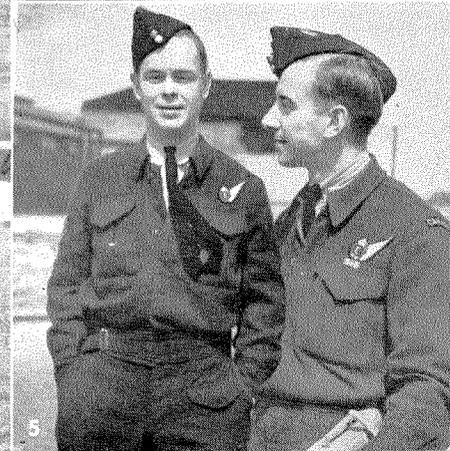
Weather during the last three days has been such that only one transit flight was recorded. There was neither air training nor opera-

tions, but it gave the leaders a good opportunity to get the boys genned up in the classrooms. In a Coastal Command squadron the occasions when a crew will attack or even see a U-boat are so rare that they are seldom able to learn by experience or by mistakes. The training must be done conscientiously and continuously so that the detection and identification of the enemy, the tactical manoeuvres, the attack and the evasive withdrawal with photographic evidence of a kill may be executed with almost automatic precision. An attack on a U-boat from a low level leaves very little margin for any errors of judgment.

As time went on there were indications that the enemy intended to increase the scale of his submarine operations in northern waters. To nip these plans in the bud, by intercepting U-boat reinforcements before they could reach the convoy routes, Coastal Command shifted considerable aircraft strength to patrols off the Norwegian coast. R.C.A.F. Sunderlands were detached to the Shetland Isles and Canos to northeastern Scotland, and they detected a fairly large movement of outward-bound U-boats. In the case of the Sunderlands, however, the enemy, with a single exception, dived before attacks could be carried out. F/L R. H. Nesbitt and crew, of Archambault's squadron, sighted what appeared to be a large puff of smoke or a splash on the water some ten to 15 miles away. On closing to investigate, the wreckage of an aircraft was seen, with a surfaced U-boat in the vicinity. The sub opened fire immediately, but after using evasive tactics Nesbitt carried out a diving attack and dropped depth charges which, unfortunately, undershot as the U-boat made a quick turn. The enemy, having apparently escaped damage, submerged and was not seen again.

Invasion Month

During the five days preceding D-Day, when rumours as to the imminence of invasion were rife and an atmosphere of tense expectancy pervaded both service and civilian life, our Sunderland crews continued their U-boat hunts in the remote waters of the sub-Arctic. When first reports



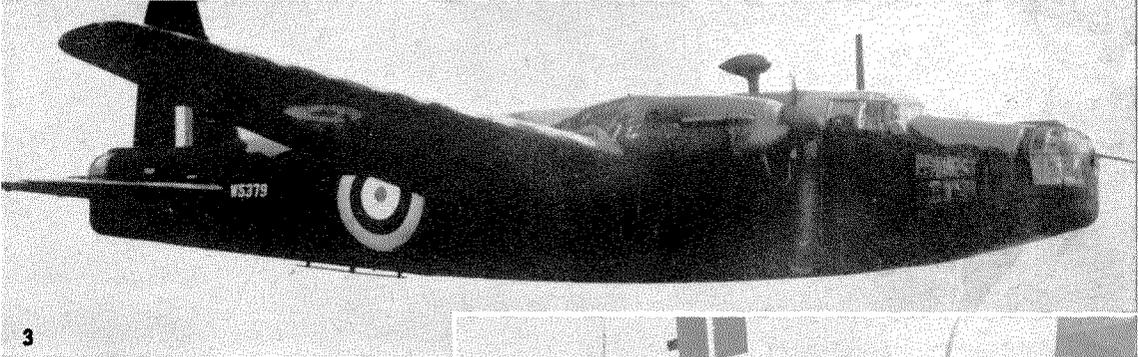
(1) F/L B. C. Denomy, D.S.O.; F/L D. E. Hornell, V.C. (2) FS I. J. Bodnoff, D.F.M.
 (3) *Front row*—Sgt. F. St. Laurent; Sgt. D. Scott; F/O G. Campbell, D.F.C.; FS Bodnoff.
Back row—F/O F. W. Laurence (a former member of Hornell's crew—killed in an earlier
 operation); F/O S. E. Matheson, D.F.C.; F/L Hornell; W/C W. F. Poag. (4) Sgt. Scott,
 F/L Denomy, F/O Matheson, F/L Hornell, F/O Campbell. (5) Sgt. Scott, Sgt. St. Laurent.



1



2



3



5



4

(1) F/L R. E. MacBride, D.F.C. (2) F/L P. W. Heron, D.F.C. (3) A Wellington of the Demon Squadron. (4) *Back row*—F/L C. C. Cunningham, D.F.C.; F/O W. V. Coffyn; F/O J. E. V. Banning, D.F.C.; Sgt. G. Gratton. *Front row*—FS J. Girard, F/O J. Somerville and FS P. Gonin. (5) A DEMON CREW: F/O C. M. Bolger, D.F.C.; F/O H. P. B. Florence, WO C. T. Butler, WO E. B. Ross, FS F. T. Osteen and F/O S. C. Butler.

of the landings in Normandy came through, it was difficult to believe that at long last the day had arrived. One squadron recorded its reaction on June 6th in these words:

Enemy reports on the radio at 0800 hrs. this morning that paratroops had landed in France gave us the first intimation of the invasion of the Continent. Was it true or a flutter sent out by the enemy for his own purposes? Four years ago we were driven out and for months we have been waiting for D-Day and were consequently not prepared to accept the news without proof. During the morning there were more rumours that General Eisenhower had spoken, and different scraps of information were gleaned from the radio.... We were now prepared to accept it as the truth and awaited only the B.B.C. news at 1300 hrs. to confirm it. The King's call for prayer at 2100 hrs. was heard with a sense of pride and humility at the messes and at every radio on the station.

A special order of the day was received from Air Chief Marshal Sir W. Sholto Douglas, K.C.B., M.C., D.F.C., A.O.C.-in-C. Coastal Command: "The great day we have all been waiting for has arrived. The invasion of the Continent of Europe has started. In this operation Coastal Command has a vital part to play. Our job is to hold the ring"—this is, to prevent the enemy from interfering with our invasion convoys and so ensure the safe passage to the Continent of our troops and their supplies. Without this the invasion cannot succeed. The enemy will doubtless make determined efforts to penetrate Coastal Command's screen with his U-boats and E-boats. They must not get through. During this battle—perhaps the most important the British Empire has ever engaged in—the most intensive efforts will be, required from all ranks of Coastal Command. This is the supreme test, and I confidently rely on you all to give of your best, to take risks, to work hard, to endure hardships and discomforts. So shall we ensure final victory."

The complete success of this phenomenal amphibious operation is the measure of the efficiency and power of Coastal Command and of our naval forces on June 6th, 1944, and the days which immediately followed. The enemy, kept in doubt as to our intentions until the last, had disposed powerful submarine and fast, light, surface fleets at strategic points from Norway to the Bay of Biscay, available for deployment against invasion convoys immediately the exact location of the Second Front was disclosed. He apparently hoped to cut off the initial assault

force from contact with Britain and prevent any build-up by sea, while the *Wehrmacht* proceeded to annihilate the Allied invaders on the beaches. How completely these plans were frustrated is a matter of history. The deadly and elusive U-boat flotillas, upon which Doenitz counted so heavily, were literally blasted to pieces by Coastal Command as they essayed passage from Biscayan ports to the English Channel. A similar fate befell the enemy's destroyers and E-boats, when they came up against the well-nigh impenetrable barrier of our naval vessels and Coastal Command aircraft. The losses of invasion craft due to enemy action were unbelievably light for an operation of such magnitude; in fact, adverse weather caused greater anxiety than the German navy during the first critical days when reinforcements and supplies were being poured in.

The Sunderlands had the most active month since their formation, participating intensively in anti-submarine patrols of the upper Bay of Biscay and the southwestern approaches to the English Channel. However, after the staggering blows dealt the U-boats during the first days of the invasion, the prowlers still in that area apparently found discretion the better part of valour and very few sightings were made.

There is a very different story to be told of the Cansos, who chalked up an amazing record of successes during invasion month. With all available aircraft and crews still working temporarily from a Scottish base to intercept enemy submarine reinforcements being rushed from Norwegian ports, the squadron sank four U-boats and shared in the destruction of a fifth, thereby winning one V.C. (the first ever to be awarded to a member of the R.C.A.F.), two D.S.O.'s, seven D.F.C.'s and three D.F.M's in a single month.

The first in this series of successful actions took place when F/L R. E. McBride and his crew of F/Os J. K. Gutmanson and W. C. Lawrence, P/Os G. P. McNutty and D.

G. MacDonald, FS G. W. King, Sgts. C. G. White and T. C. Harper, sighted a U-boat and flew in to attack, skilfully evading intense and accurate flak. The aircraft opened fire at 1,000 yards and scored hits on the conning tower, then passed over the U-boat from stern to bow and dropped depth charges. When the straddling DCs exploded, the sub lifted bodily and swung to port, losing almost all forward way. A second machine-gun attack brought no answering fire. The U-boat then submerged on an even keel, leaving at least five survivors floating in the water and waving at the Canso; it also left an oil patch which increased in size until, on the aircraft's departure nearly four hours later, it was a mile long and 400 yards wide. As it was possible that the men seen in the water had been in the conning tower when the U-boat submerged the result of the attack was officially assessed as probably destroyed. The exploit was cited when, in August, McBride received the D.F.C.

The next success was achieved by F/O L. Sherman and crew of F/Os G. W. Besley, J. L. Harrison, F. W. Lawrence and R. R. Ward, FSs M. A. Gislason and F. R. Dreger and Sgt. J. E. Roberts. The victim was first sighted at a distance of some miles and the subsequent attack followed the familiar pattern—an exchange of fire on the approach, while the sub endeavoured to keep stern-on to the aircraft; the dropping of depth charges in a straddle, leaving the U-boat damaged and slowed down; a gun duel (this one lasted about ten minutes) during which the sub gradually sank lower and finally disappeared. On this occasion the claim of one destroyed did not rest wholly on the sometimes doubtful evidence of a large patch of oil, but also on the fact that approximately 35 members of the U-boat's crew, as well as considerable wreckage, were seen floating on the surface. For this "well executed operation", Sherman received an immediate D.F.C.

Not to be outdone by the rest of the squadron, the C.O. accounted for the next victim, two days later. T-Tommy

was on a routine patrol when a U-boat was sighted just as its conning tower came to the surface. A low-level attack with depth charges was made and then Chapman circled as the U-boat, with decks awash, turned slowly to starboard: After travelling for about 400 yards the sub stopped and began to settle by the bow, with her stern in the air, the rudder and motionless propellers plainly visible and many of the crew in the water. At that point, it looked like a clean-cut victory for the Canso, which made several runs to obtain photographic evidence of the kill. However, the conning tower reappeared and as the aircraft was making another run, an enemy gunner managed to open fire to such effect that T-Tommy's hull was badly holed and the port engine hit so that it leaked oil and belched black smoke. The damaged engine was switched off, but the propeller could not be feathered nor the fuel jettisoned. Finally, after being forced down from 1,000 ft. to wave-top height, Chapman cut his starboard engine and ditched safely. During the 15 or 20 minutes that the flooding hull remained afloat, the crew abandoned the aircraft smoothly, launched their two dinghies and even salvaged cameras, documents and maps. But luck was against them, as one of the dinghies burst on inflation and the whole crew was forced to take to the other and let the equipment go. Two crew members got into the dinghy while the others held on to the sides, with the idea of taking turns, but after changing places a few times the men were unable to climb into the dinghy owing to their weakness and waterlogged clothing. All were suffering from cold.

While ditching, the Canso had sent out an S.O.S. and a little more than an hour later a Coastal Command Liberator sighted the crew and directed an A/S/R Warwick to the scene. Another hour and a half elapsed before the Warwick arrived and dropped an airborne lifeboat, which fell downwind about 100-150 yards away from the dinghy. F/O D. J. C. Waterbury, the navigator, removed his clothing, swam

out to the lifeboat and after at least an hour's superhuman effort succeeded in bringing it back to his comrades. In the meantime, FS H. C. Leatherdale, 1st/Eng., who had been held up by his companions for some time, relaxed his hold and was lost. The others, however, were able to climb into the lifeboat. Another Warwick then arrived, dropped additional rescue equipment and was joined by a Sunderland which directed a high-speed launch to the scene. By the time the launch arrived, some nine hours after the aircraft ditched, the surviving members of the crew were suffering greatly from exposure and immersion and two of the wireless air gunners, WO F. K. Reed and FS G. F. Staples, were in such a bad way that, despite persistent efforts at artificial respiration, they did not revive. All surviving members of the crew were subsequently decorated, Chapman receiving the D.S.O., F/Os Waterbury and J. M. McRae and WO J. J. C. Bergevin the D.F.C., and Sgt. R. F. Cromarty the D.F.M.

On the same day Sherman and his crew, who had previously sunk a U-boat, failed to return from patrol. As the last heard from them was a flash stating that they had sighted an enemy submarine, it was assumed that in the ensuing action they had been shot down.

The R.C.A.F.'s First V.C.

At the end of July the people of Canada generally, and the R.C.A.F. in particular, were thrilled by the announcement that the first Canadian air V.C. of the war had been awarded, posthumously, to F/L David Ernest Hornell, of Mimico, Ontario. Since the official citation covering the award is less laconic than usual and tells the details of the story in eloquent, if restrained, language, it is quoted in full:

F/L Hornell was captain and first pilot of a twin-engined amphibian aircraft engaged on an anti-submarine patrol in northern waters. The patrol had lasted for some hours when a fully surfaced U-boat was sighted, travelling at high speed on the port beam. F/L Hornell at once

turned to the attack.

The U-boat altered course. The aircraft had been seen and there could be no surprise. The U-boat opened up with anti-aircraft fire which became increasingly fierce and accurate.

At a range of 1,200 yards, the front guns of the aircraft replied; then its starboard gun jammed, leaving only one effective. Hits were obtained on and around the conning tower of the U-boat, but the aircraft was itself hit, two large holes appearing in the starboard wing.

Ignoring the enemy's fire, F/L Hornell carefully manoeuvred for the attack. Oil was pouring from his starboard engine which was, by this time, on fire, as was the starboard wing; and the petrol tanks were endangered. Meanwhile, the aircraft was hit again and again by the U-boat's guns. Holed in many places, it was vibrating violently and very difficult to control.

Nevertheless, the captain decided to press home his attack, knowing that with every moment the chances of escape for him and his gallant crew would grow more slender. He brought his aircraft down very low and released his depth charges in a perfect straddle. The bows of the U-boat were lifted out of the water; it sank and the crew were seen in the sea.

F/L Hornell contrived, by superhuman efforts at the controls, to gain a little height. The fire in the starboard wing had grown more intense and the vibration had increased. Then the burning engine fell off. The plight of aircraft and crew was desperate. With the utmost coolness the captain took his aircraft into wind and, despite the manifold dangers, brought it safely down on the heavy swell. Badly damaged and blazing furiously the aircraft rapidly settled.

After ordeal by fire came ordeal by water. There was only one serviceable dinghy and this could not hold all the crew. So they took turns in the water, holding on to the sides. Once, the dinghy capsized in the rough seas and was righted only with great difficulty. Two of the crew succumbed to exposure.

An airborne lifeboat was dropped to them but fell some 600 yards, down wind. The men struggled vainly to reach it and F/L Hornell, who throughout had encouraged them by his cheerfulness and inspiring leadership, proposed to swim to it, though he was nearly exhausted. He was with difficulty restrained. The survivors were finally rescued after they had been in the water for twenty-one hours. By this time F/L Hornell was blinded and completely exhausted. He died shortly after being picked up.

F/L Hornell had completed 60 operational missions, involving 600 hours' flying. He well knew the danger and difficulties attending attacks on submarines. By pressing home a skilful and successful attack

against fierce opposition, with his aircraft in a precarious condition, and by fortifying and encouraging his comrades in the subsequent ordeal, this officer displayed valour and devotion to duty of the highest order.

Hornell's companions in this epic adventure were: F/O B. C. Denomy, co-pilot; F/L S. E. Matheson, navigator; F/O G. Campbell, 1st/WAG; FS I. J. Bodnoff, 2nd/WAG; FS S. R. Cole, 3rd/WAG; Sgt. D. S. Scott, 1st/Eng. and Sgt. F. St. Laurent, 2nd/Eng. Of these, Scott and St. Laurent died from exposure while still adrift. All the others were subsequently decorated, Denomy with the D.S.Q., Campbell and Matheson the D.F.C., and Bodnoff and Cole the D.F.M. Under existing rules, the Victoria Cross and the George Cross are the only British decorations for which recommendations can be made posthumously. However, both Scott and St. Laurent were mentioned in despatches.

When the submarine was first sighted by Bodnoff, the crew had been airborne for nearly ten hours on a routine patrol and were on their way back to base, but Hornell immediately gave the signal "action stations" and turned in for the attack. As the range closed and the flak intensified, violent evasive action had to be taken and Campbell showed remarkable skill in getting his guns on the target, making strikes on the conning tower and hitting members of the U-boat's crew. When the Canso's starboard engine was hit and caught fire, Denomy managed to feather the propeller and the violently-vibrating engine was stopped just before the sub was reached. At this moment the U-boat ceased firing and turned broadside on to the aircraft, which was all set to attack from astern. With split-second decision and great skill Hornell swerved the almost uncontrollable Canso and, as the citation says, "released his depth charges in a perfect straddle". Relieved of the weight of the DCs, the Canso was brought up to 250 ft., when the starboard engine dropped from the blazing wing and changed the trim of the aircraft to such an extent that it was impossible to stay airborne.

After Hornell had managed to turn into wind and swell for a ditching, it took the combined efforts of the two pilots to make the landing. At the first attempt they hit the top of a huge wave and bounced 150 ft.; at the second, with power switched off, they bounced again and then came down for the third time and remained on the water. All members of the crew, including Matheson and Cole who had been wounded during the attack, scrambled out of the Canso and the dinghies were launched by Scott and St. Laurent. The latter had difficulty in inflating his dinghy until it had drifted some distance. In the meantime the other seven members of the crew were in, or hanging on to, Scott's dinghy. Propelled by Hornell, Denomy and Matheson, they succeeded in reaching the first dinghy, but it exploded as St. Laurent and two others were clambering in, so St. Laurent joined Scott, Campbell, Bodnoff and Cole in the good dinghy while the others remained in the water, hanging on.

Denomy describes the next 20½ hours in the following words:

This is the way we stayed for the first two hours. Campbell took Hornell's trousers and tied the legs together to make a bailing bag. I took Matheson's flying helmet, and hanging on with one hand, bailed with the other. After two hours, when we were becoming numb, Hornell and I got into the dinghy and Scott and Campbell got into the water. I then started to bail with a regular bailing bag. After about one hour we decided it was necessary to get everyone into the dinghy for survival. We were successful in getting everyone in except Scott who had to leave his feet trailing in the water. As we carried on in this manner, I would bail for ten minutes and rest for five. To give room and allow free movement to bail, someone had to slip into the water. This continued for 12 hours.

About four hours after we ditched, an aircraft, a Catalina flown by Lt. Johansen, a Norwegian, was sighted. Campbell fired three of the two-star cartridges provided in the dinghy. It was our third and last flare that the aircraft saw. The aircraft dropped sea markers or smoke floats periodically to keep us in sight. At this stage, the waves were about 18 feet high and the wind about 20 knots. After about 30 min-

utes, the aircraft flashed to us "Courage—H.S.L. on way—help coming". It then went about two miles away and returned flashing "Vs" also "U-boat killed". This, of course, gave us considerable courage and Matheson, our navigator, kept working out an E.T.A. for the high speed launch. After about eight hours in the dinghy, . . . we threw over our ration box and oars, etc., keeping only the water can. The waves were now about 25 feet high and wind about 30 knots. . . Hornell and Campbell were seasick and Hornell began to suffer noticeably from cold. Campbell had a half package of dry cigarettes which we rationed to the entire crew. Someone also had a few barley candies which helped considerably. During the next few hours, the waves and wind increased greatly until at one stage the wind was between 45 and 50 knots and the waves 50 feet high. To keep the dinghy upright, we invented a game, "Ride 'em Cowboy", to ride the waves. We would shift our weight from one side to the other as we went up and down the high waves. Unfortunately, after 14 hours at sea, a wave broke as we were at the top of it, and capsized us. We all managed to re-enter the dinghy but we had lost our bailing bag and water can. This left us at the mercy of the seas entirely. At' this point St. Laurent and Hornell showed serious signs of weakening. Hornell, suffering from intense cold, became temporarily blind. St. Laurent became delirious and soon passed away. We slipped his body out of the dinghy to make room for Scott, who had remained partly in the water.

After about 16 hours in the dinghy a Warwick was successfully, homed to us and attempted to drop an airborne lifeboat. However, the winds were too strong and it drifted away. It was about 500 yards away and could only be seen when both it and we were on the crest of a wave. Despite the state of the sea, the distance, and his own physical condition (very weak and blind), Hornell wanted to swim for it. I refused to let him because I considered it impossible. At this stage, winds and waves were gradually decreasing in strength and size. Scott, who had been in the water for such long times, grew very weak and, about 19 hours after our ditching, died. We also slipped his body out of the dinghy. We were all very weak and becoming discouraged; however, we carried on by exercising ourselves as much as possible. Cole and Bodnoff seemed to regain strength from nowhere; Campbell and Matheson seemed to lose strength rapidly. Cole worked on Matheson, Bodnoff on Hornell and I on Campbell. Cole attempted to make a sea drogue with his field service cap but this did not prove a success. We continued to work on one another until, after 20 hours and 35 minutes in the dinghy, the rescue launch was sighted by Cole. In about ten minutes, the launch was alongside and hauled up; Matheson, Campbell and Hornell. Bodnoff and Cole climbed up the rope ladder with the assis-

tance of the sailors. I managed to get up by myself. On board, they immediately began work on us. They worked on Hornell for about three hours but were not successful. He never regained consciousness. The launch took us to . . . military hospital in the Shetland Islands. F/L Hornell is buried there in a military plot. Cole, Bodnoff and Campbell were discharged from the hospital in four days, Matheson and myself after eight days.

Outstanding about F/L Hornell was his marvellous ability in flying such a badly damaged aircraft, especially in the face of strong enemy fire. His courage and bravery throughout marked him as a great man. Words cannot do justice to the fine job he did.

It remains to be added that the rescue of the survivors was another tribute to the efficiency and devotion to duty of the air and surface crews of the A/S/R Service and of the Coastal Command operational crews who co-operated by first locating and reporting accurately the position of the dinghy, and then keeping it in sight for approximately 16 hours in spite of heavy seas and low visibility. Unknown to the Canso crew, neither their flash report of the attack nor their S.O.S. signals had been received, because the radio transmitting equipment had been rendered u/s when they first ran into the flak barrage. Thus, it was by the merest chance that they were sighted by the homeward-bound Catalina.

The next U-boat sighting was made by McBride and crew. An attack was attempted, but unfortunately the depth charges could not be released. Although damaged by flak during this unsuccessful attack, the Canso continued shadowing the sub while calling a Liberator to the scene from an adjoining patrol area. The Lib then sank the submarine.

F/O J. W. Mathers was awarded the D.F.C. at this time on completion of a tour of operational duty during which he had shown "courage and devotion of the highest order".

The next few weeks were somewhat of an anti-climax after this period of action and excitement. Several sightings were reported, but only two attacks could be made and in neither case were decisive results observed. The Cansos

returned to "Camp Maple Leaf" in Iceland, and Archambault handed over command of one of the Sunderland squadrons to Pat Grant who was promoted to wing commander.

The Demon Squadron

In the autumn of 1943 the Demons, whose nickname had been gained in earlier exploits against enemy shipping in Netherlands coastal waters, were operating from bases in Cornwall and Devon in the west of England. The monotony of their long and arduous night flights over the Bay of Biscay in landplanes was occasionally relieved by sightings of enemy submarines, but these numbered no more than seven in a period of several months. Twice the U-boats disappeared before the Wellingtons could get within range and in four other cases, although the crews headed by F/Os P. W. Heron and E. M. O'Donnell, F/O H. S. Thomson and F/L D. W. Farrell were able to make what appeared to be promising attacks with their depth charges, no definite results could be observed. P/O F. H. May's crew could at least claim that they silenced their sub's flak before it dived away. Another night the Wimpy captained by F/O D. E. Rollins found and attacked an enemy convoy of about eight vessels, but in this case too no results could be observed because of the evasive action necessary to avoid the Huns' anti-aircraft fire.

Three crews were lost during this period of luckless operations. When F/L J. C. Austin and his crew of P/O C. R. Booth and WOs R. W. Revell, K. Rolfstad, A. R. Merritt and L. G. Smith failed to return from a patrol after sending distress signals, W/C J. C. Archer, who had been C.O. of the Demons since November 1942, set out to look for them. In the course of the search he was attacked by enemy aircraft and is presumed to have been shot down with his crew, F/Os J. E. Godwin, B. E. A. Vye, J. Craig and D. S. Bier and P/O D. R. Parker. Temporary command was as-

sumed by S/L D. G. Pickard until W/C R. A. Ashman took over some weeks later.

On another routine patrol WO J. E. G. Girouard (captain), F/O J. L. Thibault, WOs J. P. J. G. Hvard, J. A. Raven and J. N. G. Milot and FS D. J. Haug were reported missing. But F/L R. C. Kenmuir's crew had better luck when they were forced by bad weather and shortage of fuel to bale out over the south coast. No one was lost.

It was about this time that the D.F.C. was awarded to S/L C.J. W. Taylor, who, in addition to having completed a large number of operational sorties as captain of aircraft, had been largely responsible for supervision of operational training in the squadron. Early in the new year the squadron moved to a base in Northern Ireland and, changing its luck at the same time, probably destroyed two U-boats within a few days. The first score went to Heron and his crew, F/Os J. O. Hornby, C. J. Sullivan and R. C. Hayes, WO L. W. Tunney and FS J. G. McDonald, who sighted a sub and dropped depth charges that straddled it abaft the conning tower. Three explosions were seen: the first, to starboard, silhouetted the whole length of the U-boat; the second, much larger, seemed to envelop all but the bow while the third smothered the stern and appeared to accentuate the angle of dive. The Wellington's rear gunner fired more than 400 rounds which struck at the base of the conning tower and along the after deck without eliciting any return fire. The aircraft circled the scene for some time after the submarine had disappeared, but nothing was visible except a dark patch, presumably oil on the water. For having "displayed a high degree of courage and tenacity" on this and other occasions, Heron was later awarded the D.F.C.

Three hours after this encounter F/O O. G. Campbell and crew made up of F/Os W. D. Gill, W. G. Campbell, C. D. Myers, FSs D. F. Dohm and A. E. Osborne, made an attack on an unusually large submarine which greeted the Wellington, as it came in from nearly dead astern, with in-

tense flak that weakened noticeably after the front gunner opened fire. Depth charges straddled the U-boat following which it lay wallowing, but still firing. Campbell circled, taking evasive action, and then came back to within 500 yards range, enabling both his front and rear gunners to get in some effective work before he turned away. After remaining stationary for 40 minutes, the U-boat disappeared. Small blue lights were seen on the water, but whether these were from survivors could not be determined and, although the aircraft searched for some time, no further trace of the enemy could be found.

There were three more attacks by Demon crews in the course of the next month. Heron, encountering his second ship within a short period of time, reported that the explosion of the depth charges was followed by a large red glow that lasted for about a minute. During the attack the Wimpy's front and rear gunners had added their bit by smashing bursts into the conning tower. Another attack by F/O H. I. Hyslop and crew was inconclusive as poor visibility prevented observation of the results. But the third sighting, by Farrell's crew, appeared to be more successful. Despite unfavourable light conditions and intense flak from the submarine the Wellington closed with the enemy and dropped its depth charges. One was seen to explode alongside the conning tower and force the U-boat bodily sideways, "causing disturbed water along its length similar to that caused by a side launching". After proceeding 700-300 yards on its course the sub lost way and stopped, but opened fire whenever our aircraft approached. When, due to shortage of fuel, the Wellington was compelled to leave the scene nearly an hour later, the U-boat was still stationary on the surface.

In the spring the Demons returned to the west of England and began an extensive programme of operations which continued night after night, almost without a break, until the close of the period covered by this narrative. Not

long after their return, F/O L. J. Bateman and his crew of F/O W. R. Keele, WOs A. D. Peter, J. W. Aulenback, S. C. Miller and Sgt. T. I. Harries sighted a submarine and approached to within 500 yards before they were met by a strong concentration of flak. Although the nose-gun jammed on the first round, Bateman attacked straight up the U-boat's track and dropped his depth charges, causing the enemy's fire to cease immediately. By the time the aircraft had gained height and returned to the position nothing could be seen except an oily patch which soon covered an area half a mile long by 100 yards wide. Any doubts as to the success of this attack were dispelled when a Sunderland, on patrol later in the day, sighted three survivors and a number of bodies floating near the patch of oil. Bateman subsequently received the D.F.C.

F/O C. M. Bolger won the D.F.C. for another U-boat attack a few days later. Conditions were not as favourable as on the earlier occasion, and it was not until the fourth approach that Bolger and his crew of F/Os S. C. Butler and H. P. Florence, WOs C. T. Butler and E. B. Ross and FS F. T. Osteen were able to get into a favourable position to drop their depth charges. As the Wellington passed over the depth charge plume the rear gunner fired 200 rounds. Flak ceased immediately the DCs exploded and although Bolger remained in the area for some time there was no further trace of the sub.

As part of Coastal Command's invasion umbrella, the Demons were called upon for a maximum effort during June, and by the combination of skill and devoted work on the part of air and ground crews the number of hours flown on anti-submarine patrols was stepped up to an unprecedented total. This accelerated tempo was maintained by the Demons and other Coastal units throughout the next two months. There were two attacks on U-boats by Wimpies from the Canadian squadron, captained by S/L A. H. Laidlaw and F/O F. H. Foster.

In the powerful beam of his Leigh Light, Laidlaw spotted a submarine moving, fully surfaced, at about ten knots. The U-boat immediately opened up with very intense flak, but the Wellington turned, strafed the Jerry's decks with machine-gun fire and dropped depth charges across the track. The flak at once ceased and there were indications that the sub had lost way and probably stopped, but as the limit of endurance of the aircraft had almost been reached, it could not delay its return to base to obtain further confirmation.

Some nights later Foster's crew attacked a U-boat travelling on the surface at 15 knots. The DCs, which could be seen entering the water on either side of the sub, exploded just aft of the conning tower and were followed by a hail of machine-gun fire from the rear gunner. At first the U-boat appeared to make an attempt to submerge, but by the time the Wimpy had come about it was again fully surfaced, practically stationary and sending up intermittent and inaccurate flak.

Two veteran crews were lost during this period of operations. Farrell, one of the Demons' most experienced captains and flight commanders, took off to patrol the Channel and the Bay of Biscay shortly before midnight on D-Day and was reported missing with his crew of F/L W. H. Brown, F/Os W. P. Johnston, A. D. Callander and E. C. N. Kent and WO C. J. Hall. From another patrol F/Os F. A. Kemper (captain), A. D. Hoddinett, P/Os B. A. Gauthier, D. L. S. Henderson, WO A. R. Elliott and FS J. M. Richardson did not return.

CHAPTER XV

ANTI-SHIPPING OPERATIONS

DURING the period covered by this narrative two squadrons of the R.C.A.F. shared in Coastal Command's operations against enemy surface shipping. These were the Buffalo Squadron, a fighter reconnaissance unit flying Beaufighters armed with cannon and rocket projectiles, and the Swordfish Squadron, equipped with Wellington bombers and Albacore torpedo-bombers.

The Buffalo Squadron

Except for a few weeks before and after the Allied invasion of France, when Coastal Command concentrated its great striking power in the English Channel and its approaches, the Buffaloes have operated from bases in the north of Scotland and in the Shetland Isles, flying in treacherous weather over the icy waters of the North Sea and North-East Atlantic to provide cover for our naval and merchant ships and to search out and attack Nazi supply vessels in Norwegian coastal waters. It is in this area that we take up their story at the beginning of September 1943 when their C.O. was G/C G. G. Truscott. Early in the month Truscott handed over the command which he had held since October 1942 to another permanent R.C.A.F. officer, W/C C. A. Willis.

The weather during September was very uncertain, with

considerable rain, and little enemy shipping was seen. On the 27th, however, one of our aircraft piloted by FIL J. G. Rowand, sighted a pocket battleship, believed to be the *Lutzow*, and five destroyers, two of which opened fire before contact yeas lost. The only opportunity for offensive action came on the last day of the month, when six Beaufighters led by S/L A. K. Gatward, D.F.C., on their first Norwegian Coast patrol after re-equipping with rocket projectiles, sighted and attacked a 2,000-ton merchant vessel, registering 25 hits and causing the entire superstructure to burst into flames. When our aircraft turned away, within range of shore batteries, the ship was burning fiercely and headed for the beach, where she was observed the following day to be lying on her side, with waves breaking over her decks. The results of this attack were most encouraging to crews and spoke well for the training they had received in the use of the new weapon.

Eight weeks elapsed before the squadron had another opportunity to engage the enemy. Then on the morning of November 22nd, eight Beaus, flying as anti-flak escort to torpedo-Beaus on a convoy search in the Stadlandet area, sighted a convoy of one timber-laden merchant vessel and two escorts which they attacked with cannon fire and scored numerous hits on all three ships. During this attack the aircraft piloted by F/O W. Wilkie was directly over the target on its second run in when the main hatch flew open and Wilkie's field service cap and Irvine jacket floated down squarely on to the deck of the enemy ship. The diary account adds: "It is unfortunate that it was not a 500-lb. bomb!" On the way home one of the escorted aircraft was seen to ditch and launch a dinghy, which was circled by S/L A. L. de la Haye until the arrival of an A/S/R boat an hour later, by which time de la Haye had just enough petrol to reach base. Some weeks later de la Haye was awarded the D.F.C. in recognition of his "great administrative ability" and "splendid example of fearlessness and devotion to

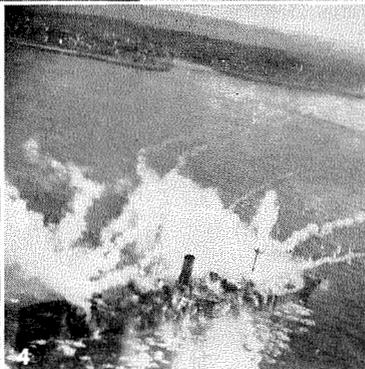
duty” as a flight commander.

There was another bit of action on the 30th, when five Beaus attacked a convoy of two M/Vs with two E/Vs and a destroyer, off the Norwegian coast. The ships, after being hit by rocket projectiles and raked with cannon fire from mast height, were left in a seriously damaged condition.

After three months of rain and lowering skies the weather finally showed an improvement in December and the tempo of operational flying was stepped up considerably. Four successful strikes were carried out, resulting in damage to nine enemy vessels. On the 7th, P/O K. S. Miller led a formation of seven RP Beaus in an attack on two M/Vs accompanied by an escort vessel and three small ships. When our aircraft left the scene the larger M/V was smoking at the water line and the E/V was enveloped in smoke. Miller and his navigator, P/O J. Young, added to their record for aggressiveness when, a fortnight later, they sighted an enemy destroyer with a surfaced submarine and made a number of cannon hits on the conning tower of the U-boat. Both Miller and Young were later awarded the D.F.C.

On the 27th, five Beaus in company with torpedo-carrying aircraft attacked a convoy consisting of one 6,000-ton M/V, four 1,500-ton M/Vs and three escort vessels. A probable torpedo hit on the 6,000-tonner was claimed and one of the smaller M/Vs was left on fire. The following day, nine Buffaloes caught a convoy of two M/Vs and two escort ships in the entrance to a fiord and despite strong flak opposition carried out a successful attack, damaging all four.

Although the Beaus on their shipping reces flew within close range of the Norwegian coast, it was seldom that enemy fighters tried to interfere. Once, in December, F/O S. S. Shulemson encountered a Ju. 188 which he promptly attacked. After its rear gun had been silenced by the Beau's fire the Junkers abandoned the contest and es-



(1) Buffalo attack on enemy shipping, August 8th, 1944. (2) Rocket-carrying Beaufighter. (3) F/L A. H. Hodson, D.F.C., and F/L W. D. Thomsett. (4) Beaufighter attack off Royan, August 13th, 1944. (5) F/O E. J. Keefe, D.F.C., and P/O B. Steed. (6) F/L P. A. Powell, D.F.C. (7) F/L S. S. Shulemson, D.S.O. (8 and 12) Buffalo attack at Le Verdon, August 24th, 1944. (9) F/O W. K. McGrath, G.M. (10) W/C C. A. Willis, D.F.C., and W/C A. K. Gatward, D.S.O., D.F.C. (R.A.F.). (11) F/L K. S. Miller, D.F.C.



(1) F/O A. H. Bartlett, D.F.C., of Montreal. (2) F/O T. R. Burtch of Hamilton.
 (3) S/L J. T. J. Davis, D.F.C., of Como, P.Q. (4) F/O A. Senecal of Rosetown, Sask.
 (5) F/L D. C. Thomson, D.F.C., of Fort Assiniboine, Alta. (6) W/C C. G. Ruttan,
 D.S.O., of Belleville. (7) S/L H. G. Keillor, D.F.C., of Mitchell, Ont. (8) F/L C. A.
 Wondolowski, D.F.C., of Bridgeport, Conn. (9) F/O R. H. Watt, D.F.C., of Winnipeg.

caped into a cloud.

As the result of another incident in December WO W. K. McGrath was awarded the George Medal for conspicuous courage. On the 16th, he was navigator of a Beaufighter piloted by F/O J. S. Cummins which, shortly after taking off with a full load of petrol and bombs aboard, crashed and burst into flames. McGrath was unhurt and after freeing himself from his damaged turret went to the aid of the unconscious pilot who was trapped in the cockpit. The control column had been forced against Cummins' stomach and his right foot was locked under the right rudder bar. "Ignoring the danger from possible explosions", says the citation, "WO McGrath endeavoured to release the pilot. After unlocking the top hatch he moved the control column, unfastened the pilot's parachute harness and removed his right flying boot. Then, by an almost superhuman effort, he extricated the pilot from the wreckage and dragged him 100 yards over very rough ground to safety." Through McGrath's alertness Cummins escaped with burns on the face and hands.

January 1944

January's operations were highlighted by three strong attacks by the R.A.F.-R.C.A.F. Beaufighter wing, comprising torpedo, RP and anti-flak squadrons, which had just been formed for the specific purpose of striking at enemy convoys and their escorts.

On the 14th, nine R.C.A.F. Beaus armed with cannon and rocket projectiles and led by F/O W. D. Thomsett set out as part of the escort to torpedo-carrying aircraft on an anti-shiping patrol. An hour and a half later the formation sighted two convoys of five M/Vs guarded by five flak ships. A concerted attack was made on the leading 4,000-ton M/V which received a torpedo hit on the stern and rocket strikes on the bridge, foredeck, and amidships. F/Os E. J. Keefe and J. H. Symons followed through with cannon

attacks on two escort vessels. On this operation Chuck Willis led the accompanying R.A.F. escort squadron, which shot up the second convoy and silenced one of the flak-ships. While inflicting this punishment on the enemy our aircraft were subjected to the usual heavy and accurate barrage from ships and shore and two of the R.C.A.F. Beaus did not return, one of which was manned by Wilkie and F/O W. L. Evans.

The second successful attack took place near Stadlandet on the 10th, when six Buffaloes, led by Gatward and escorted by an equal number of R.A.F. Beaus sighted a convoy comprising one 6,000-ton and two 3,500-ton M/Vs and eight to ten E/Vs. While the R.A.F. aircraft silenced three of the flak-ships, the Buffaloes went for the large merchant vessel and scored no less than 30 direct hits with rocket projectiles. After this well co-ordinated attack the 6,000 tonner was enveloped in steam and smoke and caught fire, while a large plume of black smoke also rose from one of the escorts. Both vessels were undoubtedly damaged seriously and two weeks later our aircraft saw the M/V lying beached on the Norwegian coast.

Again with their R.A.F. team-mates as escort, five of the Buffalo crews led by Shulemson located a convoy of three M/Vs of 2-3,000 tons with three escort vessels and a minesweeper off Stadlandet on the 26th. F/O E. J. Keefe and WO B. G. Steed scored four hits on the minesweeper and left it burning. Shulemson and his navigator, F/O P. R. Bassett, put two rockets into the rear M/V while WOs H. E. Hallatt and A. D. Glasgow registered four hits on an escort vessel, and both ships were soon enveloped in smoke. P/O J. A. C. Dixon and Sgt. E. Pearce are thought to have made a successful attack on the leading M/V, which was seen to be smoking at the bow, but unfortunately they fell victim to three Me. 109s and plunged into the sea. One of the R.A.F. Beaus was saved from a similar fate by Shulemson who saw the crippled Beaufighter being attacked and, turning

back, engaged the attention of the enemy fighter while the intended victim broke clear. Shulemson later received a well-merited D.S.O. for his outstanding work on this and previous occasions, being cited as "a skilful, courageous and determined leader whose example has inspired all."

February, March and April

While the Beaufighters were very actively employed on escort and reconnaissance tasks during February, making many more sorties than in January, only one successful strike could be reported. On that occasion a formation of nine R.C.A.F. and five R.A.F. Beaus led by Ken Gatward, attacked a 5,000-ton M/V and four escort vessels. After the R.A.F. aircraft had damaged a large escort ship astern of the M/V causing an explosion and fire, the R.C.A.F. pilots in sections of three attacked the merchant vessel and two escorts. As a result of these attacks, made in very poor visibility and in the face of intense flak from the ships and shore, the M/V was hit with rocket projectiles at the waterline and on the superstructure, as well as by cannon fire, the leading E/V was raked with cannon fire and hit under water by RP and the E/V astern was hit by a salvo of rocket projectiles which lifted her bows clear out of the water. All three vessels were left burning.

Heavy snowstorms during the first few days of March caused all available hands to be diverted from the care and operation of lethal weapons to the more strenuous task of wielding the plebeian shovel in attempts to clear the runways without benefit of bulldozers. The squadron diarist notes that after four days of this unaccustomed exercise there were "many sore backs and tired muscles".

After the storms had passed operations continued uneventfully until the 23rd, when five R.C.A.F. Beaus in company with torpedo aircraft found an enemy convoy of two merchant vessels and three escort ships off Vaagso. Gatward, leading the formation, went in with F/L V. T.

Robinson to attack the first M/V and both pilots scored hits with rocket projectiles and also used their cannon to good effect. F/O P. Dwornik concentrated on the leading escort ship and saw his shells explode on the target while WO A. B. French shot up the escort vessel astern. FS J. W. Heavener, who had been attacking another M/V in the vicinity, then joined the fray and raked two of the flakships with cannon bursts. The convoy was left with its larger M/V, a 3,000-tonner, seriously damaged and all three escorts battered.

Another attack on shipping, this time against fierce opposition, owed its success to the resolute and skilful leadership of the squadron commander, Chuck Willis. On the 30th, nine R.C.A.F. Beaufighters armed with RP were out in formation with R.A.F. torpedo and cannon Beaus when a 14,000-ton ship, escorted by a destroyer, two other escort vessels and numerous aircraft, was observed off Hauge-sund. Seeing the strength of the enemy's air protection and realizing that an intense barrage of flak would also be encountered, Willis gave exact instructions to each of our aircraft as to the form of attack to be employed. As the Beaufighters approached the target at low altitude, the enemy air escort of approximately nine Me. 109s and FW. 190s, five Me. 110s, two Arados and a BV. 138 turned towards the shore. Following the winco's instructions our forces gained altitude and then, in the face of terrific flak which opened from all the ships as well as from the shore batteries, dived on the convoy. At this moment, the enemy aircraft returned at low altitude and climbed to attack the Beaufighters from behind. When last seen, Willis was well in the lead and going in on the large ship. F/Os A. R. Fair, J. E. M. Young and P/O O. Mallalieu also dived on this target, the two last-named obtaining probable under-water hits with their rockets. Keefe fired at the destroyer, scoring hits with RP and cannon, though his aircraft was seriously damaged by flak and machinegun bullets. Two other pilots,

F/Os N. F. (Norm) Smith and Johnny Symons, also attacked the destroyer. After making RP and cannon strikes on the rearmost E/V F/O J. L. F. Rancourt went for three Me. 110s, one of which he shot down in flames. He then turned on another 110 but was driven off by an FW. 190. The determined and effective work of our Beaufighters enabled the torpedo aircraft to get in their attack on the main target. The large ship was left smoking and the destroyer was enveloped in clouds of steam. Against these very satisfactory results, however, the squadron lost two crews, including their popular and very able C.O., Chuck Willis, and his navigator, F/L F. A. Kent. (R.A.F.), and Robinson and his navigator F/O W. D. M. Devine. The winco was later reported to be a prisoner of war. Ken Gatward, who had been with the unit as a flight commander since June 1943, succeeded Willis as officer commanding.

On only one occasion in April was an enemy convoy sighted and attacked. This was on the 7th, when eight R.C.A.F. kites, acting as anti-flak escort to R.A.F. torpedo and cannon Beaus, struck at a convoy of three large M/Vs protected by seven escort vessels. Led by Keefe, our aircraft concentrated their fire on three of the E/Vs and left all three smoking. This enabled Torbeaus to close in on the main target and make a torpedo hit on the largest M/V, a 4,500-tonner. The award of the D.F.C. to Jimmy Keefe was announced some time later, a few days after he and his observer, Beech Steed, were killed on operations.

There was another successful attack on the moonlit night of May 5th when Gatward with F/O J. Carlin and F/L A. A. Adams with F/O F. E. Pickering were out on patrol. After arriving at the enemy-held coast, Adams became separated from the leader, and was posted missing. Gatward continued his patrol and when over Egero harbour sighted a stationary M/V of 2,500 tons which he attacked with rocket projectiles. A fire immediately broke out on the vessel, indicating that some of the RP's had found their mark.

This show ended a long sojourn in northern Scotland and the Shetland Isles during which the Buffaloes, since September 1943, had participated in 15 successful strikes against enemy shipping. One merchant vessel had been destroyed, another probably destroyed, and 15 more or less seriously damaged; 21 escort ships had been battered by rockets and cannon shells; two destroyers, a minesweeper and a submarine had also been damaged and an enemy aircraft destroyed.

The Buffaloes Move South

After so many months of the rigorous climate and comparative isolation of the far north of Scotland a move to the Cornish Riviera in the south-west of England was most welcome. The long trek commenced on the 10th, and on the 19th the squadron carried out their first operation from their new base against enemy naval vessels reported to be off Ushant. The attacking force, led by Gatward, comprised nine R.C.A.F. Beaus, with R.A.F. cannon Beaus as anti-flak escort. It was a new experience for the Buffaloes to be protected against enemy fighters—on this occasion by a strong formation of Spitfires. When the enemy force consisting of one *Elbing* class destroyer, one torpedo boat and three minesweepers was sighted, the cannon Beaus went in first, raking all the ships and setting one of the minesweepers on fire. The Buffaloes followed, concentrating their attention on the destroyer which received at least six direct hits from rockets. One crew also scored hits on an M/S. Intense flak from the target forced our crews to take violent evasive action and final results of the attack could not be observed fully but the destroyer was claimed as damaged and one M/S as seriously damaged. Gatward, who had now led 11 successful strikes, received the D.S.O. early in June and his navigator, Carlin, also a member of the R.A.F., the D.F.C.

With the approach of D-Day, the reason for the move to

southwestern England became apparent. The enemy, well aware that invasion was imminent but not knowing where it would take place, disposed his fast, light naval forces at bases along the occupied coasts from Holland to Cherbourg, with destroyer units in the Bay of Biscay to protect his flank. It was assumed that once the invasion had begun the enemy would attempt to send some of the destroyers to reinforce the E-boats in the Channel, and this was exactly what happened.

In the afternoon of June 6th, D-Day, three heavy destroyers of the *Seetier* class were sighted south of Brest, speeding northwards, and a formation of 14 R.C.A.F. rocket Beaus, with strong anti-flak and fighter escorts, set out to intercept them. At approximately 2030 hrs. Shulemson, the Buffalo leader, found the ships off Belle Ile and, diving out of the sun, caught the enemy by surprise. All the anti-flak aircraft went in together, their cannon blazing, and were followed immediately by the rocket Beaufighters. Four Buffaloes launched salvos at the leading vessel, scoring several underwater hits and damaging the superstructure with cannon fire. Large columns of smoke were seen to come from the ship. Nine more Beaus concentrated their attack on the second vessel, and left it burning fiercely amidships, while the remaining Buffalo went after the third destroyer, and made many cannon strikes on the deck and between the funnels. Surprisingly, none of our aircraft was damaged in this engagement.

Shortly after midnight five other crews went out to renew the attack. F/O R. C. Ridge, with FS P. McCartney, claimed hits on the centre ship which was still smoking. F/L W. R. Christison, with F/O F. J. Toon, and Lt. F. F. Guyott (U.S.A.A.F.), with F/O S. T. Faithfull, attacked the others. As Guyott pulled away, an explosion was observed in one of the destroyers and after it had subsided the ship was afire internally from stem to stern.

In spite of the damage inflicted the three destroyers

managed to reach Brest whence, after a stay of two days, they set out again during the night of the 8th. They did not get far, however, for they were sighted by patrolling aircraft as they rounded the Brest peninsula and engaged by an Allied destroyer force, which sank one ship outright, drove another on to the rocks of Ile de Batz and forced the third back to Brest. Twelve RP Beaus led by Ken Gatward went to Ile de Batz the following night and finished off the beached destroyer, beyond all hope of salvage. The enemy made no further attempt to reinforce his naval striking forces from the west.

During the latter part of June, while the Buffaloes carried out anti-shipping and anti-U-boat patrols over the Bay and Channel, there were three small attacks in which a tanker, a merchant ship, a minesweeper and a motor launch were strafed with rockets and cannon fire.

After this brief but strenuous and successful tour of operations in the southwestern area, the Buffaloes moved at the beginning of July to a base on the east coast of England, to engage in shipping strikes off the Dutch coast. On arriving over the new location, Gatward found that his port wheel would not lock down, but nevertheless he landed the aircraft with very little damage. The squadron diarist adds: "There is a story connected with this incident that has a humorous angle. F/L Hodson received a call at the mess from Flying Control to come down and assist in helping a pilot crash land a Beaufighter. 'Hoddy' rushed down and enquired what aircraft it was, and when told that it was Q-Queenie he said, 'Why, that's the winco up there'. The reply was 'No, it must be a Canadian. The pilot is swearing like a trooper because his wheel won't come down'." Apparently Gatward had become "Canadianized" during his long and distinguished association with the Buffaloes.

The crews lost no time in settling down to their job of hunting and hammering enemy shipping in Netherlands coastal waters and in Heligoland Bight. In the course of the

next four weeks the R.C.A.F. rocket Beaus, co-operating with Torbeaus of the R.A.F., made four spirited and successful attacks on heavilyescorted enemy convoys. In the first, directed against eight merchant vessels and 11 flakships off Norderney, the Buffaloes set fire to an M/V and a mine-sweeper and left three other vessels smoking while the torpedo aircraft hit at least two merchant ships, one of which blew up. F/Ls A. H. Hodson, pilot, and P. A. Powell, navigator, who led the Canadian formation on this occasion, had just been awarded the D.F.C. for the skill and courage they had shown as a crew in many attacks on enemy shipping.

Two days later, on July 8th, the Beaufighters struck at a group of six M/Vs and their ten escorts off Heligoland. The Buffaloes went in first to silence the flakships, smashing rockets at the waterline and strafing the decks with cannon fire. One E/V blew up and several others were severely damaged. Then the Torbeaus launched their tinfish at the merchantmen and scored four hits. One M/V was seen to heel over while a second was rent by a large explosion amidships.

Similar results were reported for a strike on another convoy near Heligoland on the 18th. Despite an intense flak barrage the rocket Beaus pressed home their attack, and badly mauled the escort ships. One exploded, two began to blaze and two more were damaged. The rockets also blew the starboard side out of one merchant vessel while torpedoes set fire to another.

The fourth attack in the series was perhaps the most successful of all. After the R.A.F. and R.C.A.F. Beaus had done their work photographs showed that, of nine merchant vessels and 18 escort ships in the convoy, no less than 15 were on fire and two M/Vs of 3,500-4,000 tons were sinking.

August Successes

Early in August the Buffaloes received orders to rush

all available aircraft and crews to the station in southwestern England they had left a month before. The reason for this was that, with the rapidly-developing isolation of the Biscayan ports, German shipping in the Bay presented targets which invited a concentration of offensive effort on the part of Coastal Command aircraft and naval surface forces. The next three weeks were one of the most successful periods in the long history of the squadron.

The first smashing success of the Buffaloes and their R.A.F. wing-mates was on the 8th, when they attacked and destroyed four minesweepers lying in Bourgneuf Bay, south of St. Nazaire. Four days later, the same combination attacked a 4,000-ton M/V and a small escort vessel west of La Rochelle, and left both ships badly damaged and enveloped in smoke and flames. One crew, Heavner and P/O E. E. Barker, was lost in this action. On the 13th two *Sperrbreckers* of 5,300 and 6,100 tons were sunk off Royan.

Continuing their all-out offensive, a formation of seven R.C.A.F. and six R.A.F. Beaus, led by Gatward, on a reconnaissance during the late evening of the 14th, attacked a floating dock, six armed trawlers and two tugs in Arcachon Bay, south-west of Bordeaux. More than 20 hits were scored on the floating dock, which was left in flames; one of the trawlers was also hit by rocket projectiles and the other vessels were damaged by cannon fire. Some of our crews also shot up jetty derricks and other land targets in the vicinity. Intense flak was encountered during the action and Gatward, who was completing his tour of operations with this flight, had to use all the skill at his command to bring his badly crippled kite back to base. Going into the attack, the aircraft's port wing and engine were hit, and on coming out the starboard wing was holed and the port aileron control shot away. By the combined efforts of the pilot and his navigator, McGrath, the aircraft was kept in the air long enough for the winco to jam the crash hatchet into the controls and the return flight was accomplished safely.

For his effort on this occasion Gatward, already the holder of the D.S.O. and D.F.C., was awarded a bar to the D.F.C.

A few days later the Beaufighters attacked and set on fire two armed trawlers in the harbour of Sables d'Olonne, while French and Hathway strafed and silenced flak positions on the shore.

As a climax to this series of successful strikes, the Buffaloes on the 24th participated in the probable destruction of two of the very few serviceable naval vessels left to the enemy in western Europe. The two ships—a destroyer and a torpedo boat—were sighted lying off Le Verdon, at the mouth of the Gironde, but as the aircraft approached they got under way and sent up a terrific barrage of flak. The Beaus pressed home their attack, however, and scored numerous hits with RP and cannon, causing fire and explosions on both ships. The only trace of the vessels which could be found by reconnaissance aircraft the next day was two big oil streaks and it was assumed that both ships were sunk. Most of the R.C.A.F. aircraft were damaged in the attack, but none was lost. Christison was forced to land in liberated France after putting on “a test pilot” show of evasive action when one engine was stopped by flak.

Two days later, attacks were made on two small coastal vessels and a 2,000-ton M/V which were left damaged and smoking. After these three weeks of concentrated activity the much-travelled Buffaloes returned once more to the north of Scotland, which they had left less than four months earlier.

On August 23rd the squadron reluctantly bade good-bye to Ken Gatward, who was posted on completion of an eventful tour of operations. To this officer goes a large share of the credit for the squadron's outstanding success in demonstrating the efficacy of the rocket projectile as an anti-shiping weapon. However, the Buffaloes were cheered to learn that his successor was to be one of the original pilots of the squadron, W/C E. W. (Teddy) Pierce,

who had joined the unit as a newly-appointed P/O in May 1941 and showed such ability that within little more than a year he was a flight commander holding the rank of squadron leader. He had left the squadron in July 1943, after completing his tour of ops, and during his rest period had been employed as chief flying instructor at an O.T.U.

The Swordfish Squadron

The Swordfish Squadron, which commenced its operational career as a Hampden torpedo-bomber unit in the Spring of 1942 and changed over to Wellingtons and Albacores¹ in October 1943, has specialized in night operations against the enemy's light naval forces, particularly E- and R-boats, in the English Channel and the southern part of the North Sea. Conversion training on the new aircraft and a spell of unfavourable weather prevented the squadron from carrying out any sorties until November. Then began a routine of operations which continued until July 1944.

Night after night the Wimpies, co-operating with naval forces, patrolled over the North Sea on the watch for enemy convoys and E-boats, while the Albacores maintained a lookout for shipping attempting to steal through the Straits of Dover during the hours of darkness. Many attacks were made on targets ranging from merchant vessels and destroyers to fleet little motor boats. Sometimes specific results—a direct hit, explosions or fires—could be observed, but more frequently the darkness of the night and the violent evasive action necessary to avoid the intense flak barrages made it impossible for the crews to determine the outcome of their bomb attacks. In November, for example, Albacores twice bombed groups of vessels off the French coast without being able to see the results. Lack of a direct hit, however, did not mean that an attack was a failure. A

¹ The Albacore, an aircraft usually associated with the Fleet Air Arm, is the only biplane type which has been used by the R.C.A.F. on operations overseas.

near miss might well prove to be as destructive as a bomb burst squarely amidships since the concussion could split the seams of a vessel and cause it to founder, many hours, perhaps, after the aircraft had left the scene. The results reported in this narrative, therefore, must be regarded as the *minimum* effect; only the enemy knows the sum total of the damage wrought by the Albacores and Wellingtons. E-boats were especially elusive targets, thanks to their high speed and manoeuvrability, and the considerable measure of success which the Swordfish Squadron enjoyed in combating them is high tribute to the zeal and skill of the crews.

In December and January one Albacore team, F/Os D. C. Thomson and A. H. Bartlett, made four promising attacks on enemy shipping off the French Coast between Gravelines and Le Touquet. On December 10th, after dropping six 250-lb. bombs on a group of seven 150-ft. vessels, the airmen returned to base and took off an hour and a half later, in another Albacore, for a second shot at the convoy. This time only six ships could be seen. Thomson made a head-on attack, bombing from a height of 900-1,000 feet in the face of an intense flak barrage, and saw bursts straddle one of the ships, followed by a red flash and large explosion. A week later the same crew sighted a small merchant vessel and three escort ships, lying off Gravelines, and made four attempts to attack, but searchlight and flak opposition from ships and shore was so strong that the effort had to be abandoned. Again on the 30th, Thomson and Bartlett found two stationary barges just off Calais and dropped six bombs which burst 20 feet from one of the barges and apparently caused severe damage.

In their next attack, on January 10th, the Albacore crew had a more important target—two destroyers steaming in line astern approximately five miles off Le Touquet. Aiming their bombs at the leading destroyer, they saw three explode with large flashes on the vessel's stern, starting a large fire which could be seen from a considerable distance

after the aircraft had turned for home. For his effort on this occasion, "brilliant in its execution", Thomson was decorated with the Distinguished Flying Cross. When Bartlett was later awarded the D.F.C. this attack was cited among other successes to which his skill and keenness as a navigator had contributed in large measure. FS R. A. Perry, the pilot of another Albacore, who had scored a near miss on one of the destroyers, received the D.F.M.

In March and April, Thomson and Bartlett on five occasions found targets for their bombs-minesweepers and E/R boats working along the same sector of the French coast, east and southwest of Cap Gris Nez. In one attack they scored a direct hit on a minesweeper, touching off a fire which blazed for five minutes; in another they silenced a minesweeper which had been firing at their Albacore; and in the other attacks they made near misses on E-boats or trawlers.

F/Os W. G. Brasnett and T. H. Parnell were also prominent during the early months of 1944. On the first of their numerous exploits in the Channel around the Cherbourg peninsula and Channel Islands, on the night of February 9th, they attacked an E-boat travelling at 30-35 knots, six miles off the coast near Barfleur. Despite the speed at which the small target was moving, one of Brasnett's bombs made a direct hit and another was a near miss. Early in March the crew repeated their feat when they bombed one of four E-boats knifing through the water near Alderney and saw the brilliant flash of a direct hit; the boat was probably sunk. On another occasion in March they damaged an armed vessel off Cap de la Hague, while in May they bombed a 2,000-ton merchant ship. A few nights later they made a direct hit on a minesweeper and set it well afire. For another show on May 23rd Brasnett and Parnell both received the D.F.C. During a patrol at last light that evening they dropped a bomb squarely on one minesweeper in a group of five off Barfleur. Then they returned to base,

took off again and on their second patrol made a successful attack on minesweepers in the Baie de la Seine. This time one of the vessels was hit amidships and exploded.

S/L J. T. J. Davis and F/O H. J. Thompson also were awarded the D.F.C. for the skill and determination which they showed in many attacks on enemy shipping. Among the sorties recorded in their log book was one in the early hours of March 24th when they did an effective job of flare-dropping to enable our light naval forces to engage an enemy convoy off Dunkirk.

The record of these crews is typical of the work carried out by the Swordfish Squadron during this period. P/O D. B. McNeil Watson and F/O W. Tyler formed a fourth team which made the life of the Nazi E-boat and trawler crews lively—and uncertain. Their first attacks were indecisive. One night in January they made near misses on a group of E/R boats off the French coast and a few weeks later attacked six armed trawlers near Calais, but the brilliance of the flak barrage made it impossible to observe results although the bombs appeared to fall on one of the vessels. But there was no mistaking the outcome on April 23rd. McNeil Watson and Tyler had been out on patrol for two hours when they sighted the long wake left by a column of four or five flakships or minesweepers. In a diving attack, the pilot released his bombs diagonally across the head of the wake and made two direct hits on one vessel which immediately afterwards blew up. In the early dawn of another April morning the same crew smashed a bomb onto the stern of an E-boat near Cap de la Hague. Again in May they located a formation of seven of these fast little ships north of Guernsey and scored a direct hit on one and a damaging near miss on another.

In the early hours of March 3rd Brasnett and Parnell had made a direct hit on one of four E-boats travelling at high speed north of Alderney. A second Albacore, flown by F/Os J. H. A. Senecal and T. R. Burtch, was in the vicinity

and picked up the trail of the boats, now three in number, as they headed eastward in Vic formation. One bomb was seen to fall just ahead of the wake of the starboard boat; there was a brilliant flash and the wake stopped. Another bomb hit the stern of the boat at the head of the Vic, and then there was only one wake. Three E-boats had been sunk or at least seriously damaged by the two Albacore crews.

Although the Albatrosses normally worked alone on their patrols off the French coast there were several other occasions on which combined attacks, such as the one just mentioned, were carried out. One night in April F/O N. Chadwick and WO A. W. Bermel, with P/O G. A. Hann as an extra member of the crew, bombed a number of E/R boats and trawlers off Le Touquet. After a bomb exploded under the bow of one ship a dull red glow lit the dark surface of the sea. A few minutes later F/O W. Gadzos and WO A. W. T. Joyce spotted the same group of vessels and attacked in a steep dive. Once again there was a bright flash followed by a vivid yellow glow—another of Hitler's patrol boats had been put out of commission.

A month later, early on the morning of May 10th, Gadzos and Joyce, flying J-Johnny, found three E-boats cruising in close Vic formation north of Barfleur. Their bombs apparently damaged one vessel as a red glow was seen, but before they could make any further observations Senecal and Burtch, who had been patrolling nearby and were attracted by the explosions, flew up to join in the fun. F-Freddy's bombs burst over the bows of the two rear vessels and probably caused general damage.

When Gadzos and Joyce attacked another large but scattered formation of 12 or more patrol boats off the Cherbourg peninsula a few nights later, the storm of flak thrown up at their biplane forced them to take prompt and violent evasive action and no results could be observed.

Before their attack in April, referred to above, Chadwick and Bermel had made a number of successful

sorties, notably on February 22nd when they bombed a group of six small vessels off Boulogne and saw a huge yellow explosion indicating a direct hit on one which was claimed as sunk. In March the same crew scored a near miss on another group of patrol boats in the same area.

F/Os P. D. Mackie and E. McFarland were prominent during March with four noteworthy sorties to their credit. Before dawn on the 2nd they bombed two minesweepers working in close formation near Gravelines. A 250-lb. missile burst squarely on one boat, which was claimed as sunk, and a second narrowly missed the other. Twenty-four hours later Mackie and McFarland were out again, searching the same area without success. They were on the point of setting course for base when three small vessels, probably armed trawlers, betrayed their presence by opening fire. Mackie whipped his biplane round; two bombs crashed into the sea close to one of the boats—and the guns were immediately silent. Later in the month the story was repeated when a flakship opened fire on their Albacore as it patrolled off Le Havre. A near miss once again made the gunners cease fire. The previous night Mackie and McFarland had scored a direct hit on a minesweeper off Cap de la Hague and reported that the very large bright flash of the explosion was followed by a red glow from the target.

Two successful attacks were made by F/L R. Armstrong and F/O H. R. D. S. Cuddon. A vessel, possibly a tanker, which was steaming under heavy escort between Calais and Dunkirk, received two direct hits from their bombs one night in March, and on another night in May two small vessels were apparently sunk. Armstrong sighted the boats moving in close line abreast off Le Havre and attacked from the beam, releasing his stick of bombs across the target. After the explosions nothing could be seen of either vessel.

Two, possibly three, E-boats were put out of action by F/O F. W. Broughton and P/O J. M. Dawkins, another Al-

bacore crew. In the early hours of April list they dropped a salvo on one boat in a group lying off the mouth of the Somme. There was an explosion practically alongside the target, and afterwards other vessels were seen crowding around the stricken ship. On the next attack in May two fires were observed after a bomb had registered a direct hit on one E-boat off Cap de la Hague and a second had narrowly missed another.

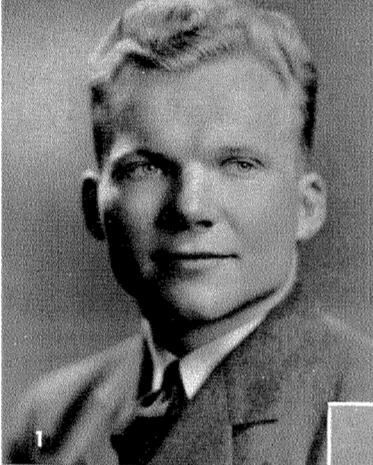
Successful attacks were also credited to F/O O. H. Mennie and WO R. A. Leach who, on their first sortie on April 20th, blew up an E/R boat with a direct, hit; to F/O M. F. C. Wilson and P/O G. A. Hann who straddled a boat with four bombs and set off a violent explosion; and to F/Os A. J. Rabbets and C. Grant who pranged at least one. Rabbets and Grant were patrolling north of Cherbourg on May 22nd when they sighted six or seven E/R boats cutting through the sea in line astern. A stick of bombs burst across the track, enveloping the two leading boats in the explosions. Less than half an hour later another Albacore crew saw a patrol boat on fire and sinking about three miles from the scene of the attack.

Off Dunkirk one night in March FS V. S. Grayston and WO J. P. Rollefson made very good shooting when they located a medium-sized merchant vessel travelling well ahead of its escort and scored four direct hits out of six tries. The ship continued on its way at reduced speed.

Barrages of light flak were a normal feature of the Albacores' nocturnal forays and occasionally an aircraft returned to base with wings and fuselage perforated by bullets or shrapnel. Sometimes the enemy fire was more effective. S/L E. W. Cowan and his navigator, F/O D. T. Wood, were reported missing on January 21st after an anti-shipping patrol in the Calais area where other crews had experienced intense flak. In March P/O L. W. F. Rivers and his navigator, F/O A. F. G. Hughes, encountered heavy anti-aircraft fire from flakships guarding a convoy off



TOP: W/C L. H. Randall, D.F.C., of Bristol, N.B., C.O. of the Tusker Squadron.
BOTTOM: Officers' Mess of the Tusker Squadron in Ceylon.



(1) S/L D. J. Sale, D.S.O., D.F.C., of Toronto. (2) F/L A. F. Aikman, D.F.C., of Toronto. (3) F/L H. B. Hay, D.S.O., D.F.C., of Edmundston, N.B. (4) S/L C. F. Westerman, D.S.O., D.F.C., of Regina. (5) F/L K. O. Moore, D.S.O., and F/O P. A. Gibb, D.F.M., both of Vancouver. (6) Sgt. G. W. Meadows, C.G.M., of Winnipeg. (7) F/L H. F. Kerrigan, D.S.O., D.F.C., of Westmount, P.Q. (8) S/L G. D. S. Koester, D.S.O., D.F.C., of Guatemala. (9) S/L R. B. Ingalls, D.S.O., D.F.C., of Danville, P.Q.

Gravelines. Rivers dived on the target and released his bombs which appeared to straddle or hit two E-boats, but definite results could not be observed as flak had damaged the Albacore and seriously wounded Hughes who died from his wounds a few hours later.

The Swordfish Wellingtons

So far we have spoken only of the Albacore crews of the Swordfish Squadron. While they patrolled over the Straits and Channel the Wellington crews were sweeping over the North Sea, keeping close watch along the shipping channels off the Dutch coast, or carrying out anti-E-boat patrols in co-operation with the Navy. The Wimpies began this work early in November, but many weeks elapsed before there was any action to reward them for the long hours spent stooging over the sea or for the loss of two crews on operations. In March their luck finally changed and for four months the Wellingtons were both busy and successful.

The first successful attack was carried out on March 1st by a crew captained by F/O K. T. Ashfield who bombed a 5,000-ton merchant vessel which had been abandoned on fire off Den Helder after being torpedoed and shot up by Beaufighters during the day. One of the Wimpy's bombs exploded on the ship and caused fresh fires to break out. As a result of these two attacks the M/V is believed to have been a total loss.

The same crew scored again on April 10th when they went for a convoy of five merchant ships guarded by three escorts. One M/V was left seriously damaged and on fire; another was possibly damaged.

Sometimes the Wellingtons worked as scouts for torpedo carrying Beaufighters, searching the seas for victims which they would then illuminate with flares. F/O R. H. Watt and his crew gave a perfect example of this co-operation on March 5th when off the Dutch coast they lo-

cated a 5,000-ton merchant ship escorted by three minesweepers. After summoning three R.A.F. Torbeaus to the scene, Watt dropped his flares and then attacked with three 200-lb. bombs which undershot. But the Beaufighters, guided by the flares and the flak streaking up from the convoy, were able to score torpedo hits on the merchantman which was left in flames.

Five nights later, on a similar co-op with torpedo Beaus, Watt's crew sighted two M/Vs and escort near Borkum. This time the Wimpy was able to make a successful attack on its own before the Beaufighters struck. Two bombs burst within 50 feet of the bow and stern of the leading M/V, and the third exploded close to the bow of the second ship. As Watt turned away smoke was seen pouring from the first vessel.

Again in April this Wellington crew located targets, two groups of E/R boats and coastal vessels, for a Beaufighter striking force. Their own bombs produced a great mushroom of smoke from one of the patrol ships which was claimed as severely damaged.

Two weeks later on April 24th, Watt sighted, with the aid of flares, seven small ships steaming close to the Dutch coast north of The Hague. When the Wimpy closed, heavy flak streamed up from the convoy while batteries and searchlights on the shore joined in. Despite the opposition Watt released his bombs in a stick from 3,500 feet. A pall of smoke rose from one vessel. More bombs fell near another, probably close enough to damage it. On the 27th the same crew scored near misses on two of a group of ten E/R boats, despite the presence of five enemy aircraft in the vicinity. Watt received the D.F.C. in recognition of the skilful leadership and determination displayed on these and many other operations since January 1943. His WAG, F/L J. J. A. R. Gauthier, was also decorated for his work on anti-shipping patrols and as gunnery leader. His services in the latter capacity had been outstanding and had played no

small part in the high standard attained by the AGs of the Swordfish Squadron.

P/O G. C. Krahn and his crew also acted as spotter for torpedocarrying Beaufighters. In clear moonlight early on April 2nd they located a convoy off the Dutch coast and dropped flares by the light of which the Torbeaus were able to set on fire and probably sink a merchant vessel. Three weeks later Krahn used his flares to illuminate another convoy of four or five M/Vs and six escorts near Nor-derney. Carefully picking out the largest ship, one of 3,500 tons, he released his salvo and saw five bombs straddle the target. The sixth scored a direct hit on the M/V which began to burn fiercely.

On April 27th another crew, captained by F/O R. H. Ridgway, while patrolling the Dutch coastal convoy route came upon three merchant ships of 1,500-2,000 tons and dropped their bombs across the formation. Three were near misses; the fourth made a direct hit followed by a large orange flash and dense smoke from one vessel's bow.

A group of E-boats was bombed on another April night by WO A. V. Foord's Wimpy, and two were set on fire by direct hits. But even without the use of bombs the patrolling Wellingtons were sometimes able to disrupt the work of the E-boats. Once, late in March, F/O J. A. Enns and his crew shadowed an enemy force so effectively that the Nazi skippers eventually gave up whatever operation had been contemplated and turned for home at high speed.

As the Spring advanced—and D-Day drew nearer—the tempo of Coastal Command's campaign against enemy coastwise shipping was stepped up. In April, the most successful month for the Swordfish Wimpies since they had started operations, there were eight successful attacks. In May there were, again eight, all within a period of three nights.¹ On the first night, May 8th, F/O R. J. Sheen and his

¹ During these two months the Albacores were in 11 and 13 successful actions.

crew found a ten-ship convoy off the Dutch coast. Their bombs, released from 4,000 feet, straddled a merchant vessel of 2,000-2,500 tons which immediately afterwards was completely enveloped by a pall of billowing smoke. The same night F/O G. S. L. Anderson also located a group of vessels and prepared to attack one 4,000-tonner. At this moment the bomb-aimer discovered his sight was unserviceable, but let his sticks go nevertheless and neatly straddled the vessel's stern.

The next night a large convoy of at least 22 vessels of various types was attacked off Terschelling by three Wimpies. F/O C. R. Watts, skipper of the first, made a concentrated attack on the largest M/V, of 4,000-5,000 tons. The crew were sure they had the target dead in their sights, but evasive action, necessary to escape from the flak barrage, made it impossible to observe the results. The next Wellington, captained by 1st Lieut. D. W. Ewing of the U.S.A.A.F., dropped a flare to illuminate the ships and, bombing by its light, saw white smoke issuing from one vessel. When Ridgway reached the scene and attacked, there was so much flak the crew were unable to distinguish bomb bursts from gun flashes.

On the 10th there were three more attacks by Wellingtons. While Foord was patrolling near Borkum in bright moonlight he saw a large scattered convoy and, after making several runs through streams of flak, got his bombs away and straddled the stern of a medium-sized merchant vessel. Two more Wimpies took off to follow up Foord's sighting report. S/L H. G. Keillor carried out an attack, despite the fact that the bombsight was not working properly, and dropped a stick across the stern of a 3,000-ton vessel, possibly scoring a direct hit. The third Wellington, piloted by F/O F. J. Paterson, found another 15-ship convoy north of Vlieland. Although flak forced the pilot to take immediate evasive action after dropping his bombs dead across the beam of three 1,500-ton M/Vs, and immediate results were

not observed, several ships were later seen converging on the scene of the attack, indicating that at least one of the target vessels may have been hit.

Operations During June and July

In June, invasion month, the anti-shiping operations of Coastal Command reached their peak. Of the record number of attacks carried out by Coastal aircraft during the month, approximately 70 per cent. were in the Channel area, as was to be expected with the enemy making all-out efforts to interrupt the flow of reinforcements and supplies to the beachheads. For the Swordfish Squadron this month, the last during which it operated completely under Coastal Command, was the most active four-week period in nearly three years of anti-shiping operations. Some part of this increased activity was due to the fact that the Albacores, in addition to their nightly patrols, carried out a considerable number of daylight sorties, laying smoke screens for the protection of our naval forces operating in the Channel.

Patrols on the historic night of June 5th were uneventful; no enemy vessels were sighted. But on the following night a week of action opened when there were three clashes with E-boats. First score went to the Wellington crew skippered by P/O H. L. Parker who bombed three E/R boats, one of which was capsized and another possibly damaged by a near miss. Mennie and Leach, an Albacore team who have been mentioned previously, attacked another group of patrol boats off Gris Nez and claimed one probably sunk and one damaged. In the same area Senecal and Burtch bombed other craft with unobserved results.

Four more E-boats were probably destroyed on the 7th by two Wellington crews. M-Mother was flown by the Swordfish C.O., W/C C. G. Ruttan, who had been decorated with the D.S.O. in April after nine months' valuable service as leader of his unit. On this night his bombs sank one E-boat and severely damaged (if they did not destroy)

another. The second crew on L-London, with Enns as captain, claimed two severely damaged and possibly sunk.

The Wimpies scored again on the 9th when Keillor's crew after bombing two ships, believed to be minesweepers, saw a tremendous explosion light up the sky, presumably the result of a direct hit. There seemed little doubt that that ship was sunk, but only a possible was claimed. Four nights later the same crew got a bulls-eye when they sighted five E-boats off the Dutch coast and dropped nine bombs around four which were bunched 100-125 feet apart. The rear gunner saw one capsize immediately and, when Keillor turned back to reconnoitre, only one could be found, so that the score was apparently one destroyed and three probables. Keillor and his navigator, F/O C. A. Wondolowski, both received the D.F.C. for their good work on this and other occasions.

Meanwhile, on the 10th—one of the most successful nights the Swordfish Squadron had had—the Wimpy crew skippered by Foord (now a P/O) got a near miss on a vessel off Dieppe and F/O C. Folsom's crew claimed two E-boats sunk north of Ostend. The Albacores made three good attacks the same night. Senecal and Burtch made direct hits on two E-boats which they believed were destroyed; Davis and Thompson, Wilson and Hann each attacked four T.L.C.'s, destroying one with a direct hit, and scoring a near miss with another bomb.

On the next night two more E-boats were seriously damaged or sunk by FSs A. Fryer and K. W. W. Bradley, and Gadzos and Joyce in successive attacks on a group of five or six. Bombs from the first Albacore straddled one boat, while the second made a large plume of black smoke rise from another.

On the 12th McNeil-Watson and Tyler dived through a curtain of accurate flak from five escort ships to crash a bomb on a merchant vessel. Three other Albacore crews, Thomson and Bartlett, F/Ls N. Williamson and D. G. Mat-

kin, and F/O C. M. Eadie and Lieut. H. Pinckes (U.S.A.A.F.), attacked minesweepers, the first crew making a direct hit.

All this offensive activity had been carried out without loss to the squadron, but on this night Krahn's experienced crew, composed of WOs D. I. A. Laurie, J. R. Dryden, G. E. Robertson, F. L. Ladd, G. N. Henson and J. M. Lacombe, did not return. They had sighted and attacked a large group of E-boats in the neighbourhood of Ostend, and the Wimpy presumably was a victim of the intense flak concentration. The enemy defences were particularly active and effective that night as, in addition to the loss of Krahn's Wellington, three Albatrosses suffered more or less severe damage while another, flown by S/L R. A. Gordon and WO D. J. G. McKenzie, had a shaky do when, on investigating some ships sighted off Gris Nez, the biplane was overturned by a close burst of heavy flak. The Albatross went down in a steep dive to 200 feet before Gordon was able to regain control.

The next few nights were quieter, the only noteworthy incident being a successful air-sea rescue in which C. R. Watts and his crew participated. They were on anti-E-boat patrol early on the 17th when they saw a Halifax ditch in the sea. On investigation, seven survivors were seen in a dinghy. Watts reported the exact position, dropped flame floats and circled the scene until he had just sufficient petrol to regain his base when he was relieved by another aircraft. As a result of the sighting and subsequent directions given by Watts, the Halifax crew were rescued three hours after ditching, although they were only 23 miles off the Dutch coast.

Two successful nights, the 22nd and 23rd, closed the record for June. Ridgway's crew after bombing five E-boats between Ijmuiden and Den Helder made a thorough search of the area and could find only three vessels still afloat. Another Wellington, skippered by Anderson, scored

a direct hit on the bow of a merchant vessel. The terrific flash of the explosion was sufficient proof that the ship had suffered severe damage. Albacore crews reported eight successful operations against E-boats and other vessels. F/L A. W. Walledge and F/O J. L. W. MacKenzie made one burn fiercely and probably damaged another; Senecal and Burtch damaged two; Mennie and Leach scored a direct hit on one which exploded and caused severe damage to two others; F/O R. C. Gates and Lieut. V. T. Rice (U.S.A.A.F.) claimed a near miss; P/Os R. A. Perry and J. G. Jobe sank an E-boat and possibly damaged two; Thomson and Bartlett sent another to the bottom with a direct hit; Chadwick and Bermel destroyed two; and McNeil-Watson and Tyler wrote off another.

In several other attacks in June results could not be observed owing to heavy anti-aircraft fire. The flak gave Enns and his crew some anxious moments when several bursts put the port engine u/s and damaged the Wimpy. After jettisoning his bombs the pilot struggled home on one engine. Another Wellington had an encounter with a Ju. 88 night fighter, which it evaded with no more damage than the loss of a trailing aerial.

As July came in, the days of the Swordfish Squadron in Coastal Command were numbered and a change-over of personnel to Bomber Command was already in progress. However, operations were carried on much as before until the middle of the month, when the crews regretfully parted company with their trusty and familiar Wellingtons and Albacores and began the trek to their new station in the R.C.A.F. Bomber Group, where they were soon to become operational in Halifaxes.

Among the successes reported by the Wellington crews during these last days were: one unidentified vessel destroyed by Keillor on the 3rd; one E-boat destroyed and two probably damaged by Ashfield on the 5th; an 8,000-ton M/V severely damaged and an escort vessel possibly dam-

aged by WO J. W. Schofield on the 6th; an M/V severely damaged or possibly sunk by Ewing on the 7th; two M/Vs damaged by Anderson on the 8th; one unidentified vessel severely damaged or sunk by Ridgway and an M/V damaged by Keillor on the 9th. The Albacores' principal task in July was the laying of smoke screens, but several attacks on enemy vessels were also made, and of these one by Senecal on the 5th resulted in the destruction of a minesweeper.

Two aircraft were lost on these last operations with Coastal Command. Sheen and his crew (F/L R. L. Harman, WOs L. L. E. Findlay, C. K. Huish, J. R. Vannier, and E. G. Crawley and FS J. Hands) did not return from an armed reconnaissance off the Dutch coast on the night of the 12th, while Mennie and Leach were missing from a patrol on the 19th, which, by the irony of fate, was the last occasion on which the squadron was called upon for Coastal duties.

CHAPTER XVI

THE FAR EAST

The Tucker Squadron

THE veteran R.C.A.F. Catalina flying-boat squadron which had been based in Ceylon since March 1942, was commanded throughout the period covered by this narrative by W/C L. H. Randall of the permanent R.C.A.F., who joined the unit in Scotland in August 1941 and became C.O. in June 1943. During this period the Tusker Squadron, in the modest words of the diarist, “has done a great deal of operational work—not spectacular, due to its nature, but nevertheless extremely important in the prosecution of the war in the East”. These operations included long flights over the waters of the Indian Ocean on anti-submarine patrols, escorts to merchant convoys and naval vessels, searches for straggling ships reported to be in trouble, and searches for survivors of those unlucky enough to fall victim to U-boats. Much of this work was done by detachments of the squadron operating from small island bases in the Indian Ocean, from the Gulf of Aden or from the East African mainland. In addition, special long-range assignments, such as reconnaissances of Japanese-held East Indian islands and freight runs to Australia, were carried out at various times by the Catalinas.

The Tuskers’ major duty—“long, strenuous and alert

wave-watching" on convoy escort and anti-submarine patrols—rarely led to an encounter with the enemy. But, as has been emphasized in the account of the work performed by the flying-boat squadrons of Coastal Command, success cannot be gauged by the number of actual engagements with U-boats, but rather by the extent to which Allied shipping is escorted safely through waters infested by the lurking prowlers. Thanks to the watchfulness and skill of the air crews, the quality of their equipment and the sting which they carry, the once swashbuckling wolves have been reduced to skulkers covertly on the look-out for unprotected stragglers from our convoys. And it sometimes happens that these lone U-boats, stalking their intended victims at apparently safe distance from the convoy escorts, are themselves caught by alert air crews and either sunk or damaged and forced to run away.

One such incident occurred late in 1943, when F/O J. R. Gowans and crew, on a convoy escort from their Ceylon base, dropped back to provide cover for a vessel straggling eight miles astern and sighted a submarine travelling at high speed. As the Cat flew over at 500 feet, the enemy changed course and was momentarily lost to sight in shadows thrown by clouds. Gowans circled and, again spotting the submarine, went in to attack, dropping several depth charges while his port gunners silenced the enemy's cannon. Although the sub was taking evasive action, the explosions were seen to straddle her stern, following which she submerged to conning tower depth and when last seen was moving away at greatly reduced speed. The Catalina's tail plane had been hit by flak, making the aircraft difficult to control, but Gowans continued to search the area until forced by shortage of petrol to make for the nearest base. Four days later an R.A.F. Catalina, on a patrol to intercept the damaged sub, sighted and depth-charged what appeared to be a moving U-boat at periscope depth, but results were not observed.

Three times during the next few weeks Tusker crews sighted U-boats while on patrol but only one attack could be made. Once Randall found a sub but by the time the Cat was in a position to release its bombs the enemy had submerged and could not be located again. Nor did F/L W. W. Fink's crew have any better luck when they detected another submarine; the target disappeared before they could attack. P/O S. J. Grandin was more fortunate. On changing course during a convoy patrol, his crew sighted a submarine travelling slowly only a mile from the convoy and half a mile from the aircraft. The sighting apparently was mutual, because, despite the short range and the speed of the Catalina's approach, only the wide swirl of water caused by a crash-dived submarine was visible as the aircraft crossed the position and dropped depth charges on the sub's track dead ahead of the swirl. As the aircraft turned and climbed, the crew saw "an object resembling the extreme end of a submarine", which surfaced for some seconds and then slid under water at an angle of 30 degrees. By the time the aircraft left, the patch of oil covering the scene had grown to such an extent as to leave little doubt that the sub had been seriously damaged, if not destroyed.

In addition to anti-submarine patrols and convoy escorts, there were numerous occasions on which the Tuskers figured in successful air-sea rescue missions, searching for survivors of ships that had been torpedoed. On one sortie F/L S. V. Kembry and crew located three lifeboats, each containing approximately 30 people who had been adrift for two days. Provisions were dropped and all survivors were shortly picked up by a vessel directed to the position as a result of the Catalina's sighting report. On another occasion Randall and his crew found a lifeboat containing 20 survivors. After reporting the position to base, the winco landed his Catalina on the sea and took off successfully with ten of the most seriously injured sailors. The remainder were rescued soon afterwards by an aircraft despatched

to the spot by an R.A.F. unit.

Some months later Kembry, operating temporarily from a small island base, again guided a warship to the rescue of the captain and crew of a merchant vessel. Other rescue flights were made by F/O E. G. Gork's crew who early in the new year located two lifeboats and guided a rescue ship to them on the following day, and by F/L A. S. McKinney who, while working from a detached base, was instrumental in the rescue of five shipwrecked men. The crew of another Cat led by F/L A. Gelmon, captain, and F/O J. P. Rankin, navigator, received the congratulations of the A.O.C. Group for locating 18 survivors who had been adrift on a raft for several weeks, and guiding a ship to their rescue. On another occasion F/O H. L. Emerson, while on a transit flight, sighted a lifeboat containing 26 people. Returning to the scene early the following morning, Emerson spoke a rescue ship and circled the lifeboat until its occupants were picked up.

This air-sea rescue work reached a climax when the Tusker crews were engaged in extensive searches for survivors of two Allied vessels which had been sunk by enemy submarines. As a result of these flights, frequently carried out in poor weather, a very large number of survivors were located on rafts and lifeboats, provisions and equipment were dropped, and their rescue was effected.

In addition to U-boat victims, the Tuskers also had a hand in saving airmen down on the sea. In August F/O K. R. Grimley's Cat joined a Warwick aircraft in circling a dinghy containing the crew of a Super-Fortress which had ditched after raiding Sumatra. A rescue ship was guided to the scene.

The normal patrol period for a Cat was in excess of 16 hours but on special reconnaissance flights this period might be exceeded considerably. On one photographic mission Catalina F-Freddy, captained by S/L G. H. Bayly, was airborne for nearly 28 hours and flew more than 3,000

miles. Such instances testify to the phenomenal powers of endurance of the flying-boats as well as of their crews, and speak volumes for the efficient maintenance work done by the servicing personnel on the ground.

One final incident may be cited from the records of the Tusker Squadron. In August 1944 Emerson and his crew had just reached their patrol area, two hours' flying time from base, when a fuel leak developed and it was decided to return. A few minutes later the port engine stopped and as the Catalina began to lose height rapidly the crew jettisoned guns, ammunition, depth charges and all loose gear. It seemed impossible that the big flying-boat could be kept airborne and after another 20 minutes the pilot informed base of his intention to ditch. Continuing to nurse the crippled aircraft along until the last possible moment, however, Emerson subsequently decided that he could reach base, which he did without further incident.

CHAPTER XVII

THE LOST LEGION

THIS story of the operations of R.C.A.F. squadrons has of necessity dealt with only a very small percentage of personnel of the Force now serving overseas, due to the fact that aircrew are far outnumbered by ground crew. Furthermore there are considerably more aircrew serving with R.A.F. units than with the R.C.A.F. but for the time being their story cannot be written; it cannot be written because it is part and parcel of the story of the R.A.F. and not until the history of that Force is compiled can the Canadian contribution be viewed in its true perspective.

It is possible however to tell briefly the story of one or two individuals—and these, for the present at least, must suffice. These stories are representative of those of hundreds of Canadian boys who are stationed not only wherever the R.A.F. flies but also on outlying ground stations, where they carry on the vitally necessary work of certain highly specialized ground crew trades.

Of all the thousands who have served in the R.A.F. possibly no names are more worthy of inclusion than those of S/L Douglas Julian Sale and his observer, F/L G. H. F. Carter. One of the outstanding bomber pilots of the war, Julian Sale had a spectacular career and before his death had received the D.S.O. and Bar and D.F.C. Carter has a

Bar to his D.F.C.

After many raids completed successfully, Sale's luck ran out on May 1st, 1943, and he found himself deposited, via parachute, far inside enemy territory. But Jerry never caught either Sale or Carter and they were soon free and back flying again.

In December 1943, when attacking a target in Germany, Julian Sale had to make five runs before he was able to release his bombs. On returning from that sortie when the aircraft was at 1500 ft. over base some stores exploded and, as the fire spread, the fuselage became filled with smoke and flame. The danger of a petrol tank exploding was very great but did not deter Sale from regaining height and ordering his crew to bale out. Just as he himself was about to abandon the kite he found one of the crew unable to leave due to a damaged parachute. The pilot decided to try to land, which he did—and the two hastily left the burning aircraft and ran. Before they were 200 yards away the kite exploded.

Two months later Sale had more bad luck and was brought down inside Germany, seriously wounded. Unwilling to leave his dying pilot and try to evade capture, Carter was taken prisoner.

Although frequently the pilot of a bomber gets the kudos, a successful raid requires the perfect co-operation of every member of the team—navigator, observer, bomb aimer, wireless operator and gunners. The life of a bomber is especially dependent on the vigilance, judgment and marksmanship of the rear gunner. Among the Canadians who have occupied this important post in R.A.F. aircraft, especially noteworthy is Sgt. G. W. Meadows who received the C.G.M. for an attack on Berlin in November 1943. When his aircraft was attacked by an enemy fighter George Meadows' turret was damaged and a bullet struck him in the back and came out his groin. Despite his very painful wound Meadows continued to direct his pilot in evasive

action by means of which, coupled with his good shooting, eight other fighter attacks were beaten off.

Among navigators who have distinguished themselves with R.A.F. units, S/Ls R. B. Ingalls, D.S.O., D.F.C., and C. F. Westerman, D.S.O., D.F.C., were outstandingly successful. So also was, WO R. J. Meek who was awarded the C.G.M. for a raid to Berlin in January. Though severely wounded with a bullet close to his heart and another in his shoulder, Meek refused to leave his post and, despite the destruction of almost all his navigational instruments, plotted a way home. S/L O. D. S. Koester, D.S.O., D.F.C., and F/L H. B. Hay, D.S.O., D.F.C., both did excellent work as observers.

Those venturesome pilots who explore the whole area of enemy-held territory in unarmed photographic aircraft are well typified by F/O W. J. Bracken, D.F.C., who has taken photographs over Norway, France, Libya, Crete and Burma.

Coastal Command has its Canadians too. F/L H. F. Kerrigan, D.S.O., D.F.C., and his navigator, F/O P. R. Rackham, D.F.C., made successful attacks on two submarines in the course of one patrol. In the face of extremely heavy flak defences which wounded Paul Rackham and seriously damaged the aircraft, setting one engine on fire, Kerrigan brought his kite home with Rackham's assistance. F/O K. O. Moore, D.S.O., skipper of a Liberator, is another R.C.A.F. pilot who sank two subs on one patrol—and his were in the record time of 22 minutes.

Many of the fighter boys in R.A.F. squadrons are Canadians. F/L A. F. Aikman, who downed at least eight Jerries, has been awarded a Bar to his D.F.C., as has F/L J. H. Turnbull, a noted night fighter pilot with ten to his credit.

But all gallantry is not exhibited in the face of the enemy. F/L G. C. Abel was a member of the crew of an aircraft which, when making a forced landing, burst into flames. Hastily scrambling out, the crew were 60 yards

away before George Abel realized that the rear gunner was missing. Ignoring the danger of tanks exploding in the furiously burning aircraft from which the ammunition was bursting in all directions, Abel smashed the perspex of the jammed turret with his bare hands. With the assistance of other crew members, he dragged the gunner clear. Before they were 20 yards away the whole aircraft blew up. Abel was awarded the George Medal.

ORDERS, DECORATIONS AND. MEDALS

AWARDED TO R.C.A.F. PERSONNEL BETWEEN
SEPTEMBER 1st, 1943 AND AUGUST 31st, 1944

*They were honoured in their generations,
and were the glory of their times.*
—ECCLESIASTICUS XLIV, 7.

This list supplements that published in “The R.C.A.F. Overseas: The First Four Years” and includes awards made up to August 31st, 1944.

The editors hope that no names have been overlooked. Any omissions which may occur will be included in later volumes.

Awards of chivalry, mentions in despatches, commendations and honours in recognition of good work on the ground (except the George Medal) have not been included but will be published in a later volume.

Rank shown is that held at the time of the award.

VICTORIA CROSS
F/L David Ernest Hornell

GEORGE CROSS
LAC Kenneth Gerald Spooner

BAR TO THE DISTINGUISHED SERVICE ORDER
W/C Lloyd Vernon Chadburn, *D.S.O., D.F.C.*; G/C John Emilius Fauquier, *D.S.O., D.F.C.*; S/L Douglas Julian Sale, *D.S.O.*

DISTINGUISHED SERVICE ORDER
S/L Gordon Bennett, *D.F.C.*; W/C Cecil George William Chapman; G/C Paul Yettvart Davoud, *D.F.C.*; F/O Bernard Charles Denomy; W/C Hugh Constant Godefroy, *D.F.C.* and Bar; F/L Hugh Burns Hay, *D.F.C.*; S/L Ross Baxter Ingalls, *D.F.C.*; F/L Harold Fleming Kerrigan, *D.F.C.*; S/L Robert Allan Kipp, *D.F.C.*; S/L George Denis Scott Koester, *D.F.C.*; S/L John Robert McDonald, *D.F.C.*; W/C Robert Wendell McNair, *D.F.C.* and Two Bars; F/O Kenneth Owen Moore; S/L Peter Geoffrey Powell, *D.F.C.*; W/C Charles

Graham Ruttan; F/L Douglas Julian Sale; F/L William John Senger, *D.F.C.*; F/O Sydney Simon Shulemson; F/L William MacDowall Stephen; F/O Maxwell Samuel Strange; W/C William Herbert Swetman, *D.F.C.*; P/O Joseph Leroy Webb; S/L Clifford Farrar Westerman, *D.F.C.*

SECOND BAR TO THE DISTINGUISHED FLYING CROSS

S/L George Urquhart Hill, *D.F.C.* and Bar; S/L Robert Wendell McNair, *D.F.C.* and Bar.

BAR TO THE DISTINGUISHED FLYING CROSS

F/L Alan Frederick Aikman, *D.F.C.*; S/L Lloyd Fisher Austin, *D.F.C.*; P/O Earl William Boal, *D.F.C.*; S/L Robert Andrew Buckham, *D.F.C.*, *D.F.C.* (U.S.A.); F/O John Todd Caine, *D.F.C.*; F/L Gordon Henry Francis Carter, *D.F.C.*; S/L Walter Allan Grenville Conrad, *D.F.C.*; F/O Colin Gowans Finlayson, *D.F.C.*; S/L Harry A. Gowan, *D.F.C.*; F/L Douglas Woods Henry, *D.F.C.*; S/L Albert Ulric Houle, *D.F.C.*; F/O James Roland Hughes, *D.F.C.*; F/O Peter Huletsky, *D.F.C.*; P/O Edgar Thompson Jones, *D.F.C.*; S/L George Clinton Keefer, *D.F.C.*; S/L Wier Clayton Klassen, *D.F.C.*; S/L Albert Lambert, *D.F.C.*; F/L William Cecil Langstaff, *D.F.C.*; F/L John Frederick Lewis, *D.F.C.*; S/L Joseph Charles McCarthy, *D.S.O.*, *D.F.C.*; F/L John Frederick McElroy, *D.F.C.*; S/L Harold Thomas Miles, *D.F.C.*; W/C James Bert Miliward, *D.F.C.*; W/C William Francis Montgomery Newson, *D.F.C.*; S/L Geoffrey Wilson Northcott, *D.F.C.*; S/L Walter Franklin Parks, *D.F.C.*; W/C John David Pattison, *D.F.C.*; F/L Thomas White Pierce, *D.F.C.*; W/C Wilbur Provence Pleasance, *D.F.C.*; W/C Blair Daizel Russel, *D.F.C.*; F/L Alfred John de Laurie Rutledge, *D.F.C.*; S/L Martin Sattler, *D.F.C.*; F/L Walter Ramon Thompson, *D.F.C.*; F/L John Howard Turnbull, *D.F.C.*; S/L William Weiser, *D.F.C.*; F/L. Peter Wilby, *D.F.C.*

DISTINGUISHED FLYING CROSS

WO James Ernest Abbey; F/O Ernest Allen Adams; F/O James Edward Agrios; F/O Douglas Alcorn; F/L Robert. Morrison Aldwinckle; F/L Edward Sudbury Alexander, *D.F.M.*; F/O Ethan Allen; S/L William Brodie Anderson; WO Gerald Ellis Lintott Angell; P/O Thomas Anderson Angus; F/O Beverley Donn Ardis; F/O Victor Dempster Ardis; F/O Stanley William Armstrong; P/O William Norman Armstrong; F/L Donald MacKenzie Arnot; WO Morley Albert Arnott; P/O Joel Hilton Ashton; F/L James Atkins; F/L Eli Baker; F/O David Gilmore Baldwin; WO David Henry Balmer; F/O Jack Bamford; F/O Henry Cyril Cameron Banks; F/O James Edgar Victor Banning; F/O Harold William Barnhart; F/O William Lemert Barrett; F/L John Hollis Barron; WO Archibald McArthur Barrowman; F/O Allan Harold Bartlett; P/O George Basarich; F/O Eric Trelawny Batchelor; F/O Lorenzo John Bateman; WO William Franklin Beals; P/O Roger Wilson Beamish; F/O Burgess John Beare; F/O Ivor Campbell Beckwith; F/O Andrew Gordon Bell; F/O James David Bell; S/L James Frank MacDonald Bell; F/L Roy Gordon Bell; F/O Arthur Raymond Blair Bellis; S/L Richard James Bennell; P/O Keith Johnstone Benner; F/O Leonard Thomas. Berrigan; P/O Donald Albert Berry; F/L Grover Arnold Berry; F/L Bruce Ervin Betcher; S/L Massey Williamson

Beveridge; F/O John Moor Bezer; F/O Douglass Edmund Biden; P/O Alfred Theodor Biech; WO John Billings; WO Ronald Herbert Birkenes; F/O Albert Alton Bishop; P/O Stewart Blair Black; F/O William Vincent Blake; F/L Douglas Owen Blarney; S/L Edward Weyman Blenkinsop; WO Robert John Bloom; P/O Earl William Boal; P/O Williard John Bolduc; F/O Clarence Martin Bolger; F/L Robert Bonnar; P/O Grant Gordon Booth; F/O James Walter Borden; WO Robert Dean Borrowes; P/O Vernon John Bouchard; WO Paul Emile Bourassa; WO Edward Harold Boutilier; F/O Alexander Bowers; WO Thomas Edward Boyle; F/L Thomas Anthony Brannagan; F/O William George Brasnett; F/O William Ransom Breithaupt; P/O Lorne Ivan Brisbin; P/O Tom Beverley Britten; F/O Albert Carnelley Brook; P/O Joseph Henri Normand Brousseau; P/O Everett Lennes Brown; WO Gordon Frederick Brown; F/O Harold Thomas Brown; WO Jack Allen Brown; P/O Joseph Frederick Carol Brown; F/O Leonard Norman Brown; F/O Charles Robert Bryers; WO Howard Bryson; F/O Herbert Chesley Bugden; F/O Clifford Frank Bull; P/O Frank Willis Burgess; F/L Robert Burns; F/L George Whitehead Burroughs; F/O Gordon Ralph Burton; WO Douglas Gordon Bush; F/O Ronald William Butcher; F/L Philip Buttar; F/O Arthur John Percival Byford; F/O John Todd Caine; S/L Lorne Maxwell Cameron; F/O Thomas Henry Cameron; F/O Graham Campbell; F/O Patrick Campbell; WO Stanley Enos Campbell; WO William Charles Campbell; F/O William James Campbell; P/O Henry Clifford Card; F/L Douglas Mintie Carey; F/L Alan Theophilus Carlson; F/O Arthur Reginald Carter; F/L Charles Murray Carter; WO George Cattiny; F/O Allan Percy Vivian Cheater; P/O George Frederick Clark; F/O Robert John Clark; F/L William Clark; S/L Howard Douglas Cleveland; F/L James Barry Cleveland; F/O William Blaise Burke Cloutier; F/O William Ralph Clow; P/O Graham Willoughby Coburn; P/O Lloyd Gerrard Coburn; F/L Robert Hugh Cochrane; WO Paul Morton Connor; P/O Douglas Tasker Cook; F/O Harry Robert Cook; F/O Thomas Charles Cooke; WO Wilfred Gordon Cooke; S/L Woodward Bowers Cooper; P/O Lawrence Benjamin Copenhaver; WO Joseph Albert Roger Coulombe; F/L George Lachlan Court; P/O Charles Martin Coutlee; F/L George Crabtree; F/O Billy Alfred Craddock; F/O James Craig; P/O Lawrence George Cramer; F/L Charles Cleveland Cunningham; F/O Joseph Patrick Curtin; WO Robert Douglas Curtis; F/L Martin Anthony Cybulski; F/L John Peter Blythman Dale; F/O William Locke Dark; F/O Harry Benson Date; P/O Auber Maurice Davidson; P/O Samuel Davidson; P/O John Davie; WO Frederick Charles Davies; S/L John Terence Joseph Davis; WO Henry William Davy; F/L William Selfridge Day; F/O Karl Alfred Decher; S/L Alphonse Leopold De La Haye; F/L Jacques Andre Hubert de le Paulle; F/L Joseph Charles Herve Delisle; F/O Stephen William Dempsey; P/O Borden Carrick Dennison; WO Alderic Li-boire D'Eon; F/O James Anthony De Rosenroll; P/O Fred Craig Derry; F/L Henri De Solla; F/O Dene Destonis; WO John Crabtree Dickinson; F/L Leslie Claremont Dilworth; P/O Wilfred Dingley; P/O Ian Harper Dobbin; F/O Wilbert George Dodd; WO Clifford Lloyd Douglas; F/L Robert Newton Douglass; F/O Michael Raymond Dourley; F/L Dean Hugh Dover; F/L James Richard Dow; F/O Harry James Dowding; F/L Leonard Alvin Draper; F/O Gordon Robert Drimmie; P/O Ronald Archie Hugh Dube; F/O Thomas Raymond Noel Duff; P/O Gordon William Duffield; F/O Warren Alvin Duffy; P/O John Doug-

las Duncan; P/O Elmer Burton Dungey; S/L Hugh Richard Ford Dyer; P/O William Hedley Eager; F/L William Henry Earl; P/O James Kenneth Easson; P/O Ivan George Edson; P/O John Francis Edwards; F/O Johann Walter Einarson, *D.F.M.*; F/O Glenmore Benjamin Ellwood; F/L George Gordon Empey; S/L Robert Frederick Epps; WO William Thomas Evans; F/L Hedley Joseph Everard; P/O Gordon Mitchell Ewan; F/L Harold Frederick Ewer; F/O Harold Richmond Facey; F/L Walter McNutt Fairey; F/O Herbert Reuben Farb; WO Alfred Clayton Farmer; F/O Gordon Henry Taylor Farquharson; F/L Vincent Joseph Faurot; F/L George Herbert Finch; WO James Bruce Findlay; F/O Colin Gowans Finlayson; P/O Thor Bjorgvin Fjeldsted; P/O Donald James Cheal Fleming; F/L Murray Franklin Flewelling; F/L Edwin Wesley Fockler; P/O Reginald William Folkes; F/O Owen Woodward Fonger; WO Allan Richard Gomez Fonseca; F/L Charles George Ford; F/O Hugh Lindsay Forrest; WO William Peter Foster; F/L Norman Ralph Fowlow; F/O Gustave Edwin Francis; F/O Arthur Edmund Franklin; F/L Reginald Bruce Fraser; F/O Thomas Fraser, W/C David Thomas French; P/O Goldwin Wilbur Gabel; P/O Peter Russell Galan; P/O Edward Gargett; P/O Stewart Foster Garland; F/O Ernest Walter Garrett; F/L Joseph John Adrian Robert Gauthier; F/O George Edward Dudman Gerrard; F/O Noel Gibbons; F/O Jack Cecil Gibbs; P/O William Edgar Gillis; F/O Joseph Redmond Glazebrook; P/O Calvin Oliver Godfrey; F/O Vernon Irving Gorrill; F/O James Lauren Gourlay; P/O Harry A. Gowan; P/O David Dunbar Graham; F/O George Thomas Graham; F/O John MacPherson Gray; F/O Kenneth Grant Gray; P/O Robert Alexander Gray; F/O John Paul Greco; F/O Robert Murray Griffiths; F/O Harold Frederick Grimble; F/O Alan Carrick Grout; P/O Joseph Grudzien; F/O Douglas Hackett; P/O Ernest Francis George Haddlesey; WO Arthur Reginald Hales; S/L Frank William Hales; F/L Donald George Hall; F/O John Thomas Hall; W/C Eric Colquhoun Hamber; F/O William David Melvin Hamblin; F/O Clayton Edwin Thomas Hamilton; F/O Frank Fletcher Hamilton, *D.F.M.*; F/L Jack Kincaid Hamilton; P/O William Bruce Hamilton; F/O Carl Eric Hanson; F/L James Robert Hanson; F/O Frank Edward William Hanton; P/O, Andrew Crawford Harding; F/O John Robert Harding; P/O Milton Harding; P/O Archie Vernon Hardy, *D.F.M.*; F/L Garnet Robson Harland; F/L Francis Robert Harris; F/L William Jarvis Harris; P/O John Douglas Harvey; WO Earnest Stewart Hawkes; F/O Raymond John Haworth; WO Jack Hewitson Hayes; WO Frederick Robert Hayward; F/O Wilbert Arley Healey; WO John Heaton; S/L Rosario Jean Claude Hebert; F/O Cecil Le Roy I-Jeide; F/L Alan Frank Helmsley; F/O Peter William Heron; P/O Gordon Warters Heselton; S/L Clifford Borden Hess; F/L Harold Arthur Hewitt; P/O Kenneth Hewson; P/O Victor Claire Hicks; S/L Clarence Wilfred Higgins; F/O Vernon Peter Bruce Hill; P/O John Philip Hind; WO George Daniel Hirschfeld; P/O Stanley Charles Hodges; F/L Albert Harold Hodson; F/L John Moore Hollingworth; F/O Edwin Norman Hooke; P/O Cecil George Hopton; WO James Talbert Houston; F/O Marshall Earl Howard; WO Thomas Joseph Howard; F/O Norman Charles Russell Howe; F/O James Roland Hughes; F/O Peter Gower Hughes; F/O Peter Huletsky; F/O Reginald George Frederick Hunt; P/O Eric James Hurd; WO Harvey Roy Hurst; F/L Rowan Theodore Hutchinson; F/L Murray Carslaw Hyslop; F/L Allister Andrew Thomas Imrie; F/L Bruce Johnston Ingalls; F/O Kenneth Edgar Ingram; F/L William John

Irving; F/O Basil George Delaval Jackson; P/O Harold Naylor Jackson; F/O Raymond Henry James; P/O Robert Harold Jarman; F/L Clarence Murl Jasper; P/O Morten Glenis Jensen; F/O Carl Helmer Johnson; F/L James Robert Feir Johnson; P/O Joseph Albert Lawless Johnson; F/L Paul Gilbert Johnson; P/O Frederick Edward Johnston; P/O James Ian Johnston; P/O Edgar Thompson Jones; F/L Joseph Albert Lloyd Jones; F/O Milton Eardley Jowsey; F/L Francis Thomas Judah; P/O Robert Alexander Kalle; F/O Henry William Keane, D.F.M.; F/L William Neil Keddie; F/O Ernest James Keefe; P/O George Frederick Keen; S/L Hubert George Keillor; F/O Robert Lloyd Kelly; P/O Hugh Robert Kennedy; P/O Edgar Andrew Ker; F/L Harold Fleming Kerrigan; P/O Thomas Henry Kimmett; F/L Daniel Baird King, *D.F.M.*; S/L Robert Allan Kipp; F/L William James Klufas; WO David Holden Knight; S/L David Graham Knox; WO John Henderson Knox; P/O Joseph Kohut; WO Abraham Isaac Korman; P/O Joseph Andre Roger Laberge; F/O Paul Charles Eugene Lafond; F/L Sven Roy Walfrid Laine; F/L George Henderson Laing; F/L George Johnstone Laird; WO Charles William Landale; P/O James Cumming Lang; WO Joseph Jean Baptiste Gaston Lapierre; F/O Joseph William Lauro; WO John Willoughby Lawrence; F/O Melvin Richard Leask; P/O Georges Yvon Lebel; F/L Gerald Bernard Leddy; P/O William Horace Ledger; F/O James Stewart Lees; F/O Arthur Kingswell Leitch; F/O Joseph Francis Lenihan; P/O William Ben Lennox; WO Alexander Buchanan Leslie; WO Wilfred Alexander Lindo; WO George Alexander Lindsay; F/L James Douglas Lindsay; F/L Karl Raymond Linton; F/L Oscar Mahaffy Linton; F/L Richard Rosswell Lipsit; S/L Harold Stanley Lisson; F/L Walter Lock; P/O Ernest Alton Logan; WO Frederick Willis Logan; F/L Forrest Guy Lord; P/O James Nelson Love; WO Robert Oliver Lumgair; P/O Joseph Arthur Laurent Lymburner; F/L Kenneth MacBain; F/L Robert Ernest MacBride; P/O Archie MacDonald; W/C Donald Charles MacDonald; F/L Douglas Allister MacDonald; F/L Gordon Webster MacDonald; F/O Harold Martyn MacDonald; F/L Donald Aikins MacFadyen; F/O Charles Edward MacIntosh; F/O Ian Finlay Macintosh; F/O Andrew Robert MacKenzie; P/O Roy Ernest MacKenzie; F/L Robert Edward Mackett; F/L Lawrence Leroy MacKinnon; F/L Donald Hector MacLean; F/L Ralph Spencer MacLean; F/O George Graham MacLeod; F/L Arthur MacMillan; P/O George James Stuart MacMillan; W/C Alexander Campbell Mair; P/O Lloyd Arthur Mann; F/L Ralph Viril Manning; F/L Oscar Archibald Joseph Martin; WO Willmer Alexander Martin; F/L James Marvin; P/O James Hubert Mason; F/O Cornelius Massey; F/L Thomas James Masters; F/O James Wilson Mathers; F/O Sidney Edward Matheson; F/L Herbert Lincoln Matthews; WO William Christie Maxwell; P/O Francis David Mayou; F/L Leslie Neil McCaig; F/L Jack Stansbury McCrae; P/O Ian Gawthorp McEwan; P/O Morley David McGill; F/L Donald William McGowan; F/O Walter Kenneth McGregor; P/O William Nelson McInnis; P/O James Alexander McIntosh; P/O John. McIntosh; F/O Malcolm McIver; F/L Donald Kenzie McKay; W/C William Arthur McKay; F/O William Robert McKinnon; P/O Francis Earl McLaren; WO Oliver Douglas McLean; S/L Wallace Anus Grayton McLeish; P/O Walter Greydon McLellan; WO Edward Thomas McLeod; WO Roy Alexander McLeod; W/C Aubray Roy McLernon; P/O Duncan James McMillan; P/O Alton Robert Ralph McQuade; F/L Donald John McQuoid; F/O Donald Farqu-

har McRae; P/O Bernard Francis McSorley; WO Hamilton Gordon McVeigh; P/O William Harold David Meaden; P/U Stuart Allen Meeks; P/O Joseph Armand Francois Meilleur; F/O Leonard Alexander Merrifield; P/O Robert Keith Metheral; F/L Sven Olaf Meyer; P/O Kenneth Robert Middlemiss; F/L Robert George Middlemiss; F/L William Sidney Middlemiss; F/L Durward Midgley; F/O Alfred John Miles; F/O George Norman Miller; F/O Kenneth Stuart Miller; P/O Gordon Sheppard Milne; S/L Roderick Francis Milne; WO James Steel Minogue; P/O Harold Wallace Mitchell; F/L James Fairservice Runciman Mitchell; F/L James Frederick Mitchell; F/L John Maxfield Mitchell; WO Philip Douglas Mitchell, *D.F.M.*; F/O Thomas Murray Laing Mitchell; F/L John Davidson Mitchner; S/L Barry Haig Moffit, *A.F.C.*; P/O Donald Allen Montgomery; F/L William Donald Craig Montgomery; F/U Duncan McNaught Moodie; F/O Vincent Kenneth Moody; FIL Leslie Albert Moore; P/O Anthony Bruno Morabito; S/L Charles Cecil Moran; P/O Chancy Leroy Morey; P/O James Robert Morrison; F/L Norman Beverley Morrison; F/L Joseph Alfred Morton; F/O Harrison Taylor Mossip; WO Arthur Joseph Charles Mower; F/L Gilbert Alexander Muir; F/L Eric Harold Mulligan; WO Leonard Munro Thompson Murie; F/L Clifford Edward Joseph Murphy; F/L Bruce Alexander Murray; F/L Francis Neville Murray; WO George Francis Denis Murray; F/O John Robinson Myles; F/O William Keith Naylor; F/O Elden Lloyd Nielsen; P/O William Robert Samuel Noyes; F/O William Stuart Goodlake Nutter; P/O John James O'Handley; F/O James Harold O'Neill; F/L Erwin Earl Osler, *D.F.M.*; S/L Gordon Byron Ough; F/O George Ovens; F/L Joseph Roger Owen; P/O Cecil William Paddock; F/O Richard William Palmer; F/O Ivan Murray Pare; F/O Arthur Wilson Parry; F/L Donald Savigny Paterson; WO Wray Paterson; S/L Bedford Donald Chase Patterson; S/L Harry Thomas Patterson; P/U George Richard Hamilton Peck; WO James Hugh Perrin; F/O Ivan Norman Peterson; FIL Wilmot Reginald Pettit; F/L Robert Dulmage Phillip; P/O Gerald Irwin Phillips; P/O Wallace George Phillips; F/L Rodney Thirsk Phipps; P/O Percy Edgar Pigeon; W/C Wilbur Provence Pleasance; F/O Arthur Gordon Plummer; WO Eric Plunkett; WO Garvin Herbert Porter; WO Bourneuf Freeman Pothier; F/L Patrick Albert Powell; P/O John Edward Powers; F/O John Henry Pratt; P/O Francis Noel Prebble; P/O Reginald William Douglas Price; P/O Robert George Pridday; F/L John Everett Pritchard; F/O Lorne Thomas Pritchard; P/O Rex Howard Probert; F/O David Harrison Protheroe; F/L William Stewart Pulsar; P/O Bryan Albert Quinlan; WO Jean Fernand Racette; F/O Paul Remby Rackham; F/L David Ramsay; F/O Donald Ross Rand; F/L Russell Edwin David Ratcliffe; F/L Byron Frederick Norman Rawson; F/O Horace Lewis Rees; F/L Thomas Gillen Reid; F/O Wilmer Harry Reid; F/L William Douglas Renton; F/L John Douglas Rice; F/L Joseph Oliver Richard; W/C Joseph Albert Dollard Baxter Richer; F/O Cyril Frederick Ridgers; F/O Arthur Rimmer; F/O James Ritchie; WO James Willett Ritchie; F/L Mark Roach, *D.F.M.*; WO Douglas Furg Robertson; F/O Clarence Ernest Robin; F/O Edward Le Page Robinson; F/O William Wishart Robson; F/O Joseph Rodolphe Ulysse Georges Rocheleau; F/L Frederick James Roddick; F/L William Rodney; F/O Armando Romano; F/L Arthur Stuart Ross; P/O John Dennison Routledge; F/L Daniel Nicholson Row; P/O Edward Lionel Llewellyn Rowe; F/L James George Rowand; P/O Allan MacDougall Roy; F/O

Howard Melvin Rudeen; F/O Alfred Herbert Russell; F/O Walter Andrew Russell; S/L William Alfred Russell; S/L Douglas Julian Sale, *D.S.O* and Bar; F/L James Harold Sanderson; F/L Harry William Sandgren; F/O Martin Sattler; S/L Howard Laun Saunders; F/L Cyril Raymond Savage; P/O William Henry Schmitt; F/O Rayne Dennis Schultz; F/L Henley Neilson Scott; P/O Ivan James Scott; WO James Archibald McNair Seaton; S/L Gordon Charles Semple; F/O Norman Merrill Sharer; F/L Hugh McLean Shearer; S/L Jackson Eddie Sheppard; F/O Allan Arthur Sherlock; F/O Eric Thomas Sherlock; F/L Frederick John Sherlock; F/O Lawrence Sherman; F/O Melvyn Curtis Sherwood; F/O Clifford Alvin Shirley, *D.F.M.*; F/L Harry Siberry Shortt; P/O Fredrick Charles Sim; F/O David Hope Simpson; F/L John Alexander Trager Simpson; WO William John Simpson; S/L Donald Charles Skene; F/O David Shirley Smart; F/O Andrew Payton Smith; S/L Charles Woodward Smith; F/L Frederick Sidney Smith; F/O Harry Frederick Ernest Smith; F/L Norman John Smith; P/O Raymond Fraser Smith; F/L Reginald Shirley Smith; F/O Stewart Thomas Smith; F/L Charles Rendol Snell; S/L John Douglas Snider; P/O Andrew Christian Sondergaard; F/O Francis Stewart Sorge; P/O George Allan Souch; F/O Grant Lawrence Spackman; F/L Wyllie Hall Spafford; WO Charles Edmond Spence; P/O Thomas Benson Spink; P/O Otto Steinberg; P/O Gordon Campbell Stephen; P/O Duncan King Stewart; S/L James Gardner Stewart; F/O William Alexander Reid Stewart; F/L Alexander Marlow Stockdale; F/O Augustus Burton Stovel; S/L Charles Herbert Stover; S/L William Watson Strachan; F/L Ronald Henry Stringer; P/O Ralph Adrian Stutt; P/O Eduard Henri Joseph Suarez; P/O Clarence Bentley Sutherland; F/L Gordon Grant Sutherland, *D.F.M.*; WO. Robert Lionel Taggart; F/O Joseph Leon Taschereau; S/L Cameron John Wilde Taylor; F/O Edward Arthur Thomas Taylor; F/O Philip Hamnett Taylor; F/L Lloyd Duncan Thomas; WO Edward Carson Thompson; F/O Harry James Thompson; F/L James Gordon Thompson; F/L Walter Ramon Thompson; P/O William Almer Thompson; F/O Dale Cairns Thomson; WO Walter Fyfe Thorburn; P/O Graydon Maurice Thornton; WO Lorne Hudson Todd; F/L Leslie James Toms; F/O Eric Torppa; F/L Hugh Charles Trainor; P/O Joseph Alphonse Gerard Tremblay; F/O McDonald Charles Tucker; F/O Warren William Tucker; P/O Denis Joseph Turenne; F/L John Cameron Turnbull; W/C Robert Steele Turnbull, *A.F.C.*, *D.F.M.*; F/O William Wrigley Watts Turnbull; W/C Sydney Desmond Turner; P/O Charles Joseph Usher; W/C William Charles Van Camp; F/L Johan Christiaan Van Nes; F/O Earl LeRoy Vawter; F/O Basil Vernon Lancelot Veira; P/O George Lindsay Vogan; WO Donald Andrew Wagar; F/L Henry Alfred Stanley Waggett; F/L Rudolph Joseph Wagner; F/L Leslie Albert Wainwright; F/L William Evan Walker; F/O Gerald Moorhouse Walls; WO Clifford Arthuh Walsh; WO David Earl Warne; P/O Milton Wilfred Warren; P/O David John Cunningham Waterbury; WO Charles Anderson Watt; F/O Robert Huycke Watt; P/O Claude Weaver, *D.F.M.*; F/O Melvin Douglas Webster; S/L Philip George Weedon; P/O Harvey Alexander Weeks; F/O William Weiser; F/O George Arthur Weldon; WO Ronald Alvin Westad; F/L Robert Allan Westell; S/L John Alfred Westland; F/O Ernest Francis Wheeler; F/O Albert Stanford White; P/O Delbert Edward White; P/O William James White; F/L Kenneth Herbert Whittington; P/O Peter Wilby; P/O John Arthur Wilding; F/O Douglas Rowe Wiley; F/O Sander Willie

Raymond Wilhelmson; WO George Alexander Wilkie; F/O James Edward Williams; F/O John Frederick Hart Williams; P/O Reginald James Williams; F/O Vernon Albert Williams; W/C Charles Albert Willis; F/O Brian Edmund Wilmot; F/L Carl Albert Wilson; F/L Donald Cameron Wilson; F/O Frederick Albert William Johnson Wilson; P/O Lloyd George Wilson; P/O Philip Joseph Wilson; F/L Terence Bawlf Winslow; F/L Gerald William Wolton; F/O Charles Aiphons Wondolowski; P/O Ernest Henry Wood; P/O Frederick William Yackman; P/O William John Young.

CONSPICUOUS GALLANTRY MEDAL

Sgt. William Harry Cardy; Sgt. Peter Engbrecht; Sgt. George William Meadows; WO Richard Jack Meek; FS Joseph Vincent Russell.

MILITARY MEDAL

Sgt. Charles Edward McDonald

DISTINGUISHED FLYING MEDAL

FS Harvey Ross Allin; FS John Angus; FS Herbert Tuxis Berry Armstrong; FS John Webster Betty; FS Israel Joseph Bodnoff; FS Arthur Tremaine Bowlby; Sgt. Graham Breakwell; FS James Orville Broomfield; Sgt. Norman Bruce; Sgt. Merrill Rugless Burnett; FS Robert John Burton; Sgt. Nolan Butts; FS Arthur Bruce Cable; Sgt. Terence Eugene Campbell; FS David Raymond Cantera; FS William Harold Russel Champion; FS Duncan Archibald Chisholm; FS Alexander Clibbery; FS Sydney Reginald Cole; Sgt. Donald Mervin Cornish; Sgt. Joseph Marcel Albert Croteau; Sgt. Richard Royden Davey; FS Kenneth George Davis; FS Aldo Della Stua; FS Frank Vincent De Marco; FS Peter Woodrow Dennis; FS Thomas William Dimma; FS Raymond Dubois; Sgt. Jean Pierre Aime Joseph Duval; Sgt. Robert Alexander Edie; FS Thomas Henry Navin Emerson; Sgt. Sidney Edward Finlayson; Sgt. Jean Paul Alfred Alphonse Florence; FS Antonio Franciscone; Sgt. Neil Cameron Fraser; FS Arthur Charles William Fussell; Sgt. Edwin Omer George; FS Alec Paddon Gibb; Sgt. Harry Glass; FS Malcolm Francis Gray; FS Harold Lewis Grayson; FS Sigurd Johannes Halvorsen; FS Keith de Havilland Hamblin; FS Archie Vernon Hardy; Sgt. Douglas Gregor Harkness; FS George Eric Hexter; FS Robert Benjamin Hicks; FS Wellington Hill; FS Ronald Forrest Hughes; FS Richard Carl Hyde; Sgt. Gordon Ireland; FS Ross Barrett Irwin; Sgt. Fred Moore Jackson; FS Walter Charles Jackson; FS Albert Josiah Janes; Cpl. Harold Knelson; FS William Kondra; FS Vincent Jean Paul Lacaille; Sgt. John Patrick Lee; FS Douglas George Lightfoot; FS Kenneth Lawrence Long; Sgt. Gordon Hansen Low; Sgt. Robert James MacDonald; Sgt. John Mangione; Sgt. Leonard Frank Martin; FS Stuart Gordon Matheson; Sgt. Donald Ralph McEvoy; Sgt. Reginald McNamara; Sgt. Charles McRae; FS John Frank Merchant; FS Philip Douglas Mitchell; FS John Edward Moriarty; FS Duncan McKerral Murray; FS David Harold Parker; Sgt. Donald Frederick George Parker; FS Stuart Pennington; Sgt. Joseph Petsche; FS Joseph Norbert Jean Pilon; FS John Robert Pollock; FS Malcolm Gerald Price; Sgt. Richard Edward Qualle; Sgt. Joseph Herve Leonel Quesnel; Sgt. Gordon John McDowell Ritchie; FS Frederick John Roberts; FS Herbert Alexander Basil Salkeld; FS

ORDERS, DECORATIONS AND MEDALS 395

Dennis Day Salmon; Sgt. Edward Fredrick Schmidt; FS Conrad Anthony Selfe; Sgt. Theodore Herbert Skebo; FS Robert Lyster Skillen; FS John Frederick Smith; FS Charles Percy Elwood Steedsman; FS Douglas Warner Storms; Sgt. John Bryson Sullivan; Sgt. Leonard Stephen Sumak; Sgt. Arthur William Switzer; Sgt. George Harold Thomson; FS Anthony Wright Tinmouth; Sgt. David Francis Tribe; FS Elmer John Trotter; Sgt. William John Walton; FS Homer Delbert Weaver; Sgt. Derek James Webb; FS Michael Nicholas Werbiski; FS Howard Albert Wobick; FS Arthur Ronald Woolsey; Sgt. Duane Harris Wright; Sgt. Andrew Campbell Yule; Sgt. Walter John Ziomko.

GEORGE MEDAL

F/L George Clayton Abel; F/L Ewart John Adyn Lindsay; F/L Robert James McCombe; WO William Kerr McGrath.

FOREIGN DECORATIONS

AWARDED TO PERSONNEL OF THE R.C.A.F.
(September 1st, 1943 to August 31st, 1944)

DISTINGUISHED FLYING CROSS (U.S.A.)

P/O Alexander Lawrence Carr; F/O John Mervyn Churchill; F/O Donald Philip MacIntyre, D.F.C.; F/O Alan James Mackie; F/O Anthony Arthur Martin; W/C Joseph Menard William St. Pierre.

AIR MEDAL AND SIX OAK LEAF CLUSTERS
(U.S.A.) F/O Anthony Arthur Martin, D.F.C. (U.S.A.)

AIR MEDAL AND FOUR OAK LEAF CLUSTERS (U.S.A.)
P/O Carl Sidney Fleck; F/O Wilfred James Miron

AIR MEDAL AND THREE OAK LEAF CLUSTERS (U.S.A.)
P/O Robert Davidson Gall; P/O Alexandre Paul Lamoureux; P/O Ronald Douglas Robertson.

AIR MEDAL AND TWO OAK LEAF CLUSTERS (U.S.A.)
P/O Alexander Lawrence Carr, D.F.C. (U.S.A.); P/O Donald Herbert Cruickshank; P/O George William Martino; P/O Forbes Robertson.

AIR MEDAL AND ONE OAK LEAF CLUSTER (U.S.A.)
P/O Joseph Jean Paul Paradis; P/O Roy Everett Sibbald

AIR MEDAL (U.S.A.)
F/L Eldon Burke Elliott; F/O Lawrence McMillan, D.F.C.; F/O Donald Gairn Scott, D.F.C.

SOLDIER'S MEDAL (U.S.A.)
Cpl. Donald Morton Harrett

MEDAL FOR VALOUR (U.S.S.R.)

FS William Lorrian McGuinty

MILITARY CROSS (Czech.)

P/O Richard Pennington Wilkin

CROIX DE GUERRE (Belg.)

FS John Henry Patrick Higgins

ORDERS, DECORATIONS AND MEDALS

AWARDED TO PERSONNEL OF THE ALLIED AIR FORCES
SERVING WITH R.C.A.F. UNITS OVERSEAS

Note: Unless otherwise indicated personnel are members of the R.A.F., R.A.F.V.R., or R.A.F.O. Those marked with an asterisk (*) are Canadians commissioned in the R.A.F.

SECOND BAR TO THE DISTINGUISHED SERVICE ORDER

W/C James Edgar Johnson, *D.S.O.* and Bar, *D.F.C.* and Bar

BAR TO THE DISTINGUISHED SERVICE ORDER

W/C James Edgar Johnson, *D.S.O.*, *D.F.C.* and Bar

DISTINGUISHED SERVICE ORDER

S/L John Baker, *D.F.C.*; S/L Bernard Walter Culpin, *D.F.C.*; *W/C Mervyn Matthew Fleming, *D.F.C.*; W/C Alfred Kitchener Gatward, *D.F.C.*; S/L Charles Curnow Scherf, *D.F.C.* and Bar, (R.A.A.F.).

BAR TO THE DISTINGUISHED FLYING CROSS

*W/C Christopher Smales Bartlett, *D.F.C.*; F/L Ian Hewitt, *D.F.C.*; F/L Charles Curnow Scherf, *D.F.C.*, (R.A.A.F.).

DISTINGUISHED FLYING CROSS

F/O Philip Alfred Andrew; F/O Kenneth Thornby Ashfield; P/O John Robert Baker; F/L Sydney Ernest Bedford; F/L Charles Mack Blakeney; P/O Victor Edward Bowden; F/L Arthur Farrer Boyd; F/L Duncan Brown; F/O George Norman Brown; F/L James Brown; F/L Sydney William Butler; F/O James Carlin; S/L Alban Philip Sidney Chipling; S/L David Walter Scaly Clark; F/L Cyril William Cole; F/L Wilfred Arthur Cory; S/L Norman McLeod Coull; P/O Frank Cousins; F/L Fred Cowling; P/O Stanley Jack Cramp; F/L George John Cribb; P/O Bernard Walter Culpin; P/O Derek Vivian Ainsworth Curley; F/L Hugh Curry; F/O Phillip Davis; P/O James Henry Eric Delaney; P/O Kenneth Shapley Delbridge; F/L James Jardine Devan; P/O John Colquitt Dougherty; P/O Frederick Cecil Edmonds; F/O Albert John Ennals; P/O Harry Fawcett; P/O Alan Harry Fernand; S/L Richard Jack Fursman; F/O Deryck Worthy

Trevor Giblin (R.A.A.F.); *F/L Robert Norman Gourlie; F/O Frederick Syme Hair; P/O. Reginald Hamby; *W/C Charles Edwin Harris; F/L Thomas William Harris; WO Eric Hartley; P/O Lionel John Haynes; P/O George Browning Haywood; P/O John McCrae Houston; F/O Clarence Lindsay Hughes; F/L Ralph Holmes Vernon Hunt; P/O Benjamin Parker Jackson; P/O Eric Arthur Johnson; P/O John Henry Jones; WO Gordon Lindsay Kennedy (R.N.Z.A.F.); F/O Gerald Klein; F/O Harold Herbert Ladbrook; F/L John Albert Edwin Lancaster; F/O William Mark Lawrence; P/O Frederick William Ronald Litson; P/O James Tilston Maddock; P/O Peter William Manning; P/O George Harry Marjoram; F/O George Albert Martin; F/O John Alexander McClune; F/L Leslie Leishman McLeod (R.A.A.F.); P/O Ronald Deane Milne (R.N.Z.A.F.); F/L Donald Mortimer; F/L John Musgrave; F/O Stanley Eric Neville; P/O Stanley John Nicolle; F/O Wilfred Ronald Eli North; F/O John Henry O'Neill; P/O Donald Ivor Palmer; F/O Thomas Hugh Parnell; F/O Philip Dunthorne Paterson; P/O William Charles Alfred Pay; F/L Geoffrey Derry Perks; *W/C James Arthur Piddington; F/L Lawrence Valentine Pollard; F/L Thomas Rawlinson; F/O John Douglas Bernard Reffitt; P/O Ronald Clapham Reinelt; WO William Allen Riddell; F/O Antony Rodwell; F/O Noel Stanton Rose (R.A.A.F.); P/O Jack Samuel Salisbury; P/O George Mair Scade; F/L Charles Curnow Scherf (R.A.A.F.); F/O Gordon Bramwell Sharman; P/O Harry Sherlock; F/O Francis Shield; F/O Gerald John South; P/O Victor Southwell; F/O Maurice John Spencer; F/L John Keith Staunton (R.A.A.F.); P/O Richard Cann Taylor; F/O Harold John Thomas; S/L Harold Walter Augustus Trilsbach; F/L Cyril Hugh Thomas Tubman; S/L John William, Ernest Tyler; F/L James Ross Valentine; P/O Bertram Vine; P/O Joseph Anthony Weber; F/O Elwyn Williams; P/O Stanley Wilson; F/O Alexander Winskill; F/L Rossmore Gordon Wood (R.A.A.F.); P/O William Frederick George Woodley; P/O John Young.

CONSPICUOUS GALLANTRY MEDAL

Sgt. Gilbert Ebenezer James Steere; FS Frederick John Stuart.

DISTINGUISHED FLYING MEDAL

FS Reginald Ragnor Armstrong; Sgt. John Norman Stephen Ashton; Sgt. Barnard Oswald Richard Bays; FS William Biggs; FS Thomas John Bright; FS William Henry Buckley; Sgt. George Dawson Burton; FS Frederick Herbert Buss; Sgt. Edward John Carden; Sgt. John William Carrigan; FS Douglas William Chard; FS Frank Day; Sgt. William Ryder Dickinson; Sgt. Jack Elliott; FS Kenneth Winston Elt; FS Stanley Frederick Fincham; Sgt. James Geddes; FS John Gingles; FS Robert Charles Hawkins; FS Thomas Sidney Heyes; FS David Benjamin James; Sgt. Gerald Ralph Ketcher; FS Daniel John Langley; FS David Waide Lloyd; FS William Lumsden; FS Cecil Frank Mace; FS Harry Marshall; Sgt. Cecil Alexander Matthews; Sgt. Patrick Bernard McDonnell; FS Leonard Edward Garry Middleton; FS William Robert Mill; Sgt. Leslie Ernest Moyler; FS Harold Nelson; Sgt. Clarence Gordon Nicholls; FS John Harrison Ormesher; FS Robert Adair Perry; Sgt. Archibald Ronald Phillips; FS Stanley Poole; FS William Shakespeare; FS Cyril Arthur Smith; FS David Cruickshanks Smith; FS Kenneth William Smith; Sgt. Peter Stuart; FS Raymond William George Sullivan; Sgt. Dennis Fletcher Walker; Sgt. Ian

Douglas Wallace; FS Dennis Arthur Watkins; Sgt. John Alexander Dyer Weeks; FS Dennis Arthur West; Sgt. Roy Garfield Williams; FS Ernest Relton Wright; Sgt. John Norman Wright.

DISTINGUISHED FLYING CROSS (U.S.A.)
W/C James Edgar Johnson, *D.S.O.*, *D.F.C.*

ROLL OF HONOUR

*Leaving his death for an example of a noble
courage . . . unto all his nation.*

-2 MACCABEES II, 25.

The following list contains the names of all members of the R.C.A.F. who were reported killed and, in addition, those who, having been previously reported missing, were for official purposes presumed to have died between September 1st, 1943 and August 3.1st, 1944. It is probable that certain names may be added to the list of those presumed dead between the dates mentioned, but the list as provided herewith was correct as of February 1st, 1945. Many of those whose names are included met death while training in Canada, while others died of natural causes.

Ranks shown in nearly all cases are those given in the original casualty reports. It is realized that in a number of instances announcement of ante-dated promotion or commissioning was made later and where these have been brought to the attention of the editors the necessary changes have been made. Sincere apologies are tendered for any errors which may still unavoidably appear in the list.

FATAL

A

F/O L. B. Abelson; F/O G. E. Adamac; F/O V. Adamic; P/O D. W. Adams; Sgt. D. C. Adamson; LAC V. E. Ahlskog; WO1 A. Aikman; P/O J. H. Y. Albert; P/O O. J. Albrecht; AC1 W. R. Alder; LAC D. G. Alexander; LAC J. M. Alexander; F/L O. R. Alexander; F/O W. W. Alexander; F/O L. R. Aliman; F/L W. C. Allan; WO2 W. H. Allan; Sgt. J. M. Allen; FS S. Allen; Sgt. W. W. J. Allen; P/O W. J. Allingham; Sgt. N. F. Alsop; F/O R. R. Amey; F/O D. M. Anderson; P/O E. W. Anderson; Sgt. G. M. Anderson; FS H. F. Anderson; Sgt. H. L. Anderson; Sgt. J. Anderson; S/L W. B. Anderson; Sgt. W. A. R. Andrew; WO2 G. A. Andrews; F/O R. J. Andrews; F/O C. G. Archibald; F/O E. G. Armour; F/O W. D. Armour; F/O D. J. Arneil; F/O R. S. Arnold; F/O W. G. Asbell; WO2 J. Ashwood; Sgt. F. A. Aspinall; P/O P. Asseff; Sgt. W. W. Asiles; Sgt. H. Astrand; LAC G. C. Atkins; P/O G. H. Atkinson; LAC L. E. Atkinson; Sgt. K. D. Attwell; P/O J. G. D. Aubin; F/O H. C. Austen; P/O C. Axford.

B

AC1 M. A. Backstrom; Sgt. J. J. Bailie; FS P. E. Baillargeon; F/O T. Baillie; Sgt. W.O.D. Baird; F/L C. O. Baker; F/O D. H. Baker; F/O H. A. Baker; FS R. W. Baldwin; LAC F. W. Ball; P/O R. E. Ballentine; P/O S. B. Bandur; FS R. B. Banford; FS W. J. Banner; F/O J. E. V. Banning; Sgt. C. A. Bannon; Sgt. J. L. Barber; FS J. C. Barfoot; P/O L. R. Barker; WO1 T. Barlow; FS W. S. Barnard; LAC D. G. Barnes; LAC A. T. Barnson; F/O N. J. Baron; Sgt. G. H. Barr; FS E. G. Barrie; F/O R. W. Bartlett; F/O H. H. Barton; Sgt. R. J. Barts; FS C. K. Bateman; WO2 J. R. Bateman; P/O P. T. Bath; F/O E. G. Bayer; P/O E. G. Beard; AC2 W. H. Beasley; Sgt. L. K. Beattie; F/O G. D. Beatty; FS J. M. Beatty; F/O J. F. T. Beesley; F/O K. B. Begbie; LAC E. S. Beingessner; Sgt. R. Beker; F/O J. J. D. Belanger; P/O D. G. Bell; WO1 E. T. Bell; P/O H. C. Bell; LAC H. H. Bell; F/O J. L. Bell; Sgt. H. B. Bellew; AC2 W. G. Bend; P/O W. A. J. Bennett; FS H. Bennis; F/O K. G. Berry; P/O J. H. T. R. Bertrand; Sgt. H. R. Bessent; F/L J. D. Best; F/O D. D. G. Bidwell; P/O K. T. Bielby; Sgt. J. B. H. Bienvenue; P/O J. L. W. Bilodeau; P/O D. C. Bishop; Sgt. D. Black; S/L R. S. Blackler; P/O A. D. Blackman; F/O C. A. Blackmore; F/O H. D. Blair; WO2 W. Blair; Sgt. J. M. Blake; Sgt. W. J. R. Blakeley; Sgt. W. B. Blakely; LAC A. S. Blanchard; F/O J. J. Blanchfield; Sgt. W. L. Blunt; F/O J. W. Blyth; Cpl. H. A. Boddy; FS J. O. M. J. Boily; WO2 J. G. L. Boisvert; P/O W. L. Boisvert; F/O K. W. Bolstad; F/O V. H. Bolton; P/O A. F. Bond; P/O D. H. Bond; LAC R. L. Bonnell; F/O A. L. Bonnett; F/O A. N. Book; Sgt. J.O.R. Bordeleau; P/O G. A. Bottrell; LAC O.H. Bouchard; LAC G. J. A. Boucher; WO2 J. E. Boudreault; F/O E. J. Bowers; P/O W. E. Bowhay; P/O J. E. Bowler; F/O F. C. Bowring; P/O E. C. Bowsquet; F/O F. A. Boyce; P/O J. R. R. Boyer; P/O F. Bradley; F/O G. G. Bradshaw; Cpl. R. P. Brady; FS A. P. Braniff; F/O R. S. Bray; F/O F. V. Breen; P/O L. M. Brehaut; F/O G. W. Brereton; FS F. G. Brezina; AC2 J. A. Bridge; F/O N. Bridges; F/O D. C. Bridgman; FS W. E. Briggs; F/O B. W. Bristol; Sgt. G. D. Britland; WO2 J. H. Broad; Sgt. E. I. Brock; F/L J. G. Broder; F/O R. G. C. Brodie; Sgt. J. E. Brooks; P/O R. D. Brooks; F/O R. M. Brooks; F/O A. F. Brown; F/O B. E. Brown; Sgt. D. R. Brown; Sgt. G. Brown; F/O G. C. Brown; F/L G. D. Brown; F/O J. Brown; WO1 J. A. Brown; WO2 J. K. Brown; FS W. C. Brown; LAW. E. M. Brownlee; AC2 M. C. Brownscombe; Sgt. W. I. Bruce; Cpl. G. S. T. C. Bryden; F/O G. D. W. Buchanan; P/O R. C. Buckberroug; F/L K. A. Buckley; F/O R. W. H. Budd; P/O J. P. Bulger; F/L D. M. Bull; F/O E. H. Bullis; Sgt. E. Bunt; Sgt. J. F. Burgess; P/O R. C. Burgess; Sgt. B. W. Burke; P/O J. J. Burke; WO2 L. F. Burke; Sgt. W. R. Burke; F/O F. K. Burleigh; F/O G.D.W. Burnie; WO2 J. W. Burns; Sgt. D. G. D. Burnside; F/L D. H. Burr; WO1 E.W. Burrows; F/L, F. L. Burston; F/O G. F. Burston; Sgt. R. W. Burton; F/O D. G. Bush; WO1 F. C. Bushfield; P/O G. V. Butchart; P/O F. L. Butcher; P/O J. W. Butcher; F/O J. S. Butler; P/O V. B. G. Butler; LAC D. J. Byrne.

C

WO1 J. F. C. Cabot; Sgt. J. A. Calder; P/O R. G. Calder; F/L I. M. Caldwell; P/O R. F. Calnan; F/O A. R. Cameron; F/O D. J. Cameron; Sgt. G. K. Cameron; WO2 R. E. H. Cameron; LAC A. R. Campbell; F/O A. W. Campbell; LAC G.; Campbell; F/O H. C. Campbell; LAC J. F. Campbell; Sgt. J. L.

Campbell; P/O K. P. Campbell; LAC N. M. Campbell; F/O W. Campbell; F/O W. F. Campbell; WO2 W. W. Campbell; F/O G. R. Canfield; F/O. W. G. Cantlay; Cpl. W. G. Carder; Sgt. D. M. Carkner; LAC W. C. Carney; P/O R. F. Carol; Sgt. S. A. Carr; Sgt. J. L. P. D. Carrier; P/OJ. C. L. Carriere; F/L. A. R. Carter; FS L. R. Carter; Sgt. E. E. Case; Sgt. J. H. Casselman; F/O N. C. Cathcart; Sgt. J. H. Catto; F/O W. J. Caulfield; FS A. J. Chabara; W/C L. V. Chadburn; F/O R. L. Chambers; F/O L. E. Chapman; F/O G. A. Charlesworth; WO2 J. W. Chester; WO2 W. R. Chester; FS J. B. V. Chevalier; FS A. Chibanoff; F/O T. Chmielowiec; Sgt. C. R. Choma; LAC J. J. H. E. Chouinard; P/O C. Christensen; P/O B. R. Christie; P/O J. Christie; P/O J. O. Christie; FS W. J. Christie; F/L H. W. Church; F/O J. G. Ciermont; F/L D. H. H. Clark; F/L F. J. Clark; F/O H. A. T. Clark; P/O J. W. Clark; F/O R. S. Clark; Sgt. W. H. Clark; P/O A. K. Clarke; Sgt. J. R. Clarke; F/L H. J. Cleary; F/O F. P. Clegg; Sgt. T. F. Clemenhausen; F/O S. F. Cleworth; LAC R. A. Climenhage; Sgt. W. R. Clin; P/O G. E. Clode; WO1 G. R. Coathup; WO1 G. H. Cockburn; P/O J. E. Code; W/C J. C. Coffey; F/O S. A. Coffin; Cpl. C. N. Cole; WO1 C. F. Coleman; LAC J. Colley; F/O C. M. Collier; F/O F. D. Collinge; Sgt. D. M. H. Collins; LAC L. N. Collins; Sgt. N. J. Collins; LAC K. C. Colquhoun; P/O J. S. Colville; Cpl. R. E. Colwell; P/O W. M. Conly; P/O D. F. Connolly; Sgt. T. L. Connolly; P/O E. K. Conway; LAC A. R. F. Cook; F/O L. F. Cook; WO2 V. E. Cook; P/O J. M. Cooley; F/O C. E. Coons; F/O W. W. Coons; P/O A. D. Cooper; P/O W. W. Cooper; P/O A. G. Corck; F/O W. A. Corley; Sgt. J. R. M. Corman; F/O A. J. Corriveau; FS J. T. R. Corriveau; P/O J. P. Cosgrove; P/O J. Cossoff; LAC C. E. Cote; WO2 J. A. R. Cote; Sgt. J. F. R. Cote; FS D. J. Cotter; Sgt. R. E. Coulter; Sgt. J. J. O. Cournoyer; P/O J. L. Courteau; Sgt. G. F. Couse; P/O N. E. Cousins; F/O R. M. Coutts; Sgt. E. E. Cowie; F/O H. Cox; F/O K. J. Cox; FS E. C. Crabtree; Sgt. R. S. Craeknell; Sgt. M. J. Craig; P/O W. G. Craig; P/O J. S. Cram; P/Q F. E. Cranch; LAC G. H. Crawford; Sgt. N. W. Crawford; P/O F. W. Crawley; FS J. Creighton; WO2 B. V. Crist; WO2 W. V. Crockett; F/O J. O. Cross; FS D. Crossland; Sgt. E. A. Crowe; Sgt. G. C. Cull; Sgt. L. J. Cull; Sgt. J. A. Cummer; FS F. Cunningham; Sgt. R. E. Cunnings; WO2 E. C. Currie; WO2 R. T. Currie; P/O A. M. Curry; F/O W. J. Curtis; F/O R. L. Cuzner.

D

LAC W. W. Dafoe; Sgt. W. L. Dalglish; WO2 J. E. Dalling; LAC F. C. Dalton; F/O J. C. Dalziel; Sgt. A. D. Daniels; F/L T. E. Daniels; LAC C. Dansey; FS R: H. J. Daoust; F/O J. L. Darby; WO1 F. W. Darragh; F/O A. F. Daunt; Sgt. J. A: M. Dauplaise; WO1 L. F. Davey; F/O G. W. Davidson; T/O N. J. Davidson; LAC W. A. Davidson; F/O A. J. Davies; Sgt. H. R. Davies; P/O J. C. Davies; P/O P. P. Davies; P/O B. Davis; F/L B. D. Davis; P/O E. A. Davis; P/O J. Davis; Sgt. K. W. D. Davis; F/O R. A. Davis; Sgt. W. C. Davis; F/O F. E. Dawson; P/O G. O. Dawson; Sgt. R. F. Dawson; Sgt. D. G. B. Day; F/O H. G. Dayman; WO2 C. A. Dean; P/O G. Dean; FS R. T. Dean; FS R. W. Dean; F/O F. B. Deane; WO1 K. I. J. Dean; F/O H. F. Delhaye; F/O J. B. DeMacedo; P/O J. W. R. Demers; F/O J. M. Dempster; AC2 J. L. E. Denault; F/O R. W. Denison; F/O F. H. Dennison; LAC E. J. DePlanche; FS J. A. Deschamps; W/C J. P. J. Desloges; P/O L. A. Dessert; F/L E. C. Devine; AC2 W. C. Dewar; F/O T. H. Dibb; LAC J. O. G.

Dicaire; WO1 R. J. Dickie; Sgt. R. M. Dickie; LAC F. Dickinson; Cpl. W. R. Dickson; LAC A. M. DiFilippo; F/O L. J. D. Dimarco; P/O T. W. Dimma; FS H. G. Dimock; P/O F. R. Dionne; FS A. DiPesa; FS D. F. Dittmer; F/O E. L. Dixon; P/O F. A. Dixon; Cpl. L. E. Dixon; FS N. Dlusy; F/O B. H. Dobesch; WO1 A. R. Dobson; WO2 W. L. Dobson; FS R. B. Donaghy; WO2 S. J. Donen; F/O A. D. Doner; WO2 S. R. Doney; Sgt. T. Donnachie; Sgt. E. J. Donnelly; Sgt. T. E. R. Donnelly; Sgt. W. P. Donnelly; LAC L. O. Dorge; LAC H. F. Douglas; F/O R. V. Doupe; F/O C. J. Down; Sgt. B. Downey; F/O J. W. Downs; P/O W. R. Drake; Sgt. T. W. Draper; F/O C. C. Drew; P/O L. C. E. Driscoll; Cpl. H. C. Drummond; Sgt. J. C. J. E. Dubord; F/O S. Dubowski; P/O W. E. Dubroy; F/L W. A. Duff; AC1 J. A. Dufton; Sgt. J. S. Duguid; Sgt. J. A. J. Duhamel; LAC S. C. Dumont; F/O G. Dumville; WO2 A. Dunae; LAC L. A. G. Dunbar; F/L R. B. Duncan; F/L A. R. Dunlea; P/O D. A. Dunlop; LAC D. V. Dunlop; F/O L. G. Dunlop; FS V. J. Dunnigan; LAC B. H. Dunphy; Sgt. M. E. Duquette; Sgt. G. H. Durham; Cpl. N. A. Durk; P/O G. W. Durnin; Sgt. R. A. Dutton; F/O P. H. Duval; F/O F. D. Dwyer; F/O J. E. Dye.

E

F/O W. H. Eager; F/O W. R. Eaglestone; LAC N. L. Earl; P/O W. H. Earl; F/O J. L. Eastwood; F/O J. B. Eaton; F/O R. G. Eaton; WO2 J. J. Eccles; F/L J. R. Edgar; Sgt. C. M. Edwards; F/O R. F. Edwards; Sgt. W. E. Edwards; F/O H. G. Eise; F/L F. C. Eldred; F/O F. I. Elliott; FS A. Ellis; Sgt. A. W. Ellis; Cpl. H. C. D. Ellis; F/O G. Elmer; F/O B. A. Elmore; S/L H. Elsey; F/O G. A. England; FS W. H. England; WO1 L. T. Erickson; F/L O. J. Eskil; F/O D. C. Evans; F/O J. T. Evans; Sgt. W. H. Evan; F/O R. S. Ewart.

F

P/O J. D. Fairbairn; P/O E. Fairhead; Sgt. W. T. Falan; F/O L. G. Falconer; F/O J. G. Falloon; FS K. R. Fallowdown; P/O H. O. Farner; FS J. J. Farrell; P/O H. Farrer; P/O T. W. A. Farrer; FS F. N. Fearnley; WO2 A. Feldman; F/O H. E. Fenwick; FS W. G. Fenwick; P/O E. J. Fereday; WO2 A. E. Ferguson; Cpl. E. J. Ferrier; WO2 W. H. Ferris; P/O D. D. Finch; F/O E. G. Finch; F/O J. C. Findlay; F/O W. J. Fisher; P/O G. R. Fitzsimmons; WO2 C. T. Flack; Sgt. L. F. Fletcher; F/O S. M. Flett; P/O J. O. R. Fleury; F/O C. R. Floyd; F/O C. Foderingham; LAC D. J. Folkard; F/O V. R. Folkersen; Sgt. A. Follett; Sgt. J. Foote; WO1 J. E. Ford; WO2 G. W. Fordyce; P/O J. K. Forest; WO2 T. B. Forestell; Cpl. L. C. Foris; FS J. R. Forrest; WO2 R. L. Forrester; P/O M. S. Forsberg; WO2 J. G. F. Fortin; FS R. G. Foster; F/O J. A. Foulston; FS J. W. R. Fournier; WO1 J. B. Fowler; P/O H. R. W. Fox; Sgt. J. B. Fox; F/O M. A. Foy; FS F. L. Frank; F/O A. M. Fraser; F/O G. Fraser; WO1 H. S. Fraser; P/O John Alan Fraser; P/O John A. Fraser; AC1 J. A. Fraser; FS J. K. Fraser; Sgt. L. H. Fraser; P/O L. P. Fraser; WO2 A. E. Frazer; F/O W. B. Frederick; F/O E. E. Freeman; WO2 H. C. Freeman; Sgt. K. French; AC2 J. A. Fretwell; F/O G. J. Frost; Sgt. H. W. Frost; F/O M. L. Fullerton; F/O R. Fulton; LAC H. Funger.

G

Sgt. T. Gabryelski; Sgt. J. J. A. Gagnon; AC1 J. R. Gagnon; F/L C. W. Gaines; F/O J. R. Galbraith; Sgt. P. E. Galgan; P/O G. J. Gallagher; FS J. Gallant; LAC

J. F. R. Gallant; WO1 P. A. Gallop; LAC W. N. Galloway; FS C. E. Garbut; LAC J. S. Gardner; WO1 N. W. Gardner; P/O W. A. Gardner; F/O W. S. Garland; P/O R. H. Garnham; Sgt. C. R. Garrick; Sgt. N. H. B. Garrity; F/O H. W. Garwood; WO2 S. D. Gaunce; F/O G. T. Gaunt; LAC J. E. Gautreau; P/O W. H. Geddes; F/O G. J. Geggie; P/O A. L. George; FS G. T. Gerow; P/O N. H. Gerrard; P/O R. A. Gerrard; P/O G. W. Gerring; F/O J. P. C. Gervais; P/O J. L. Gibault; LAC L. C. Gibb; WO1 D. E. Gibbon; WO2 J. E. Gibson; F/O J. L. Gibson; P/O L. S. Gibson; Sgt. R. P. Gibson; WO1 G. E. Giff; F/O W. D. Gilbert; Sgt. J. H. Gilbertson; F/O D. R. Gilchrist; WO1 D. R. Gilchrist; Cpl. N. B. Gildemaster; P/O A. T. Gill; FS D. S. Gillander; Sgt. W. R. Gillespie; Sgt. A. S. Gillies; F/O J. A. Gillies; FS J. K. Gillies; Sgt. N. M. Gillis; F/O R. G. Gilmour; FS E. I. Glass; P/O H. Glass; WO1 E. A. Glauser; F/O F. J. Glazier; F/O J. A. Glenn; FS J. J. Godin; Sgt. T. Goldie; LAC J. L. Golding; Sgt. J. J. Golding; S/L E. A. Good; FS J. K. Goodfellow; P/O A. A. Goodill; WO1 A. H. Goodman; FS W. D. Goodrick; LAC B. Gordon; LAC B. M. Gordon; F/O D. A. Gordon; FS R. E. D. Gordon; F/O W. C. Gordon; FS F. Goszka; P/O J. J. L. Goudreau; FS W. N. Gould; P/O W. Gowans; P/O D. R. Graham; P/O J. C. Graham; P/O L. C. Graham; Sgt. M. H. Graham; F/O F. H. Grainger; P/O A. Grant; F/L C. D. Grant; S/L D. D. S. Grant; P/O J. J. Grant; F/O L. K. A. Grant; AC2 R. A. Grant; Sgt. J. E. Gray; F/O J. F. Gray; F/O L. W. Gray; FS P. R. Gray; F/O R. J. Gray; F/O R. Greavison; P/O A. K. Green; LAC A. G. Green; Sgt. F. G. Green; P/O F. H. Green; F/O G. G. A. Green; P/O J. H. Green; Sgt. R. C. Green; FS R. L. Green; F/O A. I. Gregg; FS G. B. Grennan; F/O R. N. Grest; WO2 H. G. Grice; Sgt. L. D. Griese; F/O D. F. Griffin; LAC P. A. J. B. Grise; P/O N. H. Groh; F/O R. W. Grosser; P/O D. H. Grover; Sgt. L. P. Guay; FS G. W. Guest; Sgt. C. W. Gugins; LAC V. J. Guiboche; P/O F. W. Gunn.

H

F/O A. P. Haacke; P/O I. Haddock; F/O D. S. Haddon; F/O R. S. Hadley; F/O H. A. Hague; F/L D. B. J. Hall; P/O J. G. B. Hall; Cpl. R. Hall; F/O G. H. Hamilton; P/O H. B. Hamilton; WO2 W. P. Hamilton; LAC R. N. Hammond; P/O W. B. Handy; FS B. W. Haney; P/O J. E. Hannesson; WO1 G. W. Hansford; FS H. J. Hanson; P/O W. Haraczay; P/O E. Harbo; WO1 C. M. Hardcastle; WO2 H. S. Hardy; Sgt. H. W. H. Hare; Sgt. R. W. Hare; Cpl. S. G. Harfitt; WO2. V. K. Harris; F/O W. A. Harris; WO2 W. H. Harris; P/O W. P. Harris; P/O J. E. Harrison; F/O J. R. Harrison; F/O W. D. Harrison; F/L E. B. Hart; Sgt. N. A. Hartrick; LAC H. J. B. Harvey; WO2 R. D. Harvey; LAC R. Haslett; WO2 J. P. Haughey; P/O J. W. Hawkey; Sgt. E. D. Hawkins; F/O W. B. Hawkins; F/O T. M. Hawryluk; P/O D. N. Hay; Sgt. C. C. Haynes; P/O W. S. Heal; WO1 J. M. Healey; F/L W. A. Healey; FS H. V. Heaton; P/O L. A. Hebenton; F/O J. Hedrick; F/O W. N. Hegy; Sgt. J. G. Heimrich; Sgt. L. M. Hembruff; FS E. F. J. Hemming; LAC S. Hemphill; F/O A. B. Henderson; LAC E. G. Henderson; WO2 G. Henderson; F/O M. G. Henderson; F/O P. W. Henderson; F/O W. A. Henderson; WO2 J. Henfrey; Sgt. E. Henley; F/O J. F. Henning; F/O K. R. Henry; P/O H. M. R. Herbert; P/O E. O. Herlen; WO1 R. C. Herod; Cpl. C. W. Hickey; F/L L. F. Hickey; F/L C. W. Hicks; Sgt. D. T. Higgins; F/O R. H. Highsted; F/O A. Hildebrand; Sgt. G. H. Hill; FS W. L. Hill; F/O E. O. Hillman; F/O V. J. Hillman; F/O V. P. Hillrich; F/O K. A. Hills;

F/O R. G. Hills; Sgt. R. D. Hinton; FS J. E. Hirstwood; Sgt. G. H. Hivon; F/O F. Hjartarson; FS E. A. Hoagg; WO2 W. J. Hoar; Sgt. W. A. Hobson; Sgt. C. M. Hodges; Sgt. R. F. Hodges; P/O N. J. Hodgins; F/O A. K. Hodgkinson; Sgt. J. H. Hodgson; LAC L. I. Hogan; Sgt. J. E. Holbeck; P/O W. Holenchuk; F/O D. R. Holloway; LAC J. S. Holmes; F/L L. L. Holmes; F/O R. W. Honderich; F/O G. Hoopchuk; P/O H. W. Hooper; Sgt. C. L. Hope; F/O D. J. Hope; F/O J. C. W. Hope; Sgt. G. W. J. Hopkins; F/O A. Horn; F/L D. E. Hornell; LAC K. Horodyski; P/O D. E. Horton; Sgt. D. W. Howard; F70 W. F. M. Howard; F/L C. M. Howes; WO1 C. M. Howes; FS W. H. Howie; P/O A. W. Howl; WO2 W. H. Howson; Sgt. A. K. Hrycenko; WO1 J. Huddleston; F/O J. H. Hudson; F/O G. L. Huffman; F/O A. F. G. Hughes; F/L W. H. Hughes; P/O N. Hughesgames; AC2 H. W. Huhtala; F/O D. W. Hume; FS P. R. Humphrys; WO1 C. H. Hunter; F/O W. G. Hunter; F/O S. L. Huntley; Sgt. A. W. Huppe; Sgt. N. S. Hurder; P/O H. E. Hutchings; LAC J. A. Hutchinson; P/O J. L. Hutchinson; WO2 R. G. Huxtable.

I

F/O R. B. Idiens; P/O V. H. S. Inderbitzen; F/L B. J. Ingalls; Sgt. H. W. Ingleson; FS G. A. Inns; FS D. R. Irvine; F/O R. R. Irvine; F/O G. D. Isaacs; Sgt. W. C. Isted; FS R. O. G. Ives; FS G. Ivey.

J

F/O T. Jackman; P/O D. E. Jackson; F/L F. G. Jackson; FS G. T. Jackson; FS A. L. Jacobs; F/O D. L. Jacobs; Sgt. J. A. Jefferson; LAC N. B. Jenkins; F/O S. W. Jobson; FS M. L. John; WO2 H. W. Johnson; F/O K. S. Johnson; F/L P. G. Johnson; F/O R. E. Johnson; P/O A. A. Johnston; FS C. Johnston; Sgt. C. A. Johnston; F/O C. D. Johnston; F/L D. D. Johnston; WO2 E. G. Johnston; F/O G. P. Johnston; FS J. W. Johnston; Sgt. L. G. Johnston; Sgt. L. H. Johnston; F/O R. A. Johnston; Cpl. W. L. Johnston; LAC R. E. Jolly; WO1 D. C. T. Jones; Cpl. G. A. Jones; P/O G. M. Jones; F/O H. E. Jones; FS J. H. Jones; F/O M. C. P. Jones; F/O M. L. Jones; LAC R. C. Jones; F/O R. R. Jones; G/C W. A. Jones; LAC W. G. Jones; F/O S. J. Joplin; Sgt. J. A. Jordan; P/O S. Josephson; P/O K. M. Joyce; F/L J. J. Jupp.

K

F/O J. Kalen; Sgt. T. J. Karaim; F/L J. G. Kee; F/O E. J. Keefe; FS C. C. Keegan; F/L D. P. Kelly; LAC C. C. Kendall; FS F. J. Kendall; F/O C. G. Kennedy; F/O J. Kennedy; F/O W. E. Kennedy; P/O W. J. Kennedy; P/O G. A. Kent; F/O D. S. Kerrff. F/O H. L. Kerr; WO1 L. Kerr; Sgt. N. T. Kester; F/O T. C. Kewen; Sgt. A. E. Kidney; Sgt. N. J. Kidney; WO2 W. J. Kilpatrick; Cpl. R. G. Kimball; F/O G. L. King; F/O J. G. King; P/O W. D. King; WO1 W. G. King; P/O G. F. Kingsbury; Sgt. C. D. Kippan; AC2 J. R. A. Kirlin; F/O I. Kirschner; F/O H. J. Kirton; Sgt. J. S. Kitts; P/O I. G. Klein; S/L T. M. Kneale; FS V. C. I. Knox; F/O J. P. Kolomic; Sgt. W. Komer; P/O M. Kram; LAW K. D. Kronbauer; Sgt. P. E. Krotz; P/O W. J. Kuntz.

L

F/O J. C. Laidlaw; Sgt. K. N. Lake; Sgt. L. C. Lamb; Sgt. J. A. Y. Lamontagne;

P/O J. D. Langlois; Sgt. J. A. Lanouette; FS J. H. Lapointe; WO1 C. F. Larson; F/L R. A. S. Lasser; W/C A. Laut; F/O R. K. Laut; F/O J. P. Lavallee; Cpl. E. I. Lavergne; WO2 N. T. Lavoie; F/O J. Law; Sgt. J. Law; F/O D. E. C. Lawrence; LAC C. E. Lawton; LAC R. W. Lay; WO1 A. C. Leadbeater; LAC W. G. Leard; F/O K. G. Learn; F/L J. N. G. Leclerc; F/L G. B. Leddy; P/O M. J. C. H. Leduc; Sgt. C. F. Lee; Sgt. J. J. Lee; S/L R. L. Lee; WO1 F. J. Leech; P/O J. P. Leech; F/O J. D. C. Lefebvre; AC2 J. G. J. Legault; FS J. R. E. Leger; F/O R. H. Legrow; Sgt. B. E. Lehman; Sgt. L. W. Lehman; P/O C. D. Leitch; P/O J. W. Leitch; P/O R. E. Lemmon; WO1 L. W. Len; Sgt. A. R. J. Lepage; P/O F. W. Lerl; FS A. B. Levene; P/O S. J. Levesque; AC2 S. Levine; F/O D. H. Lewis; P/O W. D. Lewis; F/O G. A. Lewthwaite; FS G. M. Lhommedieu; Sgt. O. W. Libby; F/O G. C. Liggett; F/O A. G. Lillico; AC1 J. H. B. Lincourt; F/O A. E. Lindenfield; FS M. J. Lindsay; F/O W. E. Linning; FS R. F. Linton; F/O T. E. U. Lister; F/O M. S. Little; FS S. W. Litynesky; F/O H. H. Lively; F/O W. H. Lloyd; F/O K. A. Lobb; WO1 C. R. Locke; AC1 D. F. Lockwood; WO1 F. G. Logan; F/L J. R. Loggie; FS C. R. G. Long; Sgt. G. Long; F/O N. E. Long; F/O P. Loszchuk; WO1 W. J. Louden; Sgt. V. H. Louis; P/O R. C. Lounsbury; WO2 R. J. Love; WO2 W. C. Love; AC1 K. R. Loveridge; Sgt. C. E. Lovett; F/O H. Lowe; FS M. P. Loyst; WO1 L. H. Ludington; Sgt. J. M. Ludlow; Sgt. A. L. Lunan; Sgt. J. R. R. Lussier; P/O D. E. Lybbert; WO1 R. S. Lyle; F/L C. P. Lyman; Sgt. R. R. Lynch; Sgt. L. M. Lysak.

M

WO2 A. H. MacDonald; FS D. A. MacDonald; Sgt. F. W. MacDonald; P/O J. F. MacDonald; WO2 J. S. MacDonald; W/C K. F. MacDonald; WO1 R. W. MacDonald; FS J. J. MacGillivray; P/O R. N. MacGillivray; WO2 W. E. R. Machan; WO2 D. B. Machum; AC2 K. J. MacIntosh; P. O. P. M. MacIntyre; F/O J. MacKay; FS W. B. MacKay; P/O A. E. MacKenzie; LAC D. C. MacKenzie; LAC D. V. MacKenzie; Sgt. G. C. MacKenzie; S/L J. G. MacKenzie; Sgt. A. H. MacKimmie; Sgt. D. W. MacKinnon; F/O J. D. Macklem; S/L I. M. MacLean; F/O J. S. MacLean; F/O J. G. MacLeod; Sgt. W. J. MacMillan; Sgt. D. G. MacNeil; F/O D. MacNeill; P/O F. C. MacQueen; WO2 J. MacRae; F/O R. M. MacTavish; P/O J. L. A. Madden; LAC A. Maduik; P/O J. G. H. Magill; F/O H. J. Magnes; Sgt. E. H. D. Maguire; F/O O. K. Main; F/O T. E. Major; Sgt. H. A. Maki; WO2 A. P. Malzan; FS C. D. Manders; Sgt. J. S. Manfield; F/O S. D. Mann; Sgt. H. M. Manson; P/O F. S. Marcellus; FS J. J. M. P. Marchessault; Sgt. G. F. Marchington; F/L J. J. Marcus; F/O J. R. P. Markowski; Cpl. W. Marshall; Sgt. G. Martin; Sgt. J. N. O. Martin; Sgt. L. G. Martin; P/O M. A. Martin; F/O S. H. Martin; Sgt. W. E. Martin; F/O M. E. Marynowski; F/O J. H. Mason; FS J. L. C. Masson; F/O J. M. Matherly; F/O L. W. Mathews; Sgt. P. K. Matkin; LAC G. C. Matthews; FS G. N. Mathews; P/O R. H. Mathews; F/L W. J. Mattocks; F/O J. A. Maudsley; P/O F. L. Maw; FS W. J. Mayo; Sgt. J. F. Mayville; F/O W. J. Mazerall; FS D. J. McAllister; Sgt. W. W. McArthur; F/O A. H. A. McBain; F/O W. E. J. McBain; WO1 J. McBeth; P/O G. E. J. McCabe; W/C W. R. McCann; F/O G. W. McCartney; LAC W. A. McCatty; P/O C. J. McConvey; F/O K. R. McCormick; Sgt. J. R. McCrea; Sgt. P. J. McCrory; F/O R. J. McCruden; AC2 D. M. McCulloch; LAC D. J. McDonald; P/O F. E. McDonald; FS H. T.

McDonald; F/L V. F. McDonald; FS R. M. McEachern; WO2 J. F. McEwen; F/O H. C. McFadden; P/O D. A. McFadyen; F/O J. J. McGavock; P/O R. C. S. McGee; P/O C. E. McGillivray; Sgt. J. T. McGovern; Sgt. B. W. McGregor; LAC. R. M. McGregor; Sgt. R. R. McGregor; F/L F. R. McGugan; Sgt. W. H. McGuigan; WO1 M. J. D. McGuire; F/L M. K. McGuire; Sgt. A. McGurty; Sgt. M. McHardy; FS S. S. McHardy; F/O J. J. McHenry; P/O G. McIntosh; P/O J. A. McIntosh; WO1 J. D. McIntosh; F/O A. B. McIntyre; P/O A. R. McIntyre; Sgt. E. C. McIntyre; F/L M. McIver; F/O C. D. McIvor; F/O A. C. McKay; Cpl. H. L. M. McKay; AC2 R. McKay; P/O H. A. M. McKell; F/O W. D. N. McKessock; F/O D. G. W. McKie; F/O A. A. McKiggan; Sgt. C. H. McKimm; F/O C. D. McKinley; F/O J. L. McKinnon; Sgt. J. R. McKinnon; LAC K. McKinstry; Sgt. R. W. McLachlan; FS A. A. McLaren; P/O W. P. McLaren; FS H. M. McLaughlin; LAC D, F. McLay; LAC P. R. McLean; Sgt. G. K. McLellan; WO1 V. A. McLellan; F/O B. A. McLennan; P/O D. G. McLeod; LAC D. K. McLeod; P/O J. G. McMaster; FS J. H. McMasters; Sgt. J. C. McMurtrie; FS I. R. McNay; FS A. M. McNeely; F/O C. L. McNeil; P/O J. J. McNeil; W/C J. G. McNeill; P/O B. McPherson; LAC J. D. McPherson; P/O M. L. McPherson; P/O D. W. McRae; P/O J. G. McRae; F/L B. F. McSorley; F/O A. S. McTavish; Sgt. A. B. McVean; F/L J. B. McWilliam; F/O H. D. Meakley; FS R. F. Mechin; F/L C. F. Medhurst; LAC L. R. Meere; FS J. C. A. Meilleur; Sgt. H. L. Mein; P/O R. H. O. Mellor; F/O J. A. Menzies; LAC J. D. Mercer; F/L R. L. Mercer; F/L N. Merinuk; F/O E. A. Merkley; F/L W. E. Merrifield; F/O J. Michalec; P/O V. V. Miettinen; FS H. E. Miles; P/O M. E. Millar; F/L H. C. Millen; F/O A. M. Miller; FS H. L. Miller; F/O J. C. Miller; Sgt. O. Miller; AC2 V. R. Miller; F/L P. S. Milliken; WO2 E. M. Mills; Sgt. F. A. Milne; P/O J. R. Milne; F/O W. A. Milner; P/O A. M. Minard; Sgt. N. G. Minor; Sgt. B. R. Minson; Sgt. F. C. Mison; Sgt. G. W. Mitchell; Sgt. H. O. Mitchell; F/O J. W. Mitchell; Sgt. J. W. Mitchell; P/O K. O. Mitchell; F/O T. R. Mitchell; LAC W. A. Mitchell; WO2 W. D. Mitchell; WO1 W. L. Mitchell; P/O A. D. Moffat; F/O W. J. Mohring; FS R. W. Moller; LAC L. A. Monette; F/L H. C. Monnier; P/O R. W. Moody; F/O G. S. Moore; WO2 G. W. Moore; LAC J. Moore; WO1 R. K. Moore; LAC S. M. Moore; F/O W. I. Moore; F/O D. K. Moores; FS R. F. Morand; Sgt. J. L. Moreau; FS J. D. Morgan; WO2 O. K. Morgan; F/O J. A. Morissette; F/O A. J. Morris; F/O H. P. Morris; Sgt. L. E. Morris; P/O L. J. Morris; P/O G. R. Morrison; FS H. P. Morrison; Sgt. J. D. Morrison; Sgt. R. C. Morrison; Sgt. W. E. Morrison; Sgt. G. D. H. Morrow; P/O H. E. Morrow; F/O E. F. Morton; Sgt. R. L. Movold; Sgt. J. W. Moxley; F/O J. E. Moyer; AC2 L. T. Moyes; F/O A. Moynach; F/O N. H. Moysey; Sgt. H. L. Muisiner; P/O T. C. Mulcair; Sgt. A. L. Mullen; FS A. W. Mullen; Sgt. P. C. H. Mullins; WO2 G. W. Munch; F/O G. Mundell; P/O J. D. Munn; WO2 G. C. Munro; F/O H. W. Munro; FS J. A. E. Munroe; WO2 A. C. Murchie; WO1 W. D. Murdie; WO1 J. E. T. Murdoch; WO1 J. M. Murie; LAC A. V. Murphy; Sgt. R. H. Murphy; P/O D. Murray; P/O F. G. Murray; WO2 G. H. Murray; FS J. L. Murray; FS M. C. Murray; F/O R. W. Murray; F/O G. L. Muskett.

N

WO2 J. I. W. A. Nadeau; P/O D. K. Nelson; P/O A. J. Ness; P/O T. G.

Nettleton; F/O J. E. Nevins; F/O W. D. Newel; Sgt. F. A. Nichols; WO2 A. W. Nicol; Sgt. J. L. Nixon; P/O T. W. Nixon; P/O A. T. Noble; WO2 K. W. Norfolk; F/O F. G. Norman; Sgt. R. R. Norman; WO1 A. Normandeau; Sgt. P. E. Normandeau; LAC J. R. Normandin; F/O K. A. Norris; Cpl. H. Northcott; F/O M. P. Northmore.

O

FS W. H. Oakley; P/O W. F. H. Obeirne; Sgt. J. J. K. O'Brien; F/L L. J. O'Connell, Cpl. W. M. J. O'Connor; AC1 C. W. Odell; WO2 F. P. O'Donnell; P/O B. A. Ogilvie; Sgt. J. E. O'Grady; FS R. W. Ogston; F/O G. S. Oliphant; F/O W. J. Oliver; F/O J. F. Ollett; F/O C. R. Olmstead; P/O A. G. Olson; LAC H. O. Olson; F/O P. A. Olson; Sgt. A. J. O'Neil; P/O C. L. O'Neil; FS J. P. O'Neill; Sgt. E. A. Opie; LAC J. H. Ormerod; F/O A. G. Orr; FS C. R. Osborne; F/O D. H. Owens.

P

LAC I. Padveen; F/O J. W. Paige; WO2 B. G. H. Palmer; P/O W. F. Palmer; F/L R. B. Palmer; LAC R. Panting; LAC J. J. E. G. Parant; Cpl. J. M. Parenteau; F/O D. F. G. Parker; F/O D. R. Parker; P/O R. C. Parker; FS S. R. Parker; FS W. G. Parker; LAW A. Parkin; F/O W. R. Parks; FS E. M. Parsons; FS F. Partridge; Sgt. D. M. Paterson; Sgt. W. Paterson; P/O G. K. Patman; Sgt. W. S. Paton; F/L L. Patterson; FS A. B. Pattison; LAC C. G. Patton; P/O H. R. D. Patton; LAC J. Pawliuk; Sgt. A. Pawlyk; WO2 D. A. Payton; F/L J. W. F. Peacock; P/O W. D. Peacock; F/O C. W. Pearce; FS A. K. Pearson; F/O R. A. Pearson; FS W. J. Pearson; Sgt. J. L. Peck; Sgt. R. C. Pegg; FS R. A. Pelletier; Sgt. J. M. E. Peltier; F/O E. Pennington; F/L C. G. Pennock; F/O G. L. Pepprell; F/O K. F. Perera; F/O D. C. F. Perkins; F/O C. P. Pesme; FS F. Pess; P/O D. R. Petrie; FS L. L. Petry; F/O F. A. Pfeffer; F/O F. Phillips; F/O W. Phillips; P/O W. S. M. Phillips; Cpl. J. P. Picard; Sgt. R. E. Pickard; Sgt. D. Pickering; LAC R. H. Pickering; Sgt. G. W. Pidgeon; LAC G. W. Pidgeon; WO1 J. A. J. J. Pierson; LAC L. Pigeon; P/O J. J. Pigeon; F/L A. S. Pilcher; WO1 H. Pincock; P/O E. F. Pitkin; F/O H. E. Pittaway; WO1 J. M. C. Plante; Sgt. L. E. Plate; WO2 R. D. Poe; FS K. W. Pollitt; WO2 J. A. Pollock; F/L N. E. Pollock; Sgt. J. R. Pollon; F/O J. M. Polomark; WO2 V. R. Polowy; F/O W. A. Pope; P/O R. S. Porter; F/O H. G. Portman; F/O W. D. Potter; F/O D. Potts; LAC J. G. A. Poudrette; FS L. A. Powell; Sgt. A. T. Power; P/O P. J. Power; F/L L. E. Price; P/O M. M. Prill; Sgt. G. O. Prime; F/O C. R. Pring; F/O B. H. Pringle; P/O F. C. Pritchard; F/O K. F. Probert; F/O D. W. Probyn; Sgt. M. P. Proteau; WO2 A. J. Pudifin.

Q

F/O E. S. Quantrill; P/O J. M. Quinlan; P/O D. C. Quinn; P/O T. P. Quinn.

R

F/L H. M. Rae; FS C. G. Rafuse; Sgt. R. H. Rahn; WO2 L. H. Ramage; F/O M. H. Ramsay; F/O J. R. M. Rankine; F/O H. Ratner; F/O W. M. Rawbone; F/O H. C. C. Read; F/O W. K. Redman; Sgt. B. N. Redmond; F/O J. G. Redpath; P/O F. K. Reed; Sgt. H. M. Reed; P/O I. H. Rees; AC1 H. R. Reeves; P/O M.

Regenstreif; F/O H. Reid; WO1 H. G. Reid; FS W. C. Reid; F/O M. F. Relihan; Sgt. D. W. Remole; LAC L. Renaud; FS E. D. Rennick; Cpl. L. J. Renshaw; Sgt. A. C. Reynolds; FS A. N. Rice; F/L G. S. Richards; P/O J. L. Richards; FS S. A. H. Richards; F/O H. H. Richardson; F/O J. Riddell; WO1 L. C. Rideout; P/O R. B. Ridley; FS K. R. Riep; WO2 L. Riggs; F/O J. M. Rinahan; FS J. A. Ringer; Sgt. J. H. R. Riopel; F/O R. E. Ritscher; F/O R. M. Robbins; WO2 E. G. L. Roberson; F/O D. E. Roberts; F/O W. Roberts; FS C. A. Robertson; Sgt. D. S. Robertson; F/O E. R. B. Robertson; LAC M. T. Robertson; LAC D. L. Robinson; WO1 E. H. Robinson; F/L E. L. Robinson; F/O W. T. G. Robinson; WO2 J. J. P. Rodrigue; FS F. H. Roe; F/O W. J. Rogers; Sgt. R. C. A. Rollo; LAC H. J. Rolls; F/O A. C. M. Roiph; F/O H. M. Romuld; FS M. F. V. Roobroeck; F/O J. H. Rooney; F/O W. B. T. Rosen; F/O A. W. Ross; WO2 H. R. Ross; FS K. D. Ross; P/O S. G. M. Ross; F/O W. S. Ross; FS H. G. Round; P/O W. H. Rowland; F/O R. S. Rowson; LAC J. J. A. Roy; P/O J. Ruddell; F/L V. S. Ruocco; FS C. E. Russell; LAC T. M. Ruste; F/O T. Rutherford; F/O A. M. Ruthven; F/O W. S. Ruxton; Sgt. A. E. Rydholm.

S

FS M. R. Sabourin; F/O W. I. St. Johns; LAC L. C. St. Louis; F/L A. L. Sanagan; F/O T. Sanberg; Sgt. R. J. Sander; P/O G. B. Sanderson; FS K. C. Sanderson; P/O R. L. Sanderson; Sgt. D. W. Sangster; F/O W. B. Sargent; FS H. M. Saunders; Sgt. E. Savage; Sgt. W. H. Sayres; P/O F. M. Scandifo; AC2 D. M. Scanlon; P/O S. B. Schatz; P/O I. T. Scheelar; P/O G. J. Scheltens; F/O H. S. Schellenberg; P/O L. F. Schell; WO2 K. R. Schiller; F/O G. H. Schlitt; LAC R. G. Schnarr; WO2 G. R. Schneider; FS A. L. Schoenthaler; F/L T. Schofield; Sgt. R. E. Schott; P/O T. H. Schrupp; LAC D. E. Schryver; Cpl. V. M. Scollon; FS G. D. Scott; Sgt. H. W. Scott; F/O N. M. Scott; WO2 W. D. Scott; F/O W. E. Scott; P/O D. E. Scratch; P/O L. A. Scutt; FS H. S. Seabrook; F/O M. T. Seabrook; LAC F. D. Seagrim; P/O R. F. W. Sedgwick; F/O H. O. Seifert; F/O R. Seigler; Sgt. H. J. Selway; WO2 G. L. Seward; F/L W. R. P. Sewell; F/O J. D. Shanahan; F/O G. A. W. Shank; Sgt. A. B. Shanks; F/O L. C. Shannon; F/O W. T. Shannon; Sgt. R. D. Sharp; FS J. H. Sharpe; P/O R. Shavaliar; F/O A. E. Shaw; F/L B. H. Shaw; P/O E. A. Shaw; LAC R. E. Shaw; P/O S. R. Shaw; F/O D. J. Shea; WO2 P. H. Sheldon; LAC E. J. Shelling; F/O W. F. Sheppard; WO2 J. G. Sherck; Sgt. V. T. Sherven; S/L T. C. Sherwood; F/O S. J. Shewell; FS G. J. B. Shields; Sgt. L. G. Shields; Sgt. R. W. Shields; P/O J. Shwiakoski; F/O C. D. Sibbett; P/O J. G. Sieben; FS H. B. Sigel; LAC J. E. S. Sigouin; P/O J. Sigurdson; FS L. Sillito; FS H. R. Simmons; Sgt. R. F. Simmons; Sgt. J. Simms; F/O E. S. Simonson; F/O R. E. Simonson; WO2 C. A. Simpson; LAC C. M. Simpson; LAC W. H. Simpson; LAC R. A. Sims; LAC S. T. Sims; P/O A. I. Sinclair; F/O D. B. Sinclair; P/O D. S. Sinclair; WO2 R. M. Sinclair; P/O R. Sirlock; LAC C. E. Skateas; F/O W. H. Skelton; F/O H. Slater; P/O J. Sleigher; FS D. L. Small; F/O W. A. Smart; Sgt. D. Smiley; FS W. E. Smillie; Sgt. G. A. Smirl; LAC A. Smith; S/L A. J. Smith; LAC C. G. Smith; F/O D. L. Smith; Sgt. D. M. Smith; F/O E. O. Smith; P/O E. O. Smith; AC1 F. H. Smith; Sgt. F. P. Smith; LAC F. P. Smith; WO2 G. Smith; F/O G. L. Smith; WO2 G. R. Smith; P/O H. A. E. G. Smith; F/O J. H. Smith; WO2 J. H. Smith; Sgt. L. F. Smith; F/O L. J. Smith; F/O N. O. Smith; AC2 R.

L. Smith; Sgt. R. W. Smith; F/O S. K. Smith; F/O S. W. Smith; FS W. A. Smith; F/O W. D. Smith; Sgt. W. F. Smith; Sgt. W. P. Smith; P/O I. E. Smithson; P/O L. S. Smoker; Sgt. J. L. Snider; P/O L. Snider; Sgt. J. B. Sollie; FS I. S. Sollows; F/O A. L. Sommerville; P/O A. G. Sootheran; LAC D. A. G. Sparks; P/O W. A. Sparks; Sgt. G. P. Speirs; F/O H. A. Spence; FS H. D. Spence; FS E. E. Spencer; P/O J. D. Spencer; F/O J. S. Spencer; Sgt. A. H. Spinks; F/O C. L. Spooner; F/O D. L. Sproule; P/O A. Stalker; F/O D. H. Stammers; FS G. F. Staples; P/O J. W. Staples; F/O G. D. Stark; Sgt. A. C. Starnes; Sgt. F. I. Stata; F/L F. G. Statham; P/O B. I. G. Steed; LAC S. E. Steeden; F/O G. Steeldavies; F/O C. J. Steele; WO2 W. J. Steenson; Cpl. W. Stein; F/O G. Steinberg; P/O C. E. Stephen; Sgt. F. V. Stephens; Sgt. J. M. Stephens; F/O W. R. Stephens; LAC H. A. Stephenson; F/O G. A. H. Stevens; Sgt. J. J. U. Stevens; P/O P. B. Stevens; P/O W. R. Stevens; P/O J. M. Stevenson; F/O A. W. Stewart; LAC H. C. E. Stewart; P/O H. M. Stewart; P/O J. G. Stewart; WO2 R. D. Stewart; WO1 R. E. Stewart; P/O T. M. Stewart; LAC P. Stichman; WO2 W. A. Stiles; WO2 G. M. F. Stockwell; Cpl. H. J. Stoik; Sgt. W. R. Stone; Sgt. A. L. Stoneham; P/O V. C. Stordy; Sgt. A. J. R. Strachan; F/L W. W. Strachan; Sgt. G. L. Strang; Sgt. P. P. Strickland; WO2 G. E. Stringer; FS D. K. Stroud; LAC G. W. E. Stroud; F/L W. D. Stroud; F/O R. C. Stuart; F/O R. F. Stubner; LAC R. R. Sturgeon; P/O N. Stusiak; S/L W. R. Suggitt; F/O L. M. Sullivan; FS P. W. Sullivan; P/O D. K. Sundercock; F/O B. S. Sussman; F/O J. E. Swanson; FS D. W. Swedberg; F/O H. A. Swinden; LAC J. D. Syme; P/O L. R. Syme; F/L A. J. F. Symes.

T

ES H. M. Tait; P/O J. C. Tanner; WO2 J. Tass; P/O C. Tattrie; FS C. W. Taylor; P/O E. A. Taylor; F/L M. C. Taylor; Sgt. R. J. Taylor; WO1 R. W. Taylor; LAC S. F. Taylor; F/O W. J. Taylor; LAC W. M. Taylor; P/O G. K. Teal; P/O B. E. Tees; P/O W. A. Tees; P/O A. D. Telford; WO2 J. L. Tennyson; F/O D. M. Thew; P/O D. A. Thicke; FS C. H. Thomas; F/O F. M. Thomas; F/O K. B. Thomas; P/O R. Thomas; P/O Y. L. Thomas; P/O C. A. Thompson; WO2 D. A. Thompson; P/O F. W. Thompson; Sgt. H. G. Thompson; Sgt. H. R. Thompson; F/O J. A. Thompson; FS J. M. Thompson; FS W. C. Thompson; P/O J. N. Thomson; F/O T. Thomson; P/O J. L. Thornton; LAC J. E. Tierney; F/O A. A. Tilton; P/O L. J. Tingle; F/O D. Titleman; FS R. M. Todd; P/O C. C. Todhunter; F/O P. W. Tokar; Sgt. R. W. E. Townsend; F/O R. H. Tranter; WO1 M. E. Trask; Sgt. J. E. Trow; P/O R. J. Trudel; F/O H. G. Trueman; LAC S. G. Trueman; F/O N. E. Trusty; P/O J. W. Tucker; FS H. W. Tufts; F/O A. Tulloch; WO2 T. S. Turfus; FS C. A. Turner; P/O F. L. Tyo.

U

F/O A. N. Unser; F/L E. Unterseher; FS L. J. Upshall.

V

F/O R. A. J. Vagg; WO2 W. A. Valley; F/O G. E. Vance; Sgt. G. H. Vanevery; F/O G. D. Vanpatter; F/O J. A. Vasicek; F/O R. P. Vatcher; F/O A. G. Vautour; FS J. J. J. J. Vennes; WO2 J. W. H. Vidal.

W

Sgt. I. S. Waddell; FS W. H. Wade; Cpl. F. A. Wagner; WO1 J. Walczak; Sgt. W. Waldron; F/O D. C. Walker; W/C J. E. Walker; LAC R. G. Walker; P/O S. C. Walker; Sgt. C. B. Wallace; F/O G. A. Wallace; F/O H. A. Wallace; FS J. Wallace; F/O J. W. Wallace; FS W. C. Wallace; F/O W. M. Wallace; F/O R. A. Walld; P/O G. Walls; P/O J. S. Walsh; F/O E. W. Ward; FS S. A. Ward; F/O R. W. Warden; F/O E. L. Ware; WO1 J. Ware; P/O H. B. Wareham; F/O R. F. Warne; Sgt. S. Wasylyke; P/O M. H. Waters; F/L J. L. G. Wates; P/O E. C. Watson; LAC S. Watson; P/O W. D. Watson; F/O F. H. Watts; F/O W. S. Waychuk; F/O F. O. P. Weary; F/O F. V. Webb; Sgt. M. E. Webb; Sgt. A. O. Wedin; LAC C. M. Weegar; S/L R. S. Weir; P/O H. M. Welch; FS R. T. J. Welch; LAC R. M. Wellein; P/O A. West; S/L R. G. West; Sgt. W. S. H. West; LAC F. G. Westcott; NS M. M. Westgate; Sgt. H. D. Westley; WO1 L. L. Whale; F/L J. H. Whalen; F/O R. R. F. Whitby; FS A. B. White; Sgt. E. D. White; F/O I. R. White; F/O L. L. Whitham; F/O H. B. Whitlock; P/O A. R. Whitmore; WO1 F. H. Whittard; Sgt. C. J. Whyte; P/O P. A. Whyte; Cpl. B. H. Wickware; F/O W. N. Wiegand; P/O W. T. Wiggins; WO2 G. B. Wigle; Cpl. L. R. Wilcox; LAC O. J. Wilcox; F/O E. L. Wilhelm; F/O R. T. Wilkinson; F/O J. D. Willan; AC2 C. W. Willard; W/C J. S. Williams; P/O L. L. Williams; FS D. Willington; LAC R. H. Wilman; S/L B. E. Wilmot; Sgt. J. M. Wilson; P/O J. S. Wilson; WO2 R. G. Wilson; F/O T. F. Wilson; F/O T. H. Wilson; FS W. R. Wilson; Sgt. F. E. Wilt; Sgt. L. Wilton; P/O T. E. Wiltse; F/O W. J. Windeler; AC1 N. S. Winford; LAC L. Winkler; P/O M. Wishak; F/O G. L. Wistow; P/O W. F. Wolf; P/O W. L. Wolf; P/O R. W. Wolfe; FS J. M. Wolowiec; WO2 A. L. Wood; WO1 M. S. Wood; F/O T. B. Wood; P/O T. H. Woodard; LAC N. S. Woodley; LAC W. D. H. Woodman; AC2 A. R. Woodward; F/O D. W. Woodward; P/O A. S. Woolaver; Cpl. A. E. Woolhouse; P/O J. S. T. C. Wootton; FS D. Wright; WO2 D. L. Wright; Sgt. H. H. Wright; F/O J. W. Wright; Sgt. F. J. Wyatt; Sgt. J. D. Wyrzykowski.

Y

AC1 E. W. S. Yates; P/O J. T. Yeomans; P/O F. C. Yindmarsh; WO1 J. H. Yorke; WO1 G. Young; P/O G. J. Young; F/O H. J. Young; LAC H. L. Young; P/O W. M. Young.

Z

F/O Z. J. Zabek; FS H. J. Zacharias; F/O T. J. Zadworny; Sgt. P. Zayets; WO1 F. Zayezierski; LAC I. J. Zimmer; F/O V. Zoratti; LAC M. Zuback; F/O R. M. D. Zurbrigg.

PRESUMED DEAD**A**

F/L J. F. Acer; FS W. E. Ackland; WO2 G. W. Acorn; WO2 L. J. Adair; FS R. E. Adam; F/O G. R. Adams; Sgt. J. M. Adamson; WO2 J. W. Adamson; F/O R. H. Adamson; Sgt. D. G. Addison; FS T. J. Adkinson; P/O W. R. Adlard; FS G.

E. Aitken; FS J. A. Albert; P/O E. L. Alberts; P/O W. L. Alder; S/L E. S. Alexander; F/O H. C. Aley; F/O A. Allan; P/O F. F. G. Allan; F/O J. Allan; P/O R. E. Allan; F/O F. C. Allcroft; F/L J. A. Allen; P/O J. B. Allen; F/L L. A. Allen; F/L H. T. Amy; FS A. A. Anderson; FS E. M. Anderson; Sgt. H. L. Anderson; LAC N. T. Anderson; FS S. A. Anderson; FS W. D. Anderson; P/O G. V. Andrew; F/O E. J. Andrews; P/O W. H. Andrews; WO2 L. D. Annis; FS M. Antifaev; P/O L. P. Archibald; P/O A. R. Armitage; F/O I. Armitage; P/O G. H. Armstrong; FS G. P. Armstrong; F/O J. L. D. Armstrong; F/O L. A. Artier; WO2 V. C. Arnold; F/O W. G. Arnold; WO2 W. H. Arnold; S/L D. M. Arnot; Sgt. G. D. Arnott; F/O F. A. Arnston; P/O M. W. H. Askey; F/O J. W. Astbury; P/O J. J. Astles; F/O J. I. Atkins; P/O R. J. Atkins; P/O S. K. Atkinson; FS J. G. M. Aubin; FS C. W. Austin; F/O J. C. Austin; P/O D. M. Awrey; F/O A. A. Ayres.

B

WO1 J. G. Bachand; F/O R. E. Baht; F/O D. H. Bailey; F/O G. C. Bailey; FS W. G. Bailey; FS C. S. Baker; FS D. C. Baker; F/O J. J. Baker; F/O R. E. Baker; F/O S. W. F. Baker; FS W. L. Baker; Sgt. E. F. Baldry; FS J. S. Baldwin; P/O W. S. Ball; F/O J. H. Ballantyne; FS W. B. Ballantyne; F/O J. H. Balloch; P/O L. Bandle; WO2 J. A. Barabonoff; F/O A. S. Barclay; FS J. H. Barkwell; WO2 R. M. Barlow; Sgt. R. J. Baroni; Sgt. R. A. Barr; FS R. L. Barr; FS N. Barrett; P/O J. D. Barrie; P/O A. Barrowman; FS P. J. Barske; FS G. V. Bartle; WO2 J. H. Bateman; P/O J. D. Bates; Sgt. M. J. Bates; WO2 R. L. Baxter; P/O W. Baxter; F/O H. F. Beale; S/L G. S. Beall; Cpl. H. D. Beattie; Sgt. H. J. Beattie; WO2 J. L. Beattie; F/O A. M. Beatty; P/O C. M. Beauregard; Sgt. G. A. Beckett; WO2 W. Beckthold; Sgt. J. J. P. M. Bedard; WO2 T. J. Beechinor; P/O L. S. Beer; F/O A. D. G. Bell; F/O A. F. Bell; WO2 F. G. Bell; P/O J. Bell; FS M. O. M. Bell; Sgt. N. A. Bell; F/O W. G. Bellinger; P/O A. C. Belyea; FS C. W. Bennett; S/L G. Bennett; P/O G. N. Bennett; P/O J. G. Bennett; FS J. G. Bennett; Sgt. J. N. E. Bennett; FS F. G. Benning; F/O D. G. Bentley; WO2 C. M. Berg; F/L G. T. Berg; P/O N. Bergland; P/O B. W. Bergouist; Sgt. D. Bernard; Sgt. E. J. Berndt; F/O L. T. Berrigan; P/O J. L. Berry; WO2 B. M. Berven; FS C. A. Besse; FS G. M. Bessette; F/O H. R. Beswick; F/O A. E. Beyak; F/O D. S. Bier; P/O R. L. Biers; P/O W. W. Bigoray; F/O V. E. Bill; P/O R. A. Billings; WO2 H. F. Binder; F/O G. E. Bishop; F/O D. C. Bissell; F/O J. M. Bissett; F/O G. H. Blachford; F/O R. B. Black; FS R. E. Black; F/O C. W. Blagborne; Sgt. J. F. Blair; Sgt. W. J. Blakely; F/O L. F. Blakeney; P/O J. J. Blanchard; F/O L. A. Bland; WO2 P. P. Blazeiko; F/O W. R. Bloch; P/O R. G. Bock; Sgt. E. J. Bodell; P/O H. G. Boissevain; P/O W. H. Boles; FS W. R. K. Boles; P/O H. P. Boness; P/O L. D. Bonnett; F/O J. R. Bonneville; P/O D. Bonokoski; F/O C. R. Booth; F/O J. R. Booth; P/O R. A. Booth; WO2 J. G. Boothe; FS A. Bortolussi; F/L R. T. Botkin; P/O L. N. Botsford; Sgt. H. F. Bottomley; P/O G. Boucher; P/O L. J. H. Boudreau; P/O G. R. Bourdon; P/O T. P. Bourque; P/O E. P. Boutilier; FS D. I. Bowden; P/O L. D. Bowden; FS D. W. Howell; WO1 G. W. Bower; F/O J. F. Bower; WO1 N. R. Bowman; P/O G. R. Boxall; FS L. G. Boyd; F/O W. D. C. Boyd; P/O M. W. Boyer; P/O H. A. Brad; F/O J. R. Bradley; P/O R. J. Bradley; P/O K. L. Brager; P/O J. A. Brammall; F/O C. E. Brandt; F/O J. P. R.

F. Brazeau; P/O H. A. A. Breeze; Sgt. G. L. Brehaut; P/O T. J. Brehn; FS J. D. Bremner; P/O L. A. Brenton; F/O C. S. Brest; Sgt. T. J. Brewer; WO1 J. S. Briegel; Sgt. G. W. Briffett; Sgt. J. R. W. Briggs; FS D. S. Brillinger; Sgt. F. L. Brisco; P/O J. P. G. Brisson; F/O C. M. Broadfoot; P/O J. G. Broadfoot; WO2 L. J. M. Broderick; WO2 L. T. Brondgeest; P/O A. Brooks; P/O J. P. Brooks; F/O A. J. Brown; P/O C. D. Brown; F/L C. M. Brown; FS C. P. Brown; F/O J. A. C. Brown; P/O J. D. Brown; F/O R. O. Brown; WO1 W. D. Brown; WO2 E. C. Brunet; FS J. R. Bryant; WO2 G. Bryson; F/O G. H. Buchanan; FS J. A. Buckingham; F/O C. F. Bull; WO2 F. L. Bulman; P/O R. V. Burch; Sgt. J. G. Burke; F/O R. W. Burke; Sgt. M. E. Burnard; P/O E. R. Burns; F/O G. C. Burns; FS W. Burns; Sgt. R. G. A. Burt; F/O E. A. Burton; FS W. H. Burton; F/O C. M. Butcher; FS R. H. Butler, WO2 N. Butts; F/L A. G. Byers; FS C. E. Byers.

C

F/O J. L. E. Cabana; FS A. J. Cadeau; FS F. L. P. Cains; F/O D. H. Calder; P/O S. R. Caldwell; FS J. G. Calhoun; P/O K. B. Callaghan; FS R. W. Calvert; FS B. C. Cameron; WO2 C. F. Cameron; F/O J. B. Cameron; S/L L. H. Cameron; F/O W. P. Cameron; P/O F. P. Cammaart; Sgt. A. B. Campbell; P/O C. A. Campbell; P/O N. D. Campbell; F/O R. S. Campsall; FS P. S. Camseli; F/L J. M. Candlish; F/O T. K. Canning; P/O K. L. Cannings; Sgt. E. A. Cannon; F/O M. R. Cantin; FS E. B. Capin; F/O G. O. Carefoot; F/L D. M. Carey; P/O A. Carlson; P/O A. A. G. A. Caron; P/O J. A. R. Caron; FS C. M. Carr; Sgt. L. A. Carr; WO2 J. T. Carrigan; P/O D. B. Carter; F/L F. E. Carter; F/O F. M. Carter; Sgt. H. H. Carter; P/O J. A. Carter; WO2 J. T. Carter; P/O N. E. Carter; WO2 J. N. G. R. Casaubon; WO2 J. A. Castle; FS J. S. D. Caulderwood; F/L D. E. Cawker; Sgt. E. W. Chalk; F/O F. L. Chalmers; WO2 H. Chambers; FS W. O. E. Chambers; Sgt. D. S. Champion; F/O A. J. Chandler; F/O J. J. Chandler; FS R. Chaplin; P/O R. S. Chapman; LAC J. W. Charles; P/O W. J. D. Charles; P/O J. R. Charlton; F/O L. E. Charnaud; P/O J. L. E. Chartrand; F/L G. J. Chequer; F/O K. C. Cherer; P/O J. B. Chess; F/O A. Chorneyko; FS C. Z. R. Christianson; FS C. W. Christie; P/O R. F. Christie; F/O R. G. Christie; F/O T. A. M. Christie; Sgt. W. R. Christien; P/O G. E. Chute; WO2 W. T. Claridge; F/O C. T. Clark; FS J. Clark; FS W. L. J. Clark; F/O A. E. Clarke; WO1 J. H. S. Clarke; FS S. E. Clarke; FS W. R. Clarke; F/O E. L. Clary; P/O H. C. Clay; F/L D. A. Claydon; Sgt. P. D. Cleal; P/O R. K. Clements; F/O L. B. Clifford; P/O N. H. Clifford; F/O J. T. Clinkshill; F/O A. L. Clogg; P/O G. F. Clough; Sgt. A. E. Cloutier; F/O J. D. L. Cloutier; F/L W. B. B. Cloutier; WO2 C. B. E. Clow; F/O P. H. Coates; Sgt. J. A. Cobbett; P/O T. D. Cochrane; FS E. M. Cockin; F/O W. G. Cockwill; Sgt. H. M. Coffey; P/O J. G. Coflin; F/O E. M. Cole; F/O J. A. Cole; F/O K. A. Cole; WO1 W. P. Coleman; F/O G. H. Coles; F/O R. C. Collins; FS R. W. B. Collins; P/O C. M. Colquhoun; F/O A. C. Colville; F/O J. G. Connor; LAC C. E. Conroy; P/O R. F. Conroy; FS L. F. Cook; P/O N. E. Cook; S/L R. G. Cook; F/O W. A. Cook; P/O J. J. Cooke; FS E. J. Cooper; F/O T. W. Cooper; Sgt. A. J. Copegog; P/O D. J. Copeland; WO2 H. J. L. Copping; F/O D. W. W. Cormack; WO2 E. A. Cornfield; Sgt. J. T. Costello; FS J. R. Cote; F/O C. M. Cottingham; WO2 E. M. Coulter; Sgt. R. L. Coulter; P/O R. E. Countess; P/O J. J. M. M. Couture; S/L E. W. Cowan; WO1

J. J. H. Cowan; WO2 J. H. Cowieson; F/O P. C. Cox; F/L W. C. Cracknell; F/L J. Craig; FS S. M. Craig; WO2 M. C. Craik; FS W. G. Crain; Sgt. J. J. Crawford; F/O K. Crawford; Sgt. D. Crawley; F/O J. F. Creba; FS G. J. Crebbin; P/O R. E. Crewe; FS P. H. Crickmay; F/L W. D. Crimmins; F/O R. C. Crompton; F/O R. D. Crone; WO2 G. J. Cronk; F/O D. A. Crosbie; WO2 A. H. Crosland; FS F. W. Crossley; F/O C. W. C. Crowdy; P/O W. W. Crum; F/O W. L. Cruse; F/O H. W. Cudney; F/L W. E. Culcheth; F/O C. L. Cullen; P/O L. W. Cuming; FS G. Cummine; F/O J. T. Cummingbart; P/O K. G. Cummings; WO2 R. Cummings; F/O W. M. Cummings; P/O H. J. Cunningham; F/O J. H. Cunningham; P/O L. Curatolo; Sgt. G. Currie; P/O E. H. Cutler.

D

P/O P. R. A. Dack; F/O J. R. Dale; WO2 K. L. Dale; P/O L. G. Dalglish; FS G. E. Dalton; F/O J. J. Dance; FS G. A. Dancey; F/O H. A. Danniger; FS H. D. A. Dauk; P/O F. Davenport; FS L. G. Davey; F/O J. M. David; FS E. V. Davidson; P/O J. E. Davidson; WO2 N. S. Davidson; WO2 F. H. Davis; F/O H. E. Davis; P/O H. W. Davis; FS K. G. Davis; P/O R. H. Davis; P/O D. J. V. Dawson; FS J. E. Dayton; Sgt. G. A. E. Dean; P/O L. L. N. DeCelles; F/O M. A. Decloux; P/O A. F. DeDaw; F/O E. J. Deemer; F/O G. A. Deering; P/O J. F. G. R. Dehoux; F/L L. Dehoux; F/O L. D. Deloughry; Sgt. R. Dempster; P/O C. L. Depper; P/O D. E. Derbyshire; FS J. G. DeSieves; P/O J. E. G. Desmarais; P/O J. P. L. Desroches; P/O E. P. Devaney; P/O A. G. Devoy; F/L A. G. Dickie; F/O H. G. Dickson; FS W. E. Dickson; F/L R. J. Digney; FS J. V. Dillon; FS W. E. C. Dillow; FS A. E. Dimock; F/O L. D. Dingley; Sgt. J. H. Dipinto; F/O D. H. Disney; P/O J. L. Dissing; F/O D. W. Ditzler; P/O H. C. Dixon; Sgt. J. Dixon; F/O J. A. C. Dixon; Sgt. N. A. Dixon; Sgt. R. Dixon; F/O W. A. Dixon; F/O J. L. Dobbyn; P/O T. W. Dodd; WO1 J. D. Dodding; F/O J. H. Dodge; F/O J. Doig; F/L P. H. Doig; P/O H. W. Doiron; P/O E. G. Dolby; F/L D. J. Dolphin; FO C. J. Donahue; F/O G. E. Donaldson; Sgt. M. F. Donaldson; F/L H. W. Donkersley; WO2 E. B. Donnelly; P/O J. W. Donnelly; F/O T. H. Donnelly; P/O M. G. E. Donoghue; FS I. I. Donovan; FS W. L. Doran; P/O J. E. J. Dorval; P/O J. G. Doucet; Sgt. H. L. Douglas; P/O W. J. Douglas; F/O H. F. Doull; F/O M. J. Dowd; F/O P. Dowd; P/O S. G. Dowdell; P/O E. A. Dowe; FS N. G. Dowler; P/O W. Draganiuk; P/O E. Dramnitzke; FS R. E. Dresser; FS P. W. Dries; F/O G. R. Drimmie; Sgt. E. S. Driscoll; P/O S. A. Driscoll; FS J. P. H. Dube; WO2 H. Dubnick; F/L T. E. Dubroy; F/O J. J. A. Ducharme; FS G. H. Dudley; F/O K. V. Duffield; P/O E. R. Dujay; P/O R. A. Dumas; Sgt. W. P. Dunbar; F/O J. Duncan; P/O R. M. Duncan; F/O A. W. Dungate; F/O G. C. Dunkley; P/O G. J. T. Dunlop; P/O L. J. Dunn; FS R. G. Dunn; FS H. N. Dunnett; F/L R. J. Dunphy; LAC J. A. C. Dupont; FS C. G. Dupuis; Sgt. I. A. J. Dupuis; F/O R. E. Durnford; Cpl. D. Durrell; F/O G. H. Durston; FS P. Dutchak; P/O J. R. Dutton; F/O E. S. Dwyer; FS L. R. Dyment; LAC C. L. Dynes.

E

P/O J. A. Earle; WO2 J. C. M. Earle; WO2 R. F. Easen; P/O D. J. Eastham; FS W. R. Eaton; P/O R. F. Eberle; P/O E. C. Ecclestone; F/O A. W. Edgar; Sgt. J. W. Edgar; F/O E. B. Edgett; F/L G. B. Edmonds; Sgt. M. A. Edwards; F/O P.

C. Edwards; P/O N. T. Edmondson; Sgt. R. W. Edwards; P/O S. Einarson; P/O D. R. Eley; F/O A. C. Elliott; Sgt. D. C. Elliott; F/O D. J. Elliott; F/L E. B. Elliott; Sgt. F. H. Elliott; F/O H. M. Elliott; F/O T. J. Elliott; F/O A. J. Ellis; P/O H. Ellis; P/O S. F. Ellis; F/O R. O. Ellsmere; F/O W. R. Ellwood; P/O F. J. Elms; Sgt. A. J. Emerson; P/O B. Emerson; P/O E. D. Empey; F/O W. L. Englert; WO1 M. M. Epstein; F/O E. H. Erickson; F/O W. J. Erly; WO1 R. S. W. Esmay; FS J. D. A. Este; Sgt. F. Etienne; Sgt. H. E. Evan; Sgt. D. Everest; P/O J. B. Ewen; F/O P. H. Ewing.

F

Sgt. K. A. Farmer; F/O H. P. Farr; WO2 W. R. Farrell; F/L L. R. Farrow; FS G. S. Feakes; F/O J. Fearn; FS E. Fedi; Sgt. G. J. Ferguson; FS L. A. Ferguson; WO2 J. S. Ferris; WO2 J. D. Fiddes; F/O J. M. W. Filmer; F/O L. B. Fincham; FS B. E. Findlay; FS G. Finlayson; P/O S. S. Finlayson; F/O W. R. Finlayson; Sgt. E. M. Finn; F/O A. A. Fischer; F/O J. E. Fisher; F/L R. F. Fisher; F/L H. W. S. Fitch; Sgt. C. P. Fitzner; S/L J. G. Flaherty; FS W. J. K. Fletcher; P/O C. Flewelling; WO2 C. E. Flewin; WO2 G. A. Flood; P/O H. A. Floren; F/O E. D. Fogg; F/O B. G. Foley; F/O F. Forrest; P/O W. Forrest; P/O B. N. Forster; P/O I. R. Forster; F/O R. H. Forster; P/O W. F. Forster; F/O A. C. Forsyth; F/O T. R. Forsyth; Sgt. R. K. Forth; F/O B. C. E. Fortin; P/O L. A. Foster; Sgt. R. M. Fournier; WO2 A. J. D. Fox; F/O J. A. Frampton; WO2 A. France; WO2 R. L. Francis; Sgt. H. S. Fraser; P/O C. W. Frauts; FS A. M. Freeman; P/O G. F. Freeman; F/O H. Freeman; FS L. N. Fresque; P/O H. A. Frizzell; P/O H. H. Frost; F/O L. A. Frost; F/O H. D. Frye; P/O C. M. Fugere; P/O W. H. Fuller; Sgt. W. J. Fullum; Sgt. D. B. Fulton; F/L W. T. Fulton; F/L A. B. Fyfe.

G

P/O A. L. Gabel; P/O C. V. Galavan; P/O B. E. Galbraith; FS J. Galloway; Sgt. A. F. Gander; FS A. T. Gardiner; F/L R. Gardiner; F/O W. A. Gardiner; F/O A. S. Gates; P/O R. C. Gaudet; F/O A. D. Gavel; P/O T. D. Gavin; Sgt. M. E. Gee; F/O D. E. Geldart; F/O M. Gennis; F/O L. R. Georgeson; F/O H. W. German; Sgt. W. J. Gerow; P/O J. W. Gibbons; FS C. W. Gibbs; FS A. L. P. Gibson; P/O A. R. A. Gibson; FS D. J. Gibson; P/O J. Gibson; P/O J. W. Gibson; F/L J. V. Gibson; S/L M. W. Gibson; F/O S. J. Gibson; F/O T. C. Gierulski; F/O R. C. Gilbert; F/O J. F. Gilbey; Sgt. W. C. Gilchrist; F/O R. W. Gilkey; P/O R. E. Gillanders; FS W. H. Gillatt; F/O I. G. Gillespie; P/O A. J. Gillis; Sgt. L. K. Gilmar; P/O J. Gilson; Sgt. S. Glaister; P/O L. C. Glasser; WO2 C. G. Glover; FS J. Glover; P/O W. A. Glover; F/O P. F. L. Glynn; F/O M. Gnus; P/O J. J. R. T. Godin; F/O J. E. Godwin; F/O R. P. Goldstein; WO2 A. M. Goodall; P/O L. E. Goodkey; FS J. R. Goodwin; P/O V. A. Goodwin; P/O W. H. Goodwin; F/L H. C. C. Goodyear; FS J. P. C. Gordon; F/O M. S. Gordon; WO1 C. A. Goring; F/O C. G. Gorrie; P/O L. D. Gosney; WO2 A. N. Gott; F/O H. J. Gould; P/O I. L. E. Gould; P/O S. H. Goulding; Sgt. G. Gow; WO2 C. B. Gowrie; P/O J. A. Goyer; P/O G. A. Graham; F/L D. M. Grant; S/L F. E. Grant; P/O H. H. Gray; P/O L. S. Gray; F/O R. B. Gray; F/O R. Greaves; P/O F. S. Green; FS H. A. Green; FS T. K. Green; Sgt. W. H. Green; F/L C. J. D. Greenland; F/O F. J. Gregory; P/O G. T. Greig; WO2 J. A. Grenier; F/O M. C. Grevstad; F/O J. M. Grieve; P/O C. A. Griffiths; FS R. T. Griffiths; FS E. H. W. Griffin; FS T. J.

Griffin; Sgt. A. M. Grimson; P/O W. E. Grindley; P/O J. Grodecki; FS F. Guay; F/O C. H. Guest; F/O E. S. Guiton; F/O F. J. S. Guppy; FS R. G. H. Gustafson; F/O A. E. Guthrie; F/O N. G. Gzowski.

H

Sgt. A. H. Hackbart; F/O D. Hackett; F/O W. A. Hadden; F/O K. B. Hadley; P/O G. E. Hagerman; F/O A. F. Hague; F/L V. Y. Haines; P/O E. J. Halbert; FS C. E. Hall; P/O J. W. K. Hall; P/O W. C. Hall; F/L F. Halliday; P/O F. E. Halliday; WO2 W. R. Halloran; F/L W. L. Halperin; F/O M. P. Halpin; Cpl. H. K. Hambly; Sgt. W. H. Hamil; P/O A. Hamilton; WO2 D. G. Hamilton; F/O W. H. Hamilton; F/O W. N. Hamilton; FS L. S. Hammett; P/O A. E. Hammond; F/O W. E. Hampton; P/O W. G. Hampton; F/O H. A. Hancock; P/O J. Handzuk; F/O N. E. Hanna; FS H. E. Hansell; FS G. Q. Hansen; P/O L. H. Hansen; F/O E. Hanson; Sgt. L. G. Hanton; F/L A. C. Harding; P/O O. L. H. Harding; FS K. Hargreaves; F/O J. F. Harrigan; Sgt. M. C. Harrington; P/O J. A. Harris; P/O A. Harrison; FS B. R. Harrison; F/O J. R. Harrison; P/O J. W. Harrison; P/O O. D. Harrison; F/O C. T. Hartley; FS C. L. Hartman; F/O F. Hartnett; F/O J. G. Hatchwell; P/O G. C. Hatch; FS D. J. Haug; Sgt. C. H. Havill; F/O J. E. F. Hawke; WO1 R. E. Hawken; P/O E. S. Hawkes; F/O S. A. Hawkins; WO1 N. E. Hawkins; P/O C. W. Hay; P/O R. C. Haycock; FS R. D. Hayes; F/O W. D. Hayter; P/O R. E. Hazael; F/O R. H. Head; P/O M. F. Headly; WO1 A. Heaney; WO2 D. L. Heard; F/O J. Heath; P/O A. K. Heaton; F/O J. A. F. Heffernan; Sgt. G. Heider; F/L H. L. Heimbecker; P/O J. Hein; P/O F. W. Heinen; Sgt. J. P. Heing; Sgt. E. J. Helm; P/O B. G. Henderson; P/O G. W. Henderson; P/O R. E. Hendry; F/O H. F. Heninger; F/O E. J. Hepburn; FS G. M. Herbert; FS D. L. Herman; FS G. P. Herman; F/L A. G. Hermitage; F/O C. Hetherington; F/O D. E. Hicks; FS L. W. Hicks; P/O O. W. Hicks; F/O W. G. Hicks; FS D. E. Hilker; WO2 J. T. Hill; F/O R. W. Hill; WO2 W. Hill; P/O J. R. Hillhouse; P/O T. W. Hilliard; P/O F. W. Hingston; Sgt. H. E. Hirst; P/O M. E. Hodgins; P/O A. C. K. Hodson; F/O J. D. Hogan; F/O D. A. Hogg; F/L G. A. Holland; F/L C. D. T. Holmberg; P/O A. S. F. Holmes; F/O W. Holmesacourt; F/O R. A. Holtby; F/O A. T. Hook; Sgt. G. R. Hooper; Sgt. G. T. Hooper; WO2 W. H. Hoppus; F/O J. Horn; P/O A. W. Hornby; FS J. C. Home; F/L J. A. Horsfall; Sgt. A. J. Horton; F/O I. M. Horton; WO2 J. A. Horton; Sgt. E. C. Houlding; F/O J. A. Houston; FS W. A. Houston; FS B. D. Howard; FS G. W. Howard; P/O T. E. Howe; P/O D. W. Howell; P/O J. Howell; P/O E. C. Howey; Sgt. G. A. Howitson; WO2 W. Howlett; WO1 J. J. P. G. Huard; P/O D. L. Huband; WO2 J. A. N. Hucker; F/L H. M. Hudson; S/L A. J. Hughes; P/O D. Hughes; P/O G. L. Hughes; FS J. J. Hughes; F/O W. A. Hughes; F/O W. P. Hugh; S/L C. W. L. Hulke; Sgt. A. V. D. Humphries; P/O N. B. Hunt; F/L R. B. Hunt; F/O D. R. Hunter; FS J. M. Hunter; P/O J. T. B. B. Huot; WO2 C. N. Hurl; P/O H. J. Hurley; FS J. F. R. Hurteau; LAC J. W. Husselbee; F/O E. H. Hutcheson; F/O R. B. Hutchison; WO2 H. J. Hyde; P/O O. F. Hyndman; FS W. J. Hynes.

I

P/O L. R. Ingell; F/O W. C. Ingraham; Sgt. W. J. B. Ingram; W/C R. R. Ings; FS A. G. Innes; F/O R. A. Irwin; F/O J. T. Isfan; FS H. E. Isles.

J

FS A. B. Jackson; F/O D. J. Jackson; P/O H. A. Jackson; P/O H. N. Jackson; FS L. M. Jackson; F/O O. L. Jackson; P/O R. B. Jackson; F/O R. H. Jackson; F/L R. H. B. Jackson; FS J. M. Jacob; W/C D. S. Jacobs; F/O W. H. Jacobs; P/O D. E. James; Sgt. R. G. James; Sgt. G. M. Jandron; F/O W. B. Jardine; Sgt. E. F. Jarvis; FS G. K. Jarvis; WO1 F. E. Jenkins; P/O S. D. Jenkins; FS I. D. Jennings; P/O R. G. Jennings; WO2 A. A. Jepson; Sgt. G. H. Jessiman; F/O W. H. Jessiman; Sgt. J. J. L. Jette; F/L A. G. Jira; FS F. E. Johnson; F/O J. G. Johnson; P/O J. G. Johnson; Sgt. H. Johnson; F/O W. S. Johnson; Cpl. A. C. Johnston; FS A. M. Johnston; P/O C. S. Johnston; FS E. C. Johnston; P/O J. M. Johnston; F/O J. S. Johnston; P/O N. Johnston; F/O W. S. Johnston; P/O R. E. Johnstone; FS P. G. Jolliffe; P/O D. H. Jonasson; P/O A. Jones; F/O B. S. Jones; F/L D. J. Jones; FS J. R. Jones; P/O L. W. W. Jones; P/O W. S. Jones; Sgt. G. R. Jordan; FS T. L. Jordon.

K

P/O S. K. Kaiser; P/O P. Kalyta; WO2 J. G. S. Kavanaugh; F/O G. H. Kay; P/O S. Kay; F/L E. E. Kearl; WO2 W. D. Kearney; Sgt. H. A. Keast; F/O R. J. Kee; F/O E. L. Keeler; P/O L. J. Keely; FS J. P. Keenan; Sgt. G. D. Kehoe; P/O N. Kellner; WO2 H. K. Kells; FS F. J. Kelly; LAC J. F. Kelly; WO1 J. L. Kelly; P/O R. G. Kelly; P/O S. R. Kelso; P/O H. F. Kelter; F/O H. L. Kemp; F/O R. W. Kemp; F/O J. M. Kendall; P/O F. L. Kennedy; F/O L. S. Kennedy; WO2 L. T. Kennedy; FS M. J. Kennedy; F/O P. Kennedy; P/O E. D. Kent; P/O S. M. Kent; F/O J. W. Kerr; FS L. N. L. Kerr; P/O R. A. Kerr; P/O W. Kerslake; F/O A. B. M. Ketterson; LAC A. C. Kilsby; WO2 C. J. E. Kindt; F/O F. J. King; FS G. M. King; P/O J. King; FS H. H. Kinghorn; F/O W. C. Kingsley; F/O G. P. Kinnear; P/O D. S. Kirkwood; F/O F. L. Kirkwood; F/O H. A. N. Kitchen; F/O R. S. Knapp; P/O M. A. Knight; FS R. V. B. Knox; Sgt. V. A. Knox; F/L G. W. Knupp; FS A. G. Knuutila; P/O J. O. Koivu; F/O P. F. Korbyl; FS W. Kozicki; F/O W. E. Krampe; F/O C. W. Kruger; P/O S. Kuleski; P/O M. Kwas.

L

P/O P. Labach; FS J. E. N. R. Labelle; FS D. J. Laberge; P/O J. L. R. R. Lachance; P/O A. E. Lafferty; Sgt. J. G. E. Laflamme; F/L D. D. Laidlaw; F/O J. D. Laidlaw; F/L S. R. W. Laine; P/O J. A. Laing; P/O D. A. Laird; S/L G. J. Laird; P/O J. S. Laird; WO2 J. A. R. W. Lalonde; P/O C. B. Lamb; S/L J. F. Lambert; P/O J. Lamont; F/O F. E. Lampin; P/O F. G. Langford; WO1 J. A. Langlois; P/O G. J. Langridge; F/O H. K. Langrish; P/O E. A. Lansdowne; FS J. O. A. Lapointe; F/O E. E. Laporte; WO1 J. A. Larocque; WO1 F. A. Larsen; Sgt. I. Larson; P/O R. H. Larson; P/O J. Latham; P/O M. C. Latornell; F/O J. M. Lauder; P/O A. M. Laughland; P/O C. A. Lavery; P/O J. A. Lavoilette; Sgt. M. Lavoie; WO2 A. K. Lawrence; F/O W. J. Lawrence; P/O V. M. Lawson; FS J. A. Leach; F/O R. A. Leader; F/O J. R. Leaman; WO2 D. G. Leask; WO2 H. C. Leatherdale; FS J. T. L. Leblanc; Sgt. J. A. Leboldus; P/O J. W. O. Lebrock; F/O J. J. H. Leclaire; Sgt. J. J. B. L. Leduc; F/O C. T. E. Lee; Sgt. G. D. Lees; P/O R. G. Leese; F/L H. K. Lefroy; F/O L. F. Legace; P/O J. Legault; Sgt. J. B. L. Legault; F/O J. C. Leithead; F/O G. E. Lemerick; FS A. M. Leonard WO2 N. Leone; FS J. A. Lesage; FS R. Lesser; P/O A. C. Letcher; P/O J. W.

Lethridge; P/O J. J. M. Levasseur; P/O F. E. Lewis; Sgt. G. W. Lewis; Sgt. D. C. Lewthwaite; FS S. M. Liddle; F/O J. A. Linde; S/L H. L. Lindo; WO2 B. E. Lindsay; P/O R. W. Link; S/L L. M. Linnell; F/O H. W. Linscott; P/O F. M. Linton; P/O L. T. Linton; P/O O. A. Linton; F/O G. J. Little; Sgt. R. D. Livingstone; P/O S. G. Livingstone; FS B. J. Lobb; F/O D. H. Loewen; P/O S. A. Loftson; Cpl. C. E. Logan; WO2 C. L. Logan; P/O G. B. Loney; FS A. J. Long; F/O H. M. Long; P/O S. H. Long; F/L F. C. Lord; FS R. Losa; P/O H. W. Lossing; FS R. W. Lough; F/O S. W. Lough; P/O W. J. Louth; P/O W. K. M. Love; WO2 I. M. Lowe; WO2 G. P. Lowle; F/O J. C. Lowther; P/O R. F. Lowther; FS J. Luck; FS S. W. Lucyk; F/O J. C. Lummis; Sgt. J. Lundy; F/O J. D. Lynch; F/O R. V. Lynch; P/O D. T. Lyng; F/O B. E. Lynnn; P/O O. Lytle.

M

F/O N. A. Macaulay; FS A. MacDonald; FS C. M. MacDonald; FIL D. A. MacDonald; F/O D. H. MacDonald; Sgt. D. J. MacDonald; F/L H. D. MacDonald; P/O I. A. MacDonald; F/O J. A. MacDonald; P/O J. I. MacDonald; P/O M. N. MacDonald; P/O R. W. MacDonald; P/O D. C. MacDougall; P/O H. E. MacDuff; F/L R. E. MacFarlane; P/O J. C. MacGillivray; P/O R. MacGillivray; P/O A. C. MacGillivray; F/O D. A. MacGregor; F/O R. R. MacGregor; P/O G. R. Machesney; WO2 B. H. MacIsaac; F/O G. I. MacKay; Sgt. G. L. MacKay; WO1 L. B. MacKay; F/O E. L. MacKeigan; P/O H. F. MacKenzie; F/O H. H. MacKenzie; Sgt. W. F. MacKenna; F/O J. A. MacKinnon; P/O J. A. MacLean; P/O J. W. MacLean; F/O R. MacLean; WO2 H. MacLennan; P/O D. K. MacLeod; P/O J. M. MacLeod; P/O M. H. MacLeod; FS H. C. MacMillian; F/O E. D. MacMurchy; Sgt. W. MacNaughton; P/O F. R. Macrovic; FS F. D. Maddock; FS E. K. Maden; P/O P. J. B. M. Madore; F/O G. F. Maffre; Sgt. P. J. Maher; F/O J. B. Mahoney; P/O L. C. Main; W/C A. C. Mair; F/O C. M. Mair; F/L W. J. Maitland; F/O K. B. Malcolm; P/O J. R. H. B. Mallette; P/O D. F. Malyon; F/O F. T. Manners; F/O C. W. Mannett; FS J. E. Marchant; F/O M. Marder; F/O A. R. Mark; F/O G. H. Markle; P/O O. C. Markle; FS M. Marks; F/L S. P. Marlatt; Cpl. R. D. Marr; F/O G. C. Marshall; P/O L. Marshall; FS W. F. Marshall; FS J. A. L. Martel; W/C A. N. Martin; FS I. A. Martin; P/O I. W. Martin; F/O J. L. Martin; FS J. R. Martin; WO1 L. G. Martin; FS P. J. Martin; WO2 T. E. Martin; F/O T. R. Martin; Sgt. T. M. Martin; P/O W. H. Martin; Sgt. B. W. Matheson; Sgt. D. W. Matthews; F/L S. W. Matthews; F/O W. H. Matthews; Sgt. L. W. Mattin; FS C. C. Maw; P/O W. K. Maxwell; Sgt. G. A. May; P/O J. May; FS H. C. A. Maynard; P/O J. R. Mayo; P/O G. W. Mayor; F/O A. P. Mazur; WO2 E. F. McAneeley; WO1 E. M. McArthur; WO2 K. A. B. McArthur; F/L H. K. McAvery; FS R. A. McBeath; FS L. B. McBride; P/O D. A. McCabe; F/O R. M. McCabe; Sgt. E. W. H. McCaffrey; F/L L. N. McCaig; WO1 J. M. McCallum; FS P. T. McCallum; WO1 G. McCann; P/O L. M. McCann; P/O C. J. McCarvill; Sgt. H. S. McCartney; Sgt. R. McCart; FS M. L. McClay; F/O R. B. McClellan; Sgt. D. S. McClelland; P/O R. E. McComb; P/O R. J. McCormick; P/O L. A. McCrea; WO2 F. C. McCubbin; FS R. L. McCulloch; WO2 M. A. McCurdy; FS F. McCutcheon; P/O E. T. McDermott; F/O C. G. McDonald; WO2 D. A. McDonald; FS J. McDonald; F/O R. A. McDonald; P/O G. McDougall; P/O R. V. McDougall; F/L T. R. McDougall;

F/O J. N. McDowell; P/O D. R. McEvoy; Sgt. J. A. McEwen; P/O C. W. McFarlane; P/O R. McGhie; F/O J. L. McGill; Sgt. B. R. McGimsie; Sgt. A. W. McGrath; F/O J. E. McGrath; F/O W. R. McGregor; P/O R. E. McGregor; F/O P. G. McGuire; FS J. G. McInnes; P/O J. R. McInnes; FS D. W. McInnis; P/O J. D. McIntosh; P/O J. E. McIntyre; P/O P. A. McIntyre; F/L H. C. McIver; P/O J. McIvor; P/O R. A. McIvor; F/O D. H. McKay; FS H. R. McKay; P/O R. A. McKay; P/O R. J. McKay; Sgt. W. E. McKee; FS M. A. McKellar; F/O A. C. McKenzie; F/O D. N. McKenzie; P/O J. P. McKenzie; WO2 J. A. W. McKenzie; Sgt. J. A. McKenna; P/O V. H. McKeown; FS F. T. A. McKernan; P/O D. A. G. McKerry; WO1 G. F. McKinnon; FS D. H. McKitterick; F/O P. A. McLachlan; F/O G. McLaughlin; F/O J. M. McLay; P/O J. C. McLean; WO2 J. P. S. McLeod; WO2 N. S. McLeod; F/O R. McLeod; F/O S. McManus; F/O R. W. McManaman; P/O J. F. McManus; Sgt. R. L. McManus; F/O R. J. McMehean; S/L J. P. McMillin; F/O J. K. McMorris; W/C G. A. McMurdy; FS N. W. McNair; P/O J. C. McNary; FS R. W. McNeil; F/O W. Y. McNeil; F/O W. E. McNicholl; F/O C. L. McPherson; F/O W. H. McPherson; FS L. A. McQueston; FS C. F. McRae; F/O H. E. McRae; F/O R. McSorley; F/O G. E. McTaggart; P/O L. R. J. Meech; FS R. A. Meek; Sgt. R. K. Megitt; F/O E. W. T. Mellander; F/O N. Melnick; P/O H. J. Menzies; FS F. F. Mercer; WO1 A. R. Merritt; P/O J. Metka; Sgt. D. J. Metz; S/L H. W. Metzler; P/O L. M. Meyer; P/O J. L. Michell; FS R. J. Middlemas; P/O K. R. Middlemiss; WO1 L. Mieyette; F/O A. H. Mildon; P/O K. R. G. Millar; F/O R. N. Millar; FS A. S. Miller; FS C. P. Miller; F/O C. W. Miller; Sgt. E. G. F. Miller; F/O H. J. Miller; FS R. W. Miller; FS V. L. Miller; FS W. D. Miller; WO2 E. G. Millidge; WO2 D. W. Milliken; Sgt. E. J. Mills; P/O E. Milner; WO1 J. E. Milner; WO2 J. N. G. Milot; P/O L. V. Milward; FS S. A. Minter; Sgt. A. Mitchell; F/O W. A. Mitchell; F/O W. W. Mitchell; FS H. A. Moad; FS F. R. Moffat; P/O J. A. Moffat; FS R. E. Mogalki; Sgt. G. Molnar; WO2 S. R. Moncrieff; FS J. H. T. Monteith; F/L D. M. Moodie; F/L V. K. Moody; WO2 E. S. Moon; P/O A. R. Moorby; FS A. F. Moore; F/O J. L. Moore; P/O N. E. Moore; FS R. Moore; P/O E. G. More; WO2 A. R. Morgan; WO2 C. E. Morgan; Cpl. J. R. Morgan; F/O H. Moroz; Sgt. F. K. Morris; P/O F. W. Morris; P/O T. H. Morris; WO2 W. P. Morris; Sgt. B. R. Morrison; F/O F. W. Morrison; Sgt. J. M. Morrison; P/O N. B. Morrison; P/O J. M. Morrill; FS F. P. Morro; F/O H. F. Morrow; F/O L. L. Mortimer; F/O S. W. Morton; F/O K. M. Mosher; P/O W. V. Moss; P/O M. R. N. Mouchet; Sgt. G. B. Mould; FS G. C. Mould; F/L E. E. Muffitt; F/O T. J. Muir; F/O G. H. Mulligan; Sgt. J. Mulligan; Sgt. M. G. Mulligan; FS D. S. Mullin; F/O N. G. P. Munnery; FS G. A. Munro; F/L J. F. Munro; F/L R. Munro; P/O B. H. Murdock LAC J. K. Murphy; F/O W. Murphy; P/O C. B. Murray; F/O C. L. Murray; FS K. D. Murray; F/O L. J. Murray; F/O M. C. Murray; P/O R. D. Mutch; WO1 G. T. Mutton; WO2 T. W. Myers.

N

P/O J. A. M. Nadeau; Sgt. J. R. E. Nadeau; F/O D. A. Naismith; WO2 G. M. Naugler; F/O P. Nazar; FS F. J. Neal; F/O W. P. Neale; WO2 F. R. V. Nello; F/L J. N. Nelson; F/O O. K. Nelson; Sgt. P. A. T. Nelson; FS W. Ness; Sgt. M. L. Nesvold; Sgt. A. C. Neville; F/O C. G. Neville; WO2 J. D. Newcombe; Sgt.

H. Newlove; WO2 P. E. Nichols; P/O R. O. Nickerson; FS W. J. M. Nickerson; FS C. M. Niven; F/O G. F. Nixon; FS H. W. Nixon; Sgt. J. W. Nixon; WO2 N. A. Noble; WO2 T. H. Nolan; P/O J. Norgard; F/O A. Normandin; FS C. J. C. Norquay; FS H. G. Northway; F/O A. Nova; F/L A. Novick; Sgt. F. Nowlan.

O

Sgt. E. J. Oakley; F/O C. E. O'Brien; P/O D. J. O'Brien; P/O R. D. Ochsner; Sgt. J. C. O'Connell; P/O J. G. O'Dell; F/O E. M. O'Donnell; F/O M. E. O'Donoghue; P/O J. F. O'Dowda; FS L. Offer; F/O W. H. Offer; F/O J. M. Ogilvie; WO2 J. B. O'Grady; FS B. M. O'Hara; F/O R. E. O'Heare; P/O J. Oliver; FS L. T. Olmstead; P/O A. L. Olsson; F/O D. O. Olsvik; P/O G. M. O'Neil; F/O L. W. O'Neill; P/O H. F. Orr; P/O R. J. Orr; WO2 R. S. Orr; Sgt. H. C. Oswald; FS S. J. Ouelette; P/O J. A. Ovens; Sgt. J. H. Overholt; WO2 J. D. Owen; P/O J. C. Owens.

P

F/O H. D. Paddison; FS R. E. Paddison; F/O R. E. Padget; F/O G. S. Palin; P/O F. H. Palmer; P/O J. P. Papineau; FS J. E. Paquet; F/O F. F. Paquin; Sgt. J. A. C. A. Paquin; P/O J. A. N. Pare; P/O J. P. D. Parise; P/O W. A. Park; P/O A. S. Parker; F/O D. R. Parker; F/O G. H. Parker; P/O J. A. Parker; F/O J. F. Parker; F/O W. H. Parkinson; P/O V. Parrott; F/O R. C. Parry; WO2 W. A. Parsley; F/O F. J. Parsons; FS G. J. Partridge; P/O D. A. Pastorius; F/O D. J. Paterson; P/O J. W. Patrick; F/O E. D. Patterson; AC1 G. R. Patterson; FS L. H. Patterson; F/O H. D. Pawson; P/O A. G. Pearce; F/O J. V. Pearl; F/O T. W. Pearson; F/O C. W. Peasland; F/O O. S. Peck; WO2 R. C. Pedlar; P/O H. T. Peerles; F/L R. H. Penalagan; Sgt. H. T. Penfold; F/O K. T. Penkuri; WO2 H. A. Pennell; FS C. Pennycook; P/O F. W. Peppiatt; F/L D. H. Perry; FS H. Perry; F/O N. K. Perry; F/L S. W. W. Perry; F/O D. H. Petch; FS F. W. Peterkin; S/L H. P. Peters; Sgt. H. E. Petersen; Sgt. R. F. Peterson; F/O S. G. Peterson; FS W. A. Peterson; FS R. Pettitt; F/O H. B. Pharis; P/O C. Phillips; FS C. F. Phillips; F/O S. A. Phillips; P/O C. G. Phinney; Sgt. J. L. Piche; F/O D. L. Pickard; FS C. P. Pierce; F/O R. A. Pildrem; FS J. D. Pilkey; Sgt. L. A. Pinchess; F/O J. R. Piper; F/O A. Pitkethly; F/O L. C. Pitman; F/L T. O. Pledger; F/O L. Plishka; FS E. J. C. Plouffe; P/O W. Plunkett; Sgt. E. Podborochinski; F/L J. A. R. Poirier; P/O R. D. Poison; F/O J. B. Poole; F/O C. H. S. Popplewell; FS H. M. Porteous; F/O A. W. Porter; F/O D. G. Porter; P/O R. L. Porter; Sgt. W. M. Power; WO2 D. A. Powley; P/O R. W. Pratt; Sgt. R. W. Pratt; F/O G. R. Presland; WO2 R. H. Prest; Sgt. J. M. Preston; P/O L. J. Prete; P/O J. L. Priamo; Sgt. C. M. Price; P/O D. A. Price; Sgt. E. S. Pridham; Sgt. B. C. Prill; P/O K. W. Priske; F/O L. D. Proctor; F/O G. B. Pronger; P/O L. T. Prosser; F/O E. R. Proud; P/O T. H. Proudlock; P/O L. J. Pugh; P/O D. W. Pudham; P/O V. R. Puralm.

Q

Sgt. P. L. J. M. Quenet; FS C. E. Quickfall; Sgt. E. G. Quigley; FS F. P. M. Quinn.

R

FS W. E. Raban; F/O W. K. Raby; FS A. B. Radburne; LAC A. J. Radcliffe;

Sgt. K. L. Radcliffe; P/O D. A. Rae; Sgt. H. T. Raine; Sgt. J. L. R. Rainville; F/O H. P. Ralph; F/L D. Ramsay; F/O J. M. Ramsay; P/O D. T. Randall; FS R. Ranger; Sgt. J. R. Rankin; F/O G. I. Ransom; P/O K. W. Raper; Sgt. W. J. Rattigan; P/O J. A. Raven; F/O D. E. Raymond; P/O G. I. Raymond; Sgt. J. D. Raymond; FS L. K. Raymond; LAC E. W. Read; WO2 G. L. Ready; FS C. D. Redgrave; F/O W. W. Redkopf; F/L J. C. Redmond; Sgt. J. E. Redmond; F/O J. N. R. Redpath; S/L J. P. Redpath; FS C. L. Reed; FS N. L. Reed; Sgt. V. E. Reed; F/O W. R. Reed; F/O A. E. Reid; FS H. S. Reid; F/O M. J. Reid; S/L A. V. Reilander; F/O W. E. Rempel; F/O J. A. L. L. Renaud; P/O J. G. M. Renaud; FS J. J. Renning; FS C. W. Renwick; WO2 R. W. Revell; FS C. C. Reynolds; P/O D. G. Reynolds; FS R. P. Reynolds; F/O D. Riach; P/O G. H. Rich; LAC C. E. Richard; Sgt. J. P. F. Richard; F/O R. B. Richard; WO1 E. G. Richards; P/O M. L. Richardson; F/O G. W. M. Richter; F/O C. F. Ridders; Sgt. S. J. Rigden; F/O L. R. Rinn; P/O C. A. Ritchie; FS R. W. Ritchie; F/O R. J. Roach; P/O S. L. Roach; P/O F. J. Roberts; F/O G. A. Roberts; P/O J. V. Roberts; F/O L. J. Roberts; F/L W. A. Roberts; P/O R. W. Robertshaw; P/O I. Robertson; F/O J. A. Robertson; F/O D. A. Robinson; Sgt. D. R. Robinson; F/O J. F. Robinson; F/O L. E. Robinson; Sgt. A. E. Roden; Sgt. W. K. Rodgers; WO2 I. Rodin; F/O B. L. Rogers; FS E. Rogers; WO2 L. H. Rogers; P/O S. J. Rogers; WO2 K. G. Rolfstad; P/O W. E. Rood; WO2 R. E. Roos; P/O C. E. Rose; P/O C. W. Rose; FS D. I. Rose; WO2 W. F. Rost; LAC J. H. F. Rousseau; F/O J. W. Roussel; F/O D. A. Rowat; Sgt. B. S. Rowe; FS E. F. A. Rowe; P/O L. C. Rowe; P/O L. G. Rowell; WO1 J. N. L. Roy; Sgt. F. Rudd; F/O R. M. Rumble; WO2 I. F. Ruppel; P/O E. J. Rush; Sgt. H. Russel; F/O B. A. Russell; P/O J. E. Russell; F/O J. V. Russell; FS L. B. Russell; P/O W. F. Russell; Sgt. J. R. A. Ruthven; F/L A. H. Rutledge; FS J. Rutzki; WO1 J. E. Ryan; FS T. J. Ryan; P/O T. M. Ryan.

S

P/O E. P. Sabine; Sgt. F. St. Laurent; F/O B. A. St. Louis; F/O A. J. Salaba; S/L D. J. Sale; F/L E. A. Sanderson; Sgt. F. G. Sanderson; F/O S. A. Eanderson; F/O C. R. Sandes; F/L P. T. Sargent; FS W. E. Sargent; FS J. E. Saunders; F/O J. E. Sauve; FS K. W. Sawyer; P/O A. F. Scans; P/O H. M. Schade; FS K. E. Schiedel; F/O I. Schilansky; P/O T. Schioler; FS L. C. Schmidt; F/L M. S. F. Schneider; P/O G. E. H. Schultz; Sgt. C. F. Scott; F/O C. L. Scott; Sgt. D. Scott; P/O D. G. Scott; FS D. S. Scott; FS G. H. Scott; WO2 J. E. Scott; WO2 L. G. Scott; FS A. E. Scaly; P/O W. Searle; P/O E. K. Sears; FS A. L. Sedgwick; F/O R. G. Selman; P/O J. H. G. Senecal; WO2 D. J. Setter; F/O W. S. Sewall; F/O J. H. Seymour; WO2 G. A. Shanks; F/O G. A. Shannon; F/O R. A. Shannon; FS R. Sharp; FS F. P. Sharpe; F/O G. E. Sharpe; WO1 H. W. Shaver; P/O C. H. Shaw; F/O M. C. Shaw; F/L T. R. Shaw; FS E. F. Sheehan; FS F. Sheehan; F/L P. A. Shelton; F/L R. H. Sherback; F/O H. M. Sherman; F/O T. R. Sherrill; FS C. A. Sherwood; F/O D. A. Shewan; F/O A. W. Shirley; WO2 K. F. Shoener; FS W. R. R. Shore; F/O D. R. P. Short; F/O H. L. Shortliffe; Sgt. P. M. Shulman; F/O M. A. Siddons; FS J. L. Sills; F/O T. Siltala; WO2 J. Silverstein; F/O D. M. Sim; FS P. H. Simonson; P/O C. E. Simpson; FS R. N. Simpson; FS D. Sinclair; F/O D. J. Sinclair; P/O G. E. Sinclair; Sgt. P. S. Skebo; Sgt. L. C. Skerry; FS J. A. W. Skilleter; FS A. E.

Slegg; Sgt. P. E. Sloan; F/O W. R. Sloan; F/O F. G. Small; WO2 J. R. R. Small; FS K. G. Smalley; WO2 J. A. Smart; P/O A. Smith; Sgt. C. C. Smith; S/L C. W. Smith; F/O D. I. Smith; Sgt. Earl Smith; Sgt. Edwin Smith; F/O E. W. Smith; FS F. W. Smith; FS G. F. Smith; F/O H. W. Smith; Sgt. J. M. Smith; F/O J. S. Smith; P/O K. Smith; WO2 K. C. Smith; WO1 L. G. Smith; F/O L. L. Smith; Sgt. N. Smith; Sgt. R. C. Smith; FS R. H. Smith; P/O R. S. Smith; FS S. Smith; FS S. E. Smith; Sgt. S. J. Smith; F/O S. M. Smith; AC2 S. S. Smith; F/O W. F. Smith; F/O W. R. Smith; Sgt. M. R. Smoke; F/O J. A. Sneddon; F/O A. V. Snook; F/O M. V. Snow; F/O W. F. C. Snow; F/O K. Solmundsson; Sgt. S. Sondergaard; F/O S. J. R. Soper; F/O H. C. Sorley; F/L J. J. H. Souaillard; F/L H. J. Southwood; F/O E. Sowerby; FS H. W. Spackman; F/O F. G. Spanner; FS G. W. Speicher; P/O C. C. V. D. Spencer; FS F. A. Spencer; FS N. V. Spencer; FS S. D. Spencer; P/O L. Spensley; F/O L. G. Speyer; F/O G. L. Spofford; P/O W. C. Stainton; Sgt. R. H. Stanley; FS R. H. A. Stanley; WO2 P. R. Starr; P/O B. V. Starrup; P/O J. A. St. Denis; WO2 A. D. Steadman; WO2 C. F. D. Steel; FS A. D. Steels; F/O C. B. Steeves; F/O H. B. Steeves; Sgt. A. J. Steinacker; Sgt. L. A. Stemmler; F/L J. J. Stephen; F/O J. A. Stephens; WO2 S. G. Stephenson; F/L W. M. Sterns; P/O W. G. Stevens; FS G. E. Stevenson; F/O D. B. Stewart; Sgt. G. M. Stewart; F/L H. W. J. Stewart; F/O J. E. Stewart; Sgt. J. B. Stewart; WO2 N. M. Stewart; P/O V. A. Stewart; P/O W. M. Stewart; F/O E. B. Stiles; P/O H. V. Stinson; Sgt. W. E. Stinson; P/O D. E. Stiver; P/O A. H. Stockton; Sgt. D. B. Stone; FS R. J. Stone; WO1 R. A. Storbakken; WO2 D. S. Storey; Sgt. D. G. Strachan; FS J. A. O. Strachan; P/O J. E. Strain; F/O R. H. Strauss; WO2 G. S. Streisel; WO1 L. Strickland; FS R. C. Strickland; P/O C. W. Strom; P/O C. D. Stroud; F/O J. A. Studer; Sgt. R. G. Sturley; P/O W. J. D. Sturmy; P/O G. R. Styles; F/O W. E. Suddick; P/O R. C. Sullivan; P/O M. B. Summers; Sgt. G. W. Sutherland; FS J. Sutherland; FS W. F. Sutherland; FS W. K. Sutherland; FS H. Suthers; WO2 G. G. Sveinson; Sgt. S. J. Swain; Sgt. W. Sweeney; Sgt. P. F. J. Sykes; P/O R. F. Sykes; P/O C. M. Sylvah; P/O F. R. Symons; F/O J. R. Symons; P/O W. Szportan; F/O C. Szymanski.

T

F/L T. H. Taerum; Sgt. J. A. G. Taillon; P/O R. Tarbet; FS S. Tatai; P/O D. E. Tate; F/O E. A. T. Taylor; FS G. S. Taylor; P/O J. A. Taylor; FS J. A. Taylor; F/O M. S. Taylor; F/O R. C. Taylor; F/O T. W. Taylor; P/O W. Taylor; F/O T. L. W. Teasdale; FS B. V. Tedford; F/O J. D. Teskey; F/O J. O. A. R. Tetrault; F/O W. Thatcher; F/O H. P. Theriault; F/L L. J. L. Thibault; P/O R. F. Thibedeau; FS W. C. Thom; P/O D. O. Thomas; F/O E. H. Thomas; FS B. Thomasberg; Sgt. J. M. Thomlison; WO1 A. A. Thompson; P/O A. C. Thompson; Sgt. G. F. A. Thompson; WO2 G. W. Thompson; FS H. B. Thompson; F/O L. E. Thompson; P/O M. H. Thompson; P/O R. H. Thompson; P/O R. J. Thompson; F/O T. W. Thompson; Sgt. T. W. Thompson; S/L W. N. Thompson; WO2 D. A. Thomson; P/O J. S. Thomson; F/O R. K. Thomson; P/O T. A. Thomson; P/O T. D. Thomson; F/O S. E. C. Thorn; FS H. Thornton; P/O J. W. Thrasher; F/O R. H. Tierney; P/O W. G. Tillmann; F/O W. H. Timmins; F/O E. T. Tinker; F/O J. E. Tinline; F/O C. W. E. Tiplady; P/O L. A. Titof; WO2 G. W. Toal; FS W. B. Tobin; FS W. R. Tobin; FS A. F. Todd; FS T. R. H. Todhunter; FS D. Tomlin; FS J. G. Tomlinson; F/O R. J. Tomlinson;

WO2 W. J. Toner; FS E. A. Toole; FS J. B. Toombs; P/O F. W. Topping; FS G. D. Torbet; FS J. H. Tovey; Sgt. S. E. Towle; FS L. R. Towsley; FS J. R. Trace; F/O W. T. Tranmer; F/O C. Travers; P/O F. L. Travers; F/O B. A. Trewin; F/L T. Trilsbeck; F/O T. D. Trippe; FS S. R. Troman; Sgt. J. L. Truax; FS Z. R. Trudeau; P/O K. D. Tucker; P/O C. S. Turner; F/O D. N. Turner; F/L G. Turner; WO2 H. A. Turner; P/O T. D. Turner; P/O G. A. Twigge; P/O E. P. Twiname; WO2 E. L. Tycoles; P/O M. D. Tymchuk.

U

F/O J. D. B. Ulrichsen; F/O E. J. Underhill; P/O R. Urban; Sgt. E. F. Uren; FS G. A. Usher; F/O W. Uyen.

V

Sgt. W. Vancoughnett; P/O G. P. C. Vandekerckhove; F/O W. Vanderdasson; F/O R. D. Vanfleet; FS B. H. Varey; WO1 M. E. Varney; FS J. G. Vaughan; LAC J. A. J. Veilleux; P/O S. J. Veron; P/O F. J. Vid; P/O E. A. Vigor; FS P. H. G. Vincent; P/O G. G. Vipond; FS M. N. Vitch; F/O N. Vlassie; P/O W. F. Vornbrock; P/O B. E. A. Vye.

W

F/O R. F. Waddington; P/O R. H. Wade; P/O A. H. Waite; P/O W. G. Wakely; FS G. R. A. Walkem; WO2 D. V. Walker; F/O G. S. Walker; F/O C. D. Wall; FS R. N. Wallace; P/O D. Wallbank; Sgt. R. J. H. Walsh; FS E. J. Walters; FS R. H. Walton; F/O A. W. Ward; LAC G. Ward; FS G. L. Ward; Sgt. L. T. Wardell; Sgt. C. H. Wardrope; F/O J. R. Wardrope; FS R. F. Ware; F/O J. H. Warkentin; FS E. F. Warr; F/O A. L. Warren; F/O R. E. Warren; P/O R. L. Warren; F/O D. W. Warwick; P/O M. A. Warwick; F/O V. M. Warwick; P/O P. Warywoda; F/L T. J. D. Waterman; P/O E. G. Waterston; WO2 F. B. Watson; FS P. Watson; S/O I. Watson; F/L J. A. Watson; Sgt. R. M. Watson; P/O J. F. Watters; F/O D. D. Watterson; FS C. L. Weatherby; P/O C. Weaver; Sgt. E. C. Webb; WO2 E. V. Webb; F/O H. Webb; F/O F. M. Webber; WO2 H. A. Weber; WO1 L. P. Webster; F/O R. J. Webster; F/O G. H. Weeden; F/O G. E. Weir; FS R. N. Weir; FS R. A. Wells; WO2 K. D. Wellwood; F/O C. G. Wenzel; F/L W. J. Weston; P/O V. G. Whalen; F/L C. R. Wharram; F/L C. H. Wheatley; WO2 J. A. Wheeler; P/O J. W. Wheeler; Sgt. J. J. Whelan; F/L A. J. Whiston; WO1 G. P. White; FS J. W. White; F/O R. J. White; FS W. J. Whitney; Sgt. J. Whittaker; P/O S. A. Wick; Sgt. P. F. Wicks; F/O W. R. Widdess; P/O J. Wilde; WO2 G. W. Wildfong; F/O J. W. Wiley; F/O W. Wilkie; S/L R. P. Wilkin; F/O R. A. Wilkins; FS A. M. Wilkinson; P/O T. E. Wilkinson; FS A. R. Williams; F/O E. K. Williams; WO2 G. I. Williams; FS R. E. Williams; Sgt. J. Williamson; F/O G. K. Willis; FS A. Williston; Sgt. D. M. Willmott; F/L H. A. Wills; WO2 A. B. Willson; FS A. Wilson; Sgt. D. W. Wilson; P/O H. C. Wilson; F/O H. R. Wilson; P/O J. Wilson; Sgt. J. Wilson; FS J. A. Wilson; Sgt. J. A. Wilson; F/O J. H. Wilson; Sgt. J. I. Wilson; P/O K. C. Wilson; P/O L. G. Wilson; F/L R. H. Wilson; FS R. H. Wilson; P/O R. P. Wilson; WO2 T. O. Wilson; F/O W. S. Wilson; F/L W. T. Wilton; FS B. D. Winders; Sgt. K. C. Windsor; F/L E. S. Winn; F/O W. Winning; F/O F. W. Winter; Sgt. C. H. Winters; FS V. J. A. Wintzer; Sgt. M. L. Wiper; FS D. D.

Witts; P/O M. Wiwsianski; Sgt. A. Wolkowski; P/O E. M. Wood; P/O F. C. Wood; Sgt. S. A. Wood; P/O W. E. Woodrow; WO2 L. H. Woodruff; Sgt. R. C. Woods; WO1 R. F. Woods; F/O A. W. Woolverton; P/O H. L. Wootten; Sgt. A. W. L. Worrad; FS C. N. D. Wright; P/O H. G. Wright; WO2 H. R. Wright; F/O J. E. Wright; F/O O. Wright; F/O R. B. Wright; WO2 D. M. Wylie; F/O A. E. Wyton.

Y

WO2 F. J. Yackison; FS B. J. Yard; FS A. E. Yaworski; F/O L. J. Yeats; P/O J. J. Yelland; P/O L. E. Yeo; F/O A. E. Young; FS A. J. Young; Sgt. A. W. Young; FS C. T. Young; F/O H. K. Young; W/C J. M. Young; Sgt. J. O. Young; WO2 R. A. Young; F/O W. Yurchison.

Z

F/O R. T. Zdan; P/O J. E. Zegarchuk; Sgt. R. Zimmer; F/O F. J. Zubic. F/O F. R. Zulauf; WO2 J. J. Zunti.

INDEX

- ABEL, G. C., 349
Adams, A. A., 323
 C., 203
 K. R., 197
Aikman, A. F., *f.* 335, 349
Aldred, E. M., *f.* 30, 93, 201, 214.
Alexander, J., 201
 P. A., 190, 191, 280
 W., 293
Allen, C., 149
 E., 264
 J. A., 56
Alliston, A. J., 142
Anderson, C. A. S., 152
 G. S. L., 338, 341, 342
 J., 56
 J. A., *f.* 70
 R. A., 98
 Ron, *f.* 71
 T. G., 160, 169
 W. B., 85, 197-8
 W. J., 197
Annan, D. B., 286
Anthony, R. F., 203
Archambault, L. G. G. J., 291, 293, 300,
 302, 312
Archer, J. C., 313
Armstrong, J. L., 157
 R., 334
Arnot, D. M., 66, *f.* 205
Ashfeld, K. T., 336, 342
Ashford, A. E., 90
Ashleigh, D. D., 120, 128
Ashman, R. A., 313
Atkins, G., 97
 J., 1, 71, 84
Atkinson, R. L., 99
 S. K., 26
Aulenback, J. W., 315
Austen, R. J., 213
Austin, J. C., 313
 W. G., 193
Avant, A. F., *f.* 78, 94
Avasiloff, S., 218
BAKER, E., 92
 R. E., 139-40
 T. L., 99
Bakkan, M. W., 176
Ballantyne, J. H., 120
Bamford, J., 232, 237
Bandle, L., 52, *f.* 62, 77
Banks, W. J., 240, 247, 251
Bannih, R., 99
Banning, J. E. V., 299, *f.* 303
Bannister, R., 202
Bannock, R., 188, 189, 190, 191, 192,
 f. 271, 275, 281, 286
Barker, A., 162, 168, 188, 190, 192, 275
 E. E., 328
Barlow, R. M., 24
Barnes, S., 107-8
Barrett, C. K., 91
 N., 296
Bartlett, A. H., *f.* 319, 330-1, 340, 341
 C. S., 201
Barton, T. C., 200
Bassett, G. A., 19
 P. R., 321
Basson, R. A., 71
Basten, H. G., 70
Bateman, L. J., 315
Bayly, G. H., 346
Bays, B. O. R., 155, 156
Beals, W. F., 293-5
Beaton, *f.* N., 201
Beaumont, W. H., 188, 276
Bedford, G. W., 200

- Beach, C. T., 203
 Beeley, K., 206
 Beirnes, J. R., 233, *f.* 255, 256, 257
 Bell, G. A., 251
 J. B., 82
 J. W., *f.* 205
 T., 142
 Beilis, A. R. B., *f.* 286, 293-5
 Bemrose, M., 200
 Bennell, R. J., 155, 162, *f.* 174
 Bennett, G., 92
 Bergevin, J. J. C., *f.* 287, 307
 Bermel, A. W., 333, 341
 Besley, G. W., 305
 Betts, W. E., *f.* 71
 Beurling, G. F., 103, 105, 109-10, 116, 123
 Beveridge, M. W., 155, 156, 157, 270, 282, 284
 Biden, D. E., 60
 Bier, D. S., 313
 Biggs, W., 20
 Bilbe, J., 218
 Billing, G. D., 229
 Bilson, F. W., 30
 Birnie, H. N., 206
 Bishop, E. H., 215
 W. A., 127, 229
 Bissett, J. M., 78
 Blair, G. R., 250
 R. W., 211
 Blais, J. L. A., 215
 Blake, W. V., 68
 Blakely, W. J., 56
 Blakley, E. R., 191
 Blakeney, W. T., *f.* 158
 Blake, J. D., 66
 Bloomer, J. F. G., 276
 Boal, E. W., 158, 159, 161, 163, 164-5, 166, 168, *f.* 174
 Bodard, G. P. A., 152, 279
 Bodnoff, I. J., *f.* 302, 308-12
 Boehmer, G. A., 215
 Bolger, C. M., *f.* 303, 315
 Bonikowsky, A., 61
 Booth, C. R., 313
 R. D., 102, 111
 Borland, A. G., 250
 Borrowes, R. D., 89
 Botkin, R. T., 30
 Bouskill, R. R., 252, 261
 Bowhay, W. E., 170, 188, 281
 Bowker, H. W., 107, 112, *f.* 127, 133, 245
 Boyer, A. V. J., 202-3
 Boyle, H. V., 266
 J. J., 261
 Bracken, W. J., 349
 Bradford, N. W., 154, 276
 Bradley, K. W. W., 340
 Bradshaw, G. W., 215
 Brager, L. K., 43
 Brannagan, T. A., 124, 129, *f.* 238, 245, 246, 248, 252
 Brasnett, W. G., , 331-2
 Bray, J., 34, 199
 Brayne, K., 218
 Breadner, L. S., *f. title*, 8-9, *f.* 239
 Bregman, S., 269
 Breithaupt, W. R., 149
 Bretz, N. H., 116
 Brewer, D. L., *f.* 31
 Brice, F. T. S., 199
 Bristow, D. A., 201
 Brittain, G. D., 202
 Bromhead, D. T., 293
 Bromley, R. A., 243, 244
 Brook; P. R., 190, 191
 Brookes, G. E., 11
 Broughton, F. W., 334
 Brown, E. A., 157, 158, 160, 161
 G. S., 141
 K. A., 142
 M., 100
 M. G., 270
 O. M., *f.* 63, 217
 R. C., 244
 R. C. J., 141-2
 R. O., 142, 144
 W., 215
 W. H., 316
 W. W., 234
 Browne, J. D., 110, 112, 129, 241, 245
 Bruce, R. R., 188, 189, 190, 191, 192, 275, 281, 286
 Brunet, E. C., 31
 Bryan, A. J. A., 131, 132
 Bryon, *f.* H., 244
 Buchan, A., 24
 Buchanan, G. R., 61
 Buckham, R. A., 104, 105, 109, *f.* 126, 231, 232, 247 *f.n.*, 249
 Buckles, R. J., 115
 Buckley, J. M., 90
 Buckham, R., 201
 Budd, R. E., *f.* 70, 217
 Bugg, T. A., 264
 Bullivant, G. E., 214
 Bulow, K. G., 201

- Bundy, E. W., 31
 Burgess, F. A., 215
 Burke, C. G., 69
 Burnett, M. R., 198
 Burns, N. A., 253-4
 R. J., 218
 W. C., 34, 199
 Burnside, D. H., 26, *f.* 221
 Burrell, A., 90
 Burroughs, G. W., 142, 144, 145, *f.* 158, 243
 Burtch, T. R., *f.* 319, 332-3, 339, 340, 341
 Burton, G. D., 93
 P., 197
 R. E., 211
 Butchart, C. E., 243, 244
 Butkewitz, L. J., 211
 Butler, A. L., 207
 Butler, C. T., *f.* 303, 315
 S. C., *f.* 303, 315
 S. W., 299, 300
 Byford, A. J., 68, *f.* 70
 Bzowy, M. A., 200
- CABLE, A. B., 71
 Cadman, J. F., 160
 Caine, J. T., 158, 159-60, 161, 163, 164-5, 166, 168, *f.* 174
 Calderwood, W., 213
 Callander, A. D., 316
 Calvert, H. M., 301
 Cameron, B., 52
 G. E., 215
 L. M., 114, 115, 119, 120, 126, *f.* 127, 127, 134, 229, 241, 242, 246, 253
 Campbell, A. P., 52
 B., 293-5
 G., *f.* 302, 308-12
 J. L., 253
 O. G., 314
 R., 201
 R. O., *f.* 71
 S. E., 5 8
 W. G., 314
 Candling, A. E., 215
 Canter, W. L., 84
 Cardwell, M., 277
 Cardy, W. H., 27, *f.* 220
 Carlin, J., 323, 324
 Carlson, A. T., 140, 141, 145, *f.* 158
 Carr, D. W. J., 168
 Carson, D. A., 211
 Carter, F., 67
 G. H. F., 347-8
 Carter R. G., 213
 Carter-Edwards, E., 198
 Cartwright, L. W., 201
 Caslake, J., 301
 Cassidy, L. F., 215
 Castellan, P., 276
 Caterham, A. R., 293
 Chadburn, L. V., 101, 102, 105, 106, 107, 110, 111, 114, 116, 124, *f.* 126, 226, 227, 231, 232
 Chadwick, N., 333, 341
 Chamberlain, H., 213
 Chapman, C. G. W., *f.* 287, 297, 305-7
 G. A., 203
 S. C., 139
 Charest, J. M. A., 61
 Charman, K. K., 259, 272
 Charron, P. M., 229
 Chase, W. M., 90
 Chesters, F. H., 243
 Chopin, J. A., *f.* 127
 Chowen, W. R., 234, 246
 Christie, J. S., 152, 153, 279
 Christison, W. R., 325, 329
 Chunick, W. W., 202
 Clark, F. J., 130
 J. L., 164
 P., 165, 169, 190, 275, 280, 281
 Clarke, E. A., 215
 J. D., 56
 J. P., 190, 276
 W. L. J., 52
 Clay, F. J., 215
 Cleary, A. C., 202
 Clement, J., 195
 Clenard, A. B., 232
 Clerc, J. R. O., 99
 Cleveland, H. D., 161-2, 165, 166, 168-9, *f.* 270
 Clibbery, A. R., *f.* 62, 65
 Clothier, R. A., 213
 Cochrane, F. L., 190, 191, 192
 Coe, G. E., 91
 Coffey, S. D., 215
 Coffyn, W. V., *f.* 303
 Cohen, C. B., 134
 Colborne, L. M., 283, 284
 Coldrey, G. E., 194
 Cole, C. W., 35
 F. S., 61
 K. A., 73
 S. R., 308-12
 Coleman, H. R., *f.* 71
 Coles, A. C., 108, 114

- Collins, F. K., 284
 O. R., *f.* 63, 93, 196, 203
 Colville, J. S., 267
 Compton, O. F., 218
 Congreve, H. G., 90
 Connell, J. M., 168
 Connolly, J. J., 30
 Conrad, W. A. G., 115, 235, *f.*239, 240
 Cook, J., 215
 N. E., 57
 W. F., 104, 107, 232
 Cooke, F. T., 259
 T. C., *f.* 287, 299
 Cooper, J. H., 211
 Copeland, D. J., 90
 J. C., 248
 Corbally, J., *f.* 63
 Corbeil, L. J., 213
 Corbett, S. A., 174, *f.* 175
 V. B., 121
 Corbiell, J. C., 41
 Corran, S., 218
 Corriveau, J. T., 59
 Costello, G. A., 241, 253
 J. G., 152, 276
 Cotterill, S. H. R., *f.* 174, 188, 189, 190,
 192, 275
 Cotton, D. N., 207
 Coulombe, J. A. R., *f.* 31, 38
 Court, G. L., 194, 195
 Cowan, E. W., 335
 H., 193
 S., 301
 Cox, J. S., 243
 Craig, J., 313
 Crawford, D., 201
 H. A., 261
 Crawley, E. G., 342
 Crimmins, J. A., 130
 Cromarty, R. F., *f.* 287, 307
 Cronyn, P. H., 218
 Cross, C. D., 126
 Croswell, A. C., 67
 Croteau, J. A., 84
 Croucher, G., 215
 Crumbley, W. M., 195
 Cuddon, H. R. D. S., 334
 Cull, R. H., 229, 261
 Cummings, W. E., 119, 126
 Cummins, J. S., 319-20
 Cunliffe, H. N., 70
 Cunningham, C. C., 298-9, *f.*303
 Currie, R. M., 284
 Cuthbertson, D. R., 261
 Cybulski, M. A., 147, *f.* 159
 DADSON, T. A., 228
 Dallyn, J. B., 91
 Daly, J. R., 174, 175, 180
 Daly, R. V. J., *f.* 70
 Daniels, R. D., 90
 D'Arcy, G., 206
 Darlow, A. E., 90
 Davenport, R. M., 118, *f.* 127, 247, 261
 Davey, H. G., 218
 Davidson, J. C., 140-1
 J. F., 132
 R. T. P., 122, 123, 125, 126, 135-6, *f.*
 255
 Davies, F. C., 92
 Davis, J. T. J., *f.* 319, 332, 340
 R., 86
 Davoud, P. Y., 155, 160, 254
 Dawkins, J. M., 334
 Dawson, R., 66
 Day, F., 161, 165, 166, 168-9
 Daymond, G. H., *f.* 31
 De Courcy, T., 115
 De Dauw, A. F., 52, *f.* 62, 77
 Deegan, R. C., 40
 De la Haye, A. L., 318
 De le Paulle, J. A. H., *f.* 286, 291-2
 De Larminat, B. N. M., 175, 180
 De Long, (Sgt.), 254
 Dempsey, J. H., 73
 Dempster, C. J., 218
 De Niverville, J. A. H. G., 108, 193
 Dennis, P. W., 35, *f.* 62, 97
 W., 203
 Denomy, B. C., *f.* 302, 308-12
 Depew, D. G., 218
 Devine, F. J., 214-15
 W. D. M., 323
 Dewar, J. F., 264
 Dexter, W. A., 279
 Dezorzi, S. J., 213
 Dickinson, A. J., 218
 Dilley, K., 98
 Dingwall, J., 215
 Dinsdale, W. G., 151, *f.* 270, 276, 283
 Dixon, J. A. C., 321
 Docherty, J., 206
 Dodd, W. G., 107, 108, 192
 Dohaney, V. C., 142, 259
 Doherty, L. A., *f.* 158
 Dohm, D. F., 314
 Doidge, R. W., 230
 Donaldson, K. J., 203

- Donnan, M., 198
 Donnelly, T. H., *f.* 30, 52
 Donoghue, J. E., 190, 283
 Donovan, J. H., 140-1
 R. W., 278
 Doran, A., 98, 199
 Doubassoff, T., *f.* 30
 Douglas, D. C., 293
 H. J., 213
 Dover, D. H., 241, 253, 254, 260, 266
 Dow, H. R., *f.* 78, 94, 213, 215
 Dowbiggin, T. W., 129
 Dowding, H. J., 103, 104, 237, *f.* 238, 250,
 253, 265, 266
 Doyle, G. L., 174, 178
 J. J., 176, 177
 Dreger, F. R., 305
 Drimmie, G. R., 64
 Drope, W. J., 229
 Druett, E. J., 203
 Dryden, J. R., 340-1
 R. P., 211
 Dube, J. P., 33
 Dubeau, E. D., 201
 Dubois, P. A., 40
 Ducharme, A. J., 215
 Duffin, E. P., 201
 Dunlap, C. R., 45, *f.* 221
 Dunlop, G., 98
 Dunn, J. E., 151, 276, 283
 L. A., 115
 R. W., 261
 Dunne, J. B., 52
 Durmin, A. H., 215
 Dwyer, D. F., 156
 E. S., 204
 Dyer, E. G., 301
 Dymond, C., 201
 Dwornik, P., 322

 EADIE, C. M., 340
 Eames, J., 284
 Eastman, D. E., 173, 174, 175
 Easton, J. F., *f.* 79, 197
 Eckert, A. J., 157-8, 159, 165, 167-8, *f.* 271
 Edinger, C. E., 277, 279
 Edington, G. P., 267
 Edwards, G. T., 277
 H., 8, 9
 T. H., 301
 W. S., 73
 Egli, H. D., 213-14
 Einarsson, S., 61
 Elliott, A. R., 316

 Elliot D. J., 56
 K. E., 211
 Ellis, H. S., 189
 R. A., *f.* 158, 243, 271
 R. O., 195
 Ellwood, G. B., *f.* 30, 224
 Elms, G. H., 147, *f.* 270
 Elvin, R. C., 77
 Ely, T., 201
 Emerson, A. J., 70
 H. L., 346
 Emmerson, L. A., 190, 284
 Engbrecht, P., 92, 199, 218, *f.* 220, 223
 England, V., 67
 Enns, J. A., 337, 339, 342
 Errington, J. B., 33
 Esam, R. T., 189, 191, 192
 Evans, C. J., *f.* 174, 187, 188, 189, 190,
 192, 280, 281
 D. H., 253
 F. B., *f.* 127
 G. R., 56
 K. E., 64
 L. E., 170, 191
 V. W., 283
 W. L., 320
 Everard, H. J., 174, *f.* 175, 175, 176
 Everett, C. B., 177, 178
 Ewing, D. W., 338, 342
 Eyolfson, K. M., *f.* 270, 276, 277, 279

 FACEY, H. C., 203
 Fair, A. R., 323
 Fairfield, C. E., 267
 Faithfull, S. T., 325
 Farb, H. R., 61, *f.* 205
 Farnum, C. A., 30
 Farquharson, G. H., 239
 Farr, T. W., 198
 Farrell, D. W., 313, 314-15, 316
 Faulkner, W., 77
 Fauquier, J. E., 11, *f.* 15, 26, 66, 81, 183
 Fearn, F., 215
 Fellows, F. G., *f.* 286, 300-1
 Fernyhough, W., 207
 Ferris, W. D. S., 33
 Fiauder, J. W., 105-6
 Ficek, P. P., 299
 Findlay, L. L. E., 342
 R. G., 27
 Fink, W. W., 344
 Finlayson, C. G., 160, 161, 162, 163, 168-
 9, *f.* 174
 Finley, H. R., 112, 116, 118, 131

- Fiset, K. J., 254, *f.* 255
 Fisher, W. C., 30
 Fitton, N. F., 201
 Fitzgerald, R. E. J., 213
 Fleming, J. W., 128, 234
 M. H., 99
 M. M., 28, *f.* 79
 Florence, H. P., *f.* 303, 315
 J. P., 92
 Folsom, C., 340
 Foord, A. V., 337, 338, 340
 Forbes-Roberts, R. D., 132, 249-50
 Ford, C. G., 83
 C. W., 198
 H. C., 164
 Forman, J. M., 21, 22
 Forrest, H. L., 293
 Forsyth, A., 202
 D. M., 189, 191, 192
 Foster, D. F., 198
 F. H., 316
 L., 118
 Fowlow, N. R., 102, 109, 125, 126, 135,
 f. 143
 Fox, C. W., *f.* 142, 266
 E. S. P., 147, 151
 Frame, J. H., 92
 Franklin, A. E., 155, 163
 Fraser, A. J., 249
 N. C., 68, *f.* 70
 Frauts, D. J., 213
 Frederick, R. G., 168
 Freer, R. H., 291
 French, A. B., 322, 328
 D. T., *f.* 78, 94
 Frizzle, J. R., 291, 293
 Fryer, A., 340
 Fullerton, J., 284-5
 R. L., 276
 Fulton, J. D. L., 201
 Fumerton, R. C., 148, 152, 153-4, *f.* 159,
 277, 281, 282
 Furneaux, R. U., 203
 Fyfe, A. B., 73

 GADZOS, W., 333, 340
 Galbraith, V. E., 73
 Gallagher, B. E., 284-5
 Gallaher, F. W., 299-300
 Gamey, T. C., 129
 Ganderton, V. F., *f.* 79
 Gardiner, R. A., 35
 Garland, M. L., 266
 Gates, R. C., 341

 Gatward, A. K., 318, *f.* 318, 320, 321, 322,
 323, 324, 325-6, 328, 329
 Gauthier, B. A., 316
 J. J. A. R., 337
 Gavin, T. D., 52
 Geddes, E. J., 259, 272
 Gelmon, A., 345
 Georges, W., 277
 Gerard, S. W., 206
 Getty, R. C., 232-3
 Gibb, P. A., *f.* 335
 Gibbons, N. J., 155, 158, 159, 163, *f.* 174
 Gilbert, W. A., 239
 Gilbertson, F. S., 271
 Gilbey, J. F., 64
 Gilchrist, I. C., 85
 Gill, G. H., 99
 J. T., 90
 R. F., 272
 W. D., 314
 Gillanders, C., *f.* 170, 199, 218, 223
 Gillmor, K. G., 272
 Gilmour, B. T., 262
 Gimbel, E. L., 115, *f.* 142
 Girard, J., *f.* 303
 Girouard, J. E. G., 313
 Girvan, I. S., 277
 Gislason, M. A., 305
 Givens, D. J., 115
 Glasgow, A. D., 321
 Glass, H., 78, 220
 Glendenning, A., 199
 Godefroy, H. C., 104, 105, 106, 109, 110,
 115, 124, *f.* 126
 Godfrey, J. M., 243
 Godwin, J. E., 313
 Goldberg, D., 120, *f.* 143
 Goldspink, W. E., 26
 Gonin, P., *f.* 303
 Gonyou, G. L., 98
 Goodenough, R. S., *f.* 31
 Goodwin, D. W., 229, 239, 265
 E. A., 215
 Gordon, M. J., 234, 245
 R. A., 341
 Goring, F. C., 259, 272
 Gork, E. G., 345
 Gorrie, C. G., 296
 Gould, J. B., 249
 Goundrey, T. A., 91
 Gowans, J. R., 344
 Grandin, S. J., 344-5
 Grant, C., 334-5
 Grant, D. D. S., 149

- Grant D. M., 140, *f.* 158
 F. E., 100, 102
 F. G., 122, 123, 125, 227, 228, 232,
 236, 240, 254, *f.* 255
 P. J., 300, 312
 V. M., 278
 W. A., 26
- Gratton, G., *f.* 303
- Gray, J. G., 199
 J. M., 59
 L. S., 66
 R., *f.* 174, 188, 191
- Grayston, V. S., 335
- Green, C. F., 147
 F. E., 109, 132, 133, 252
 R. L., 152, 277, 278
 W. P., 152
- Greene, R. B., 245
- Gregory, L. W., 277
- Grierson, Q. T. R., 215
- Grigg, R. J., 229
- Grimley, K. R., 346
- Grimsey, M. F. C., 213
- Grimstone, A. L., 152
- Guillot, L. N., 134
- Guina, B., 203
- Guiver, R., 301
- Gurnett, R. J., 156, 161
- Guthrie, J. T., 215
- Guttormson, J. K., 304-5
- Guyott, F. F., 325
- HAAR, F. R., 293
- Habiluk, M., 203
- Hache, D., 218
- Hagen, F. *f.* 31
- Hagen, F. D., 203
- Haggins, A. V. H., 24
- Halcrow, A. F., 120, 238, 250, 251, *f.* 254,
 267
- Hale, H., 174, 175
- Haley, W. S., 211
- Hall, C. J., 316
 D. B., 220
 J. C., 214-15
 J. L. N., 150, 152, 153
 L. A., 176
- Hallatt, H. E., 321
- Hamber, E. C., 65, *f.* 78, 88, 94
- Hamilton, A., 91
 F. F., 79
 H. K., 113, 118, 130-1
- Hammond, A. K., 200
- Hands, J., 342
- Hann, G. A., 333, 334, 340
- Hanson, J. R., 91
- Hanton, F. E. W., 141, *f.* 158
- Harkness, D. G., 198
- Harling, D. W., 262
- Harman, B. L., 342
- Harper, T. C., 304-S
 W. J., 165, 167, 168
- Harries, T. I., 315
- Harrington, A. A., 152, *f.* 270, 277
- Harris, C. E., 94
- Harrison, F. A., 223
 J. L., 305
 N. L., 249
 R., 202
- Harrod, R. U., 220
- Hart, J. P., 178
- Harvey, G. R., 215
 J. D., 58
 W. S., 193
- Harvie, J. J., 190, 191, 280
- Hastie, W. A., 191, 286
- Hatch, J. A., *f.* 270, 284
- Hathway, E. J., 328
- Hatton, R. F., 284
- Haug, D. J., 313
- Hauzenberger, A. A., 215
- Haver, H. M., 251
- Haw, V. A., 105
- Hawkes, E. S., 23, *f.* 30
- Hawley, M., 202
- Hay, H. B., *f.* 335, 349
 W. B., *f.* 175, 176, 178, 179
- Hayes, J. D., 195
 R. C., 313-14
- Hayward, R. K., 118, 120, 127, *f.* 143, 239
- Headley, C. S., 153
- Heavner, J. W., 322, 328
- Hedley, W. H., 31
- Hembry, J., 207
- Hendershot, F. D., 169, 189
- Henderson, A. L., *f.* 255
 D. L. S., 316
 M., 91
 R. B., 229
- Henke, R. F., 190, 284
- Henry, R. W., 134
- Henson, G. N., 340-1
- Heron, P. W., *f.* 303, 313-14
- Hewitt, R., 201
- Hicks, C. W., *f.* 255, 256, 263
 G. H., 177
 J. S., 107
- Higgins, E. E., 299, 300

- Hildebrand, A., 298
 Hill, E. S., 299
 G. U., 123, 128-9, *f.* 142
 J. S., 191
 W. J., 245
 Hillman, J. G., 70
 Hillock, F. W., 122, 228, 230, 254, *f.* 255
 Hillyer, A. W., 152, 277, 278
 Hiltz G. A. 152, 279, 283, 284
 Hingston F. W., 42
 Hinscliffe, A., 89
 Hoare, T. H., 262
 Hockey, J., 59
 Hoddinett, A. D., 316
 Hodgins, R. A., 231
 Hodgson, J., 115, 130, 132, 134, *f.* 142
 Hodson, A. H., *f.* 318, 326-7
 K. L. B., 100, 126
 Hofforth, B. M., 215
 Holden, J. H., 278
 R. G., 215
 Holland, C. L., 299-300
 Holmes, G. V., 64
 Holness, R. E., 262
 Hooper, W., 191, 285
 Hooson, T. E., 299
 Hoppus, W. H., 64
 Hornby, J. O., 313-14
 Hornell, D. E., 290, *f.* 302, 307-12
 Horrell, A. J., 262
 Horricks, G. E., 173, 174, *f.* 175, 175
 Horton, A. L., 90
 Hough, T., 178
 Houle, A. U., 172, 173, 174, *f.* 175, 175
 Houston, J. T., 68, *f.* 220
 Howe, E. F., 64
 Howell, J., 200
 J. E., 168, 191, 280
 Huband, D. L., 63
 Hucker, J. A., 30
 Hughes, A. F. G., 335
 B., 199
 P. M., 91
 Huish, C. K., 342
 Huletsky, P., 158, 159, 160-1, 164-5, 166,
 167, 169, 170, *f.* 174, 275
 Humblestone, S., *f.* 174, 187, 188, 189,
 190, 192, 280, 281
 Hume, W. G. M., 135
 Humprey, N. R., 62
 Hunt, P. F., 212
 Hunter, B. F., 299
 Huppert, S. B., 152, 153, 279
 Hurley, J. L., *f.* 15
 Husband, D. F., 229, 261
 Hutchinson, R. T., 140-1, 145, *f.* 158, 243,
 244, 271
 Hvard, J. P. J. G., 313
 Hyndman, R. S., *f.* 238
 Hyslop, H. I., 314
 IMRIE, B., 218
 J. A. K., 215
 Ingalls, B. J., *f.* 175, 176, 179
 R. B., *f.* 335, 348
 Iverson, W. J. M., 272
 JACKSON, A., 90
 H. C., 295
 Jackson, T. A., 220
 Jacobs, D. S., 33, *f.* 78, 91, 94 W. H., 111
 Jacques, J., 213
 James, D. E., 76
 J. F., 192
 Jamieson, D. R. C., *f.* 239, 245, 247, 250,
 251
 D. S., 206
 Janney, W. H., 223
 Jankun, J., *f.* 31
 Jarvie, R. B., 64
 Jasper, C. M., 163, 165, 168, 188, 189, 90,
 f. 271, 275
 Jeffrey, J. S., 246
 Jennings, P. S., 174
 Jephson, R. S., 188, 275, 280
 Jessiman, W. H., 140
 Job, B., 189, 190
 Jobe, J. G., 341
 Joel, W. V., 92
 Johansen (Lt. in R.N.A.F.), 310
 Johns, R. A., 257
 Johnson, E. A., 299
 G., *f.* 254
 G. W., 229, 239, 248, 251, 261
 H. G., 173, 175
 J. E., 100, 102, 103-4, 106, 123, 124,
 f. 126, 127, 128, 129, 227, 228,
 229, 230, 231, 232, 234, 235, 239,
 241, 246, 247 *f.n.*, 249, 250, 261,
 262, 265, 266, 267, 269, 270
 J. R. F., 155, 158, 159-60, 163
 K. E., *f.* 71
 O. O., 31
 P. G., 130, 235, 240, 241, 253
 W. S., 296
 Johnston, D. D., 156
 M., *f.* 143
 N., 194-5
 W. P., 316

- Johnstone, A., 241
 Jones, G. T., 150
 H. E., 157-8, 165, 167-8, *f.* 271
 H. K., 244
 K. W., 213
 L. W., 66
 N. H., *f.* 63
 R. G., 277
 Jose, N., 283
 Jowsey, M. E., *f.* 143
 Joyce, A. W. T., 333, 340
 Judd, M. T., 135, 227, 230, 236, 240, 254, 262
 Justason, B. R., 213

 KALEN, J., *f.* 255
 Kalle, R. A., 93
 Kallio, O. C., *f.* 175, 179, 180
 Kavanaugh, J. G. S., 35
 Kazakoff, M., 154, *f.* 159, 278
 Kearl, E. E., 58
 Kearney, L. J., 154, 276
 Kearns, R. G., 214
 Keefe, E. J., *f.* 318, 320, 321, 323
 Keefer, G. C., 100, 103, 113, 124, 125, *f.* 126, 129, 130, 227, 228, 229, 230, 232, 235, 237, 247, 249
 Keele, W. R., 315
 Keenan, L. I. J., 195
 Keillor, H. G., *f.* 319, 338, 340, 342
 Kelley, D. A., 195
 Kelly, E. D., 134
 T. R., 211
 Kelso, R., 201
 S. R., 42
 Keltie, I. G. S., *f.* 143
 Kembry, S. V., 345
 Kemley, J. S. K., 213
 Kemper, F. A., 316
 Kennedy, H. J., 207
 I. F., 238-9, 246, 253
 R. S., 206
 W. W., 141, 142
 Kenmuir, R. C., 313
 Kent, E. C. N., 316
 F. A., 323
 R. W., 216
 W. H., 82
 Kerr, J. B., 165, 169, 190, 275, 280, 281
 Kerrigan, H. F., *f.* 335, 349
 Ketcher, G. R., *f.* 30
 Keys, J. G., 92, 198, 218
 Kimball, D. H., 246, 248, 252
 Kimber, G. S., 180

 King, A. J., 207
 C. W., 77
 G. W., 304-5
 W. D., 190, 280
 Kingston, P. A., 203
 Kipp, R. A., 158, 159, 160-1, 164-5, 166, 167, 170, *f.* 174, 275
 Kirby, H. A., 212
 Kirk, E. E., *f.* 31, 93, 196, 200, 203
 Kirkpatrick, C. J., 152, 153, *f.* 159, 278, 281-2
 Kirkwood, W. G., 277, 282
 Klersy, W. T., 119, 229, 238, 246
 Kneen, E. W., 197
 Knupp, G. N., 90
 Koch, T., 113
 Koester, G. D. S., *f.* 335, 348-9
 Krahn, G. C., 337, 340-1
 Kramer, H. W., 253
 Kvam, S. I., 153, *f.* 159
 Kyle, C., 201

 LABEAGE, J. R. A., 61
 Labram, G., 156
 Lacerte, R. J., 43
 Lachille, V. J., 84
 Lacombe, J. M., 340-1
 Ladbrook, H. H., 147, *f.* 159
 Ladd, F. L., 340-1
 Lafave, E. J., 218
 Laffin, M., 203
 Laidlaw, A. H., 316
 Lailey, P. C., 283
 Laine, S. R. W., 58, 64
 Laird, G. J., 27, *f.* 63, 78
 Lake, R. G., 245
 Lambert, J. F., 114, 115
 Lambros, T. H., *f.* 158, 270
 Lancaster, W. J., 293
 Landry, J. G. M., 202
 Lane, E. A., 64
 R. J., 66, *f.* 78
 Lang, F. H., 201
 Lapierre, G. J. B. J., *f.* 71, 199-200
 Lapp, E. G., 245, *f.* 254, 261
 Larson, R. H., 33
 Lastuk, W., 206
 Latimer, G. B., 215
 Laubman, D. C., 120, *f.* 239, 245, 247, 261
 Laurie, DA. A., 340-1
 Lavoie, M. J. P., 206
 Lawless, J. F., 278
 Lawrence, F. W., *f.* 302, 305
 W. C., 304-5

- Lawrence W. J., 35
 Leach, R. A., 334, 339, 341, 342
 Learn, R., 201
 Leatherdale, H. C., 306
 Lebel, G. Y., *f.* 31
 Leckie, R., 8
 Le Claire, J. G., 78
 Lecomte, L. H., *f.* 78, 94
 Lecoq, J. P., 112
 Lee, J. C., 261
 P. S., 284
 Leech, C. W., 298
 Lefroy, H. K., 35
 Leggat, C. S., 190, 191, 192
 Legge, P., 201
 Leslie, D. J., S2
 Levi, J. A., 258
 Lewis, H. D., 215
 Likeness, E. C., 112, *f.* 127, 130-1
 Lindsay, J. D., 130, 131, 132, 240, 245,
 f. 254, 261
 Linnell, L., 59, *f.* 70
 Linton, K. R., 107, 109, 110, 115, 124
 O. M., 251, *f.* 254
 Lisson, H. S., 155, 163
 Little, R. H., 173-4.
 Livingstone, K. G., 276
 Locke, J. E. R., 180
 R. G., 293
 Logan, P., 132, 234
 P. N., 206
 Long, S. H., 26
 Lord, F. G., 75
 Loriaux, H., 191
 Lorimer, G. A., 90
 Love, M. C., 102
 Lovelock, J. H., 31
 Lowndes, J. A., *f.* 158, 259, 272
 Lowther, J. C., 26
 Luckett, K. F., 98
 Luke, R. E., *f.* 31
 Luma, J. F., 157, 159, 160, 162, 163, *f.* 174
 Lumsden, J. P., 267
 Lundberg, S. T., 132
 Lynes, A. H. C., 153-4
 Lyng, D. T., 64

 MABON, A., 149
 MacBride, R. E., *f.* 303
 MacBrien, W. R., 100, 225, 232, 238,
 f. 239, 240, 249, 250, 262, 265, 266,
 267, 269, 270
 MacDonald, D., 283, 284
 D. C. S., 157, 160, 162, *f.* 174
 MacDonald D. G., 304-5
 D. J., 190, 280
 H. D., 109, 114
 J. K. L., 94, 213
 L. G., *f.* 31
 R. N., *f.* 255
 R. W., 192, 285
 MacEwen, G. F., 153
 MacFadyen, D. A., 158, 161, 163, 167,
 187, 190, 192, *f.* 271, 275
 MacFarlane, D. W., 192
 MacInnes, D., 206
 MacIntosh, A. M., 286
 MacKay, W., 207
 MacKelvie, J. A., 244
 MacKenzie, A. R., 110, 115, 132, 238, 245
 B. M., 248
 D., 279
 J. L. W., 341
 K., 278
 Mackie, P. O., 333-4
 MacKinnon, L. L., 224
 MacLennan, I. R., 229
 MacLeod, J. T., 180
 M. H., *f.* 63
 MacMillan, R. A., 234
 MacNaughton, W. N., 189
 MacPhail, A. S., 190, 280
 W. H., 149
 Maday, J., 280
 Magee, K. L., 176
 Magwood, C. M., 109, 111, 114, *f.* 239
 Mahagan, W. J., *f.* 255
 Main, J. R., 219
 Mair, A. C., 33, *f.* 221
 Maitland, W. J., 40
 Mallalieu, O., 323
 Mallory, G. E., 34, 199
 Maloney, G. H., 259
 Mangione, J., *f.* 30, 197-8
 Mann, L. A., 198
 W. F., 197
 Manser, J. R., 259, 271
 March, I. A., *f.* 270, 276, 277, 279
 Marchant, W. S., 195
 Marchildon, P. E., *f.* 30, 99
 Markis, K. G., 90
 Marquet, M., *f.* 30, 205
 Marriott, J. T., 234
 Marsden, A. F., 215
 Marshall, N., 229
 Martens, A. T., 58
 Martin, A. N., 44, 66
 J. H., 203

- Martin O. A. J., 163, 165, 168, 188, 189,
 190, *f.* 271, 275
 R. M., 213
 W. Y., 295
 Mason, E. B., 21
 W. F., 133
 Mathers, J. W., 312
 Matheson, C. N., 277, 280
 D. R., 114
 S. E., *f.* 302, 308-12
 Matkin, D. G., 340
 Maxwell, R. B., 219-20
 May, F. H., 313
 L. F., 140-1, 141-2, *f.* 158, 258, 259
 S. N., 188, 190, 191, 192, 280
 Maybee, N. W., 115
 Mayo, W. J., 24
 Mayson, G. L., 235
 McAllister, H. P., 203
 McBride, R. E., 304-5, 312
 McCaffrey, J. H. A., 215
 McCaig, L. N., 23
 McCart, J., 213
 McCarthy, J. P., 44, *f.* 221
 McCartney, P., 325
 McClarty, S. M., 237
 McCluskie, A., 82
 McConnell, D. J., 154
 McCrea, L. A., 195
 McCullough, R., 86
 McDonald, A. J., 245
 J. G., 313-14
 M. J., 199
 McDougal, C. F., 215
 McDougall, T. R., *f.* 78, 91
 McDuff, D. M., 253, 267-8
 McElroy, J. F., 232, 235, 239, 252
 McEvoy, D. R., *f.* 31, 196, 200, 203
 McEwan, C. M., 11, *f.* 15
 R., 207
 McFadden, A. R., 133
 McFarland, E., 333-4
 McFarlane, J. D., 115, 125
 McGill, E. R., 169, 189
 M. D., 199
 McGrath, W. K., *f.* 318, 319-20, 328
 McGregor, A. H., 82
 G. R., 249, 250, 262, 264, 265, 266,
 267, 270
 McIntosh, D., 88
 D. N., 188, 191, 192, *f.* 271, 285, 286
 J. A., 52, *f.* 62, *f.* 63, 77
 McIntyre, W. J., 203
 McKay, W. A., 88, 94
 McKenna, E. H., *f.* 174, 188, 189, 190,
 192, 275
 G. A., *f.* 78, 88
 McKenzie, D. J. G., 341
 M. M., *f.* 30, 205
 McKinney, A. S., 345
 McLachlan, P. A., 124
 McLaren, A. D., 167, 190, 191
 R. W., 180
 McLeish, W. A. G., 94, *f.* 221
 McLeod, A., 153
 C. A., 200
 D. C., 258
 H. W., 123, 127, 128, 129, 231, 232,
 235, 239, 250-1, *f.* 254, 261, 266
 J. R., 201
 McLernon, R. A., *f.* 78, 88, 94
 McMacken, G. R., 299
 McMurdy, G. A., 28
 McNabb, H. D., *f.* 71, 152, 153, 170, 278
 McNair, R. W., 100, 102, 103, 106-7, 108,
 114, 120-1, 123, 124, *f.* 126
 McNary, J. C., 89
 McNaughton, D. A., 212
 McNeil-Watson, D. B., 332, 340, 341
 McNutty, G. P., 304-5
 McQuaig, L. N., *f.* 30
 McQueen, W. M., 203
 McRae, J. M., *f.* 287, 307
 M. J., 271
 W. R., 248, 251
 McRoberts, R. C., *f.* 238, 241, 247
 McRobie, I. M., 200
 McVeigh, H. G., 208
 McVicar, H. C., 202
 Meadows, G. W., *f.* 335, 348
 Meakin, W. H., 282
 Meek, R. J., 348
 Melcombe, D. E., 195
 Menaul, A., 293
 Mennie, O. H., 334, 339, 341, 342
 Mercer, G. F., 261
 M. C. G., 82
 Merritt, A. R., 313
 Mesney, D., 293-5
 Metcalfe, W., 203
 Methal, R. K., 42
 Middleton, B. E., 268
 Mill, J. B., 65
 Miller, G. D., 164, 165-6
 G. N., 164, 165.6
 H. E., 191, 28S
 K. S., *f.* 318, 319
 L. G. R., 52

- Miller S. C., 315
 Mills, S. A., 114, 131
 Millward, J. B., *f.* 78, 224
 Milne, R. H., 268
 Milot, J. N. G., 313
 Mitchell, E. M., 215
 R. H., 215
 Mitchner, J. D., 102, 105, 107, 111, *f.* 143
 Moen, R. O., 264
 Moffatt, J. W., *f.* 63, 99
 Moncrieff, E. H., 139, 145, 272
 Montgomery, R. J., 89
 Moorby, A. R., 204
 Moore, G. E., 207
 K. O., *f.* 335, 349
 L. A., 102, 108, 129, 245
 R. B., 142, 243
 Moores, G. W., 274
 Moran, C. C., 155-6
 Morgan, A., 201
 H., 207
 J. A. W., 99
 L. E., 91
 Morham, K. L., 141, 142-3, *f.* 158
 Morrisey, J., J., 113, 115
 Morrison, A. E., 251
 Morrow, H. E., 174, 177
 R. E. E., 121
 Morton, W. F., 299-300
 Massing, B. B., 142, 243
 Mott, G. E., 241, 246, 248, 252, 264
 Mowbray, R. E., 207
 Mudford, V., 90
 Muir, N. C., 218
 Murchison, J. T., 113
 Murdoch, T. M., 213
 Murphy, H. F., 200
 L. E. J., *f.* 71, 217
 Murray, D., 200, 220
 G. B., 126, 229, 238, *f.* 239
 J. F. G., 218
 R. W., 130
 M. W., *f.* 143
 Murrell, W. H., 214
 Muschett, W. G., 153
 Musser, J. V., 207
 Mutch, R., 33
 Myers, C. D., 314
 W. J., 115, *f.* 142, 248-9

 NADEN, A. H., 282
 Nadon, G. R., 23S
 Naylor, H. K., 188, 281
 Neal, E. L., 100, 103, 113, 114

 Needham, L. T., 293-5
 Needham, W. B., 120, 248
 Neil, J. W., 246, 261, 262
 Nelmes, J. M., 22
 Nesbitt, A. D., 129
 R. H., 302
 Nespor, J. E., 299-300
 Nethery, L. A., 90
 Newton, W. F. M., *f.* 62, *f.* 78, 94, 224
 Newton, E., 218
 Nibbett, H., 301
 Nickerson, R. O., 66
 R. W., 132
 Nixon, H. J., 231, 253
 J. D. R., 207
 Nolan, T. F., 56
 Noonan, D. E., 102, 111, 239, 249, 252
 Nordin, C., 201
 Norsworthy, H. H., 122, 135, 137, 228,
 230, *f.* 255, 255, 256
 Northcott, G. W., 101, 102, 107, 108, 110,
 111, *f.* 126, 134, 226
 Nowlan, J., 98
 Nurse, R. S., 70

 OAKEBY, H. E., 211
 Osborne, A. E., 314
 O'Brian, J. A., 173, 176, 177-8
 Ochsner, R. D., 34, 199
 Ockenden, G. F., 229, 262
 O'Dell, J. G., 35
 O'Donnell, E. M., 313
 O'Gorman, G., 97
 Oliver, R., 301
 Olmsted, W. A., 250
 Olsson, A. L., 30
 Olsvik, D. O., 69
 O'Neil, G. M., 61
 J. H., 194
 Ormerod, A., 299, 300
 Ormston, I. C., 109, 115
 Orr, J. D., 131, *f.* 142, 235, 242, 262
 R. W., 118, 129-30, 134
 Osteen, F. T., *f.* 303, 315
 O'Sullivan, J. B., 253-4
 Ovenden, G. A., 201
 Owen, L. S., 90, 93, 196, 200.

 PACKARD, H. F., 107
 Palmer, C. W., *f.* 78, *f.* 79
 Palmer, F. H., 59
 W. H., 132
 Park, E. E., 90
 Parker, E. A., 213
 D. R., 313

- Parker H. L., 339
 Parnell, T. H., 331-2
 Parsons, G., 201
 Partridge, G. J., 33
 Paterson, F. J., 338-9
 J. N., 232
 Patrick, K., 201
 Patterson, C. E. G., 91
 G. R., 132, 239, 250
 Pattinson, H. L., 19
 Pattison, J. D., 94
 Paul, J., *f.* 71
 Peacock, J. W., *f.* 159, 276, 280, 284
 Pearce, E., 321
 H. F., 149, 190, 274, 280
 Pearcey, W. G., 203
 Pearson, R. C., 201
 Peck, G. R. H., 97-8
 Pederson, J. M. K., 33
 Penney, D. B., 214
 Penrose, R. C., 218
 Pentland, R. T., 115
 W. H., 122, 135, 137, 227, 230, *f.* 255,
 257, 264
 Perry, R. A., 331, 341
 Peter, A. D., 315
 Peters, H. P., 142
 Peterson, R. F., 64
 Petsche, J., 201
 Pett, S. O., 82
 Pettigrew, R. W., 218
 Pettit, M., 214
 Phillips, J., 189
 W. S., 220
 Philliskirk, G. W., 198
 Philpot, W. G., 91
 Phipps, L. H. T., 215
 Pickard, D. G., 313
 Pickering, F. E., 323
 Pierce, E. W., 329
 Pinckes, H., 340
 Pleasance, W. P., 28, 94, 97, 199
 Pledger, T. O., 200
 Plummer, A. G., 72
 L. A., 128, 248, 269, 283
 Plyley, G. E., 214
 Poag, W. F., *f.* 302
 Poohkay, W. M., 207
 Porritt, R. A., 268
 Pothier, B. F., 89
 Powell, P. A., *f.* 318, 326-7
 Powell, P. G., 32
 Pratner (Lieut.), 25
 Preece, C. J., 188, 276
 Prendergast, H., 98
 J., 243
 Prentice, D. F., 102
 Price, W. F., 152, 276
 Prosofsky, A. W., 207
 Pulham, K. M., 30
 Puskas, S., 77
 QUALLE, R. E., *f.* 62, 65
 Quayle, D. B., 73
 Quesnel, J. H. L., 35, *f.* 62, 97, 203
 RABBETS, A. J., 334-5
 Rackham, P. R., 349
 Rae, A. D., 64
 Rainville, G. H., 64
 J. B., 239
 Rancourt, J. L. F., 323
 Randall, A., 136
 L. H., *f.* 334, 343, 344, 345
 Rankin, J. P., 345
 Raper, R., 206
 Raven, J. A., 313
 Read, G. A., 153
 G. S., 26
 Recabarren, P., 220
 Redhead, J., 52
 Redman, A. H., 82
 Redpath, J. N. R., 31
 Reed, F. K., 307
 Rees, J. I., 91
 T. H., 165, 167, 168
 Reid, J. W., 148, 152, 1.159, 190, 276,
 280, 282, 284
 P. T., 278
 Reilander, A. V., *f.* 30, 67
 Renaud, J. M., 195
 Retter, A. J., 195
 Rettie, N. F., 244
 Revell, R. W., 313
 Rhodes, W. H., 235, 238
 Rice, V. T., 341
 Richards, P. W., 90
 Richardson, A. L., 67
 J. M., 316
 R. M., 279
 Richer, J. A. D. B., 32, 71, *f.* 79, 88
 Ridge, R. C., 325
 Ridgway, R. H., 337, 338, 341, 342
 Riding, W. H., 91
 Ritch, J. D., 188, 190, 191, 192
 Ritchie, G. J. M., 197-8
 Rivers, L. W. F., 335
 R. N., 284
 Roach, G. W., 191

- Roach M., *f.* 31
 Robb, J. M., 141, 142-3
 Roberts, D. E., 167, 170
 J. E., 305
 J. M., 188, 280
 T., 201
 T. J., 162-3
 W. E., 299-300
 Robertson, C., *f.* 31
 D. F., 73 D. W., 201
 G. D., 135, 229, 237, 239, 241, 242,
 f. 254
 G. E., 340-1
 W. D., 207
 Robillard, J. G. L., 239, 250-1, *f.* 254, 262
 Robinson, A. W., 56
 G. D., 152, *f.* 159, 283, 284
 H. W., 93, 214
 Robinson, V. T., 322, 323
 Rochon, C. G., 205
 Rodesky, E. J. P., 203
 Rodgers, A., 92
 Rogers, G. V., 156
 T. A., 206
 Rogerson, G. T., 27
 Rohmer, R. H., 270
 Rolfstad, K., 313
 Rollefson, J. P., 335
 Rollins, D. E., 313
 Rolph, R. H., 34
 Romer, R. H., *f.* 158
 Rondelet, R., 66
 Roosevelt, E. (Col.), 150
 Rose, A. H., 284
 F. W., 98
 Roseland, A. W., 241, 245
 Ross, A. D., *f.* 15, *f.* 30, 205-6
 E. B., *f.* 303, 315
 Rourke, L., 215
 Roussel, J. L., 258, 259
 Rowand, J. G., 317
 Rowe, L. C., 112
 Rushton, J. F., 299-300
 Russel, B. D., 100, 107, 108-9, *f.* 126, 231,
 234, 237, 239, 241, 242, 249, 250, 261,
 262, 264, 265, 266, 267, 270
 Russell, A. H., 293
 H., 128, 229
 Rutherford, J. Y., 293-5
 Ruttan, C. G., *f.* 319, 339
 Ryan, D. T., 215
 J. A., 217
 SAGER, A. H., 102, 111, 113, *f.* 238
 St. Germain, J. R. M., 205-6
 St. Laurent, F., *f.* 302, 308-12
 St. Louis, B. A., 26
 St. Paul, C. P., 270
 St. Pierre, J. M. W., 32
 St. Yves, J. H., 84
 Salaba, A. J., 52
 Sale, D. J., *f.* 335, 347-8
 Sam, D. L., 206
 Saphir, J., 177
 Sargent, P. T., *f.* 286, 293-5
 Saunders, R. K., 29
 Saunderson, T. M., 260, 261
 Saville, J. W., 137-8
 Sawyer, F. M., 168, 191, 280
 Schaefer, C., *f.* 254
 Scharff, W. K., 263, 268
 Schell, C. M., 77
 Scherf, C. C., 157, 158, 159, 160, 161-2,
 163-4, 166-7, 168-9
 Schmidt, K. L., 90
 Schmitt, W. H.,
 Schneider, M., 30
 Schofield, J. W., 342
 Schultz, R. D., 148, 152, *f.* 159
 Schwalm, G. T., 248
 Scott, C., *f.* 127
 D., 215, *f.* 302
 D. S., 308-12
 G., 99
 P. J., 35
 R. G., 301
 Seaman, J. T., 144
 Searles, H. H., 73
 Seath, L. W., 141, 142
 Seid, S. P., 188, 190, 191, 192 *f.* 271, 285,
 286
 Selfe, C. A., *f.* 30, 90, 196
 Semple, G. C., 100, 109
 Senecal, J. H. A., *f.* 319, 332-3, 339, 340,
 341, 342
 Servos, C. O., *f.* 254
 Sewell, W., 191
 Shand, J. H., 293-5
 Shannon, R. A., 78
 R. C., 240
 Sharer, N. M., 73
 Sharpe, G. H., 267
 Sharples, J. D., 165, 166, 167, 169-70,
 f. 174, 189, 275
 Sharun, M. R., 249, 262
 Shaw, A. N. 214
 J. M., 207
 T. R., 58, 63

- Sheen, R. J., 338, 342
 Shellington, W. R., *f.* 31
 Sheppard, J., 112-13, 119, 120, 124-5,
 131, 245, 260
 J. E., *f.* 127
 Sherk, D., 193
 Sherlock, F. J., 111
 H., 70
 Sherman, L., 305, 307
 Sherwood, M. C., 86
 Shield, F., 155, 162
 Shields, R. K., 28
 Shulemson, S. S., *f.* 318, 319, 321, 325
 Shurvell, J. W., 207
 Sibbett, G. D., 147, 151, 275
 Simard, R. J., 299, 300
 Simpson, R. H., 217
 Sims, L. H., *f.* 31
 M. H., 165, 166, 167, 169-70, *f.* 174,
 189, 275
 Sinclair, A. L., 248
 W., 90
 Skeaff, F. M., 202
 Skey, L. W., 291
 Slade, S. J., 26
 Slemon, C. R., 11
 Small, A., 77
 Smith, A. L., 156
 C. W., 58
 D. F., 64
 D. M., 139
 D. W. M., 21
 E. G., 195
 E. S., 262
 F. D., 188, 191
 H. M., 98
 H. S., 218
 J. A., 41
 J. K., 90
 J. W., *f.* 255
 L. G., 313
 N. F., 323
 P. J., 190, 280
 R. H., 134
 R. I. A., *f.* 239, 247-8
 Smitton, F. A., 207
 Snider, E. A., 212
 Snowdon, R. L., 153, 275, 276
 Soderstrom, C. V., 203
 Soeder, W. E. P., *f.* 63, 78
 Somerville, J. D., 151-2, *f.* 159, 283, 284,
 f. 303
 Sondergaard, A. C., *f.* 30
 South, G. J., 31
 Southwood, H. J., 103, 110
 Spaatz, C., 45
 Spackman, G. O., 86
 Sparling, R. H., 128-9
 Spearman, G. D., 89
 Spiller, E. G. L., 190, 283
 Spink, T. B., 53, *f.* 63
 Sprott, J. C., 99
 Squires, R. L., 89
 Stafford, J. D., 293-5
 Staples, G. F., 307
 Stayner, R. M., *f.* 127, 238, 242, 250
 Steed, B. G., *f.* 318, 321, 323
 Steele, D. T., 277
 Stecre, G. E. J., 197
 Steeves, C. B., 293-5
 Stein, A. G., 207
 L. R., 207
 Stelter, J., 257
 Stephen, W. M., *f.* 63, 92
 Stephens, G. R., 239
 Sterrenberg, A. W., 190, 276
 Stevenson, G., 301
 H., 86
 Stewart, K. G R., 99
 W. A. R., 164, 166-7, 188
 W. B., 34, 199
 W. R., 214-15
 Stiles, (Cpl.), 254
 Storrs, W. M., 277
 Story, J. D., 280
 Stover, C. H., 142, 145, *f.* 158, 244
 Strachan, W. W., 63
 Strange, M. S., 202
 Strauss, R. H., 296
 Stringham, E. W., 207
 Stronach, W. N., 232
 Stuart, P., 28
 Stubbs, D., 203
 Studholme, A. E., 113, 114
 Stults, D. C., 256
 Sullivan, C. J., 313-14
 J., B., 202
 Sutherland, G., 150
 Swan, J., 201
 Sweany, G. A., 224
 Swetman, W. H., 81, 88, *f.* 223
 Sylvah, C. M., 90
 Syme, L. B., 220
 Symons, C. R., 261, 267
 J. H., 320, 323
 TANDY, F., 201
 Tarr, C. F., 64

- Taylor, C. J. W., 313
 F. W., 261
 H. N., *f.* 63
 J. G., 30
 Tees, J. F., 217-18
 Tew, W. R., 238, 248, 253
 Thibault, J. L., 313
 Thistle, L. B., 201
 Thom, W. V., 66
 Thomas, R. D., 192, 285
 Thompson, D. N., 52
 H. J., 332, 340
 R. S., 57
 Thomsett, W. D., *f.* 318, 320
 Thomson, D. C., *f.* 319, 330-1, 340, 341
 H. S., 313
 T., 33
 Thorn, E. E., 207
 Thorne, J. N., 102, 107
 Thornton, C. P., 131
 Thorpe, D. A., 277
 Tilander, E. N. C., 299
 Tims, J. W., 219
 Tindall, B. F., 153, 170, 278
 Tinnmouth, A. W., *f.* 62, 67
 Todd, E. G., 199
 Todero, L. E., 67
 Tolmie, J. A., 99
 Tongue, D. G., 152, 277
 Toon, F. J., 325
 Trainor, H. C., *f.* 143, 239, 240, 241, 251, 267
 Tremblay, J. A. R., *f.* 31
 Tribbeck, H. R., 286
 Trippe, J. D., 26
 Trott, D. E., 241
 Trout, J. B., 202
 Trull, J. C., 118
 Truscott, G. G., 317
 H. E., 215
 Tummon, E. E., *f.* 158
 Tunney, L. W., 313-14
 Turnbull, J. H., 349
 R. S., 26, *f.* 78, 94
 Turner, J. D., 90
 P. S., 171, 173, 174
 Turvey, D. L. G., *f.* 175, 177, 178
 Tyler, W., 332, 340, 341
 W. S., *f.* 70

 ULRICHSEN, J. D. B., 296
 Unruh, V. A., 211
 Utton, T. E., 90

 VAESSEN, C. L., 277, 279

 Valk, J. C., 99
 Vallieres, S. K., 207
 Vanier, B., 92
 Vannier, J. R., 342
 Varley, N., 34, 199
 Vickers, E. A. H., 192
 Vincent, W. H., 277
 Vye, B. E. A., 313

 Waddell, G. M., 198
 J. J., 64
 Wagman, J., 218-19
 Wales, C. V., 64
 Walker, B. D., 223
 B. R., 123, 127
 C. A., 162-3
 J. E., 123, 129
 J. E. E., *f.* 126
 J. W., 218
 Walker, R. H., 101, 109
 W., 70
 Walledge, A. W., 341
 Walsh, J. R., 280, 284
 Walton, W. J., *f.* 62, 67
 Walz, D. M., 128, 232
 Ward, F. J., 197
 R. R., 305
 Ward, W. A., 280
 Warfield, W., 232, 262
 Warren, B. G., 67
 Warrington, A., 203
 Waterbury, D. J. C., *f.* 287, 306-7
 Watkins, A. A., 137
 Watson, R. A., 255-6
 Watt, R. H., *f.* 319, 336-7
 Watts, C. R., 338, 341
 J. D., *f.* 31
 R. E., 52
 Weaver, A. L. 61, *f.* 207
 C., 112, 115, 116, 118, *f.* 143
 Webb, J. L., 87
 Weber, G. R., 266
 Weedon, P. G., *f.* 79
 Weeks, W. R., 234, 253-4
 Weis, J., 198
 Wells, E. P., 124
 Wentworth, C. W., 203
 West, B. S. J., 52
 J. W., 195
 Westerman, C. F., *f.* 335, 348
 Weston, A. G., 214,
 Westrope, R. S., 215
 Wheler, T. R., 239, 249, 264
 White, C. G., 304-5

- White E., 200
 E. G., 147
 R. J., 78
- Whiteside, W. J., 174, *f.* 175, 175
- Whitson, R. D., 215
- Wickens, H. A., 195
- Wilde, L. A., 275, 276
- Wilkie, E. J., 206
 W., 318, 320
- Wilkinson, E. A., 60, 61
- Williams, A., 156, 157, 161
 A. A., 231
 D. J., 150, 152, 153, *f.* 159, 278, 281-2
 E. C., 131
 J. I., 207
 V. A., 148, 152, *f.* 159
- Williamson, N., 340
- Willis, C. A., 317, *f.* 318, 320, 322-3
 J. R., 206
- Willson, D. G., 211
- Wilson, E. L., 201
 F. A. W. J., 129
 H. W., 199
 J. H., 78
 M. C., 58
 M. F. C., 334, 340
 M. G., 223
 R. C., 104, 235, 240
 S., 157, 160
 W. A., 207
 W. R., 78
- Winiarz, E., 271
- Wiskin, E. W., 299
- Wolfe, R. R., 205-6
- Woloschuk, L., 108
- Wondolowski, C. A., *f.* 319, 340
- Wonnacott, G., 142, 144, 271
- Wood, D. T., 335
 E. P., 237, 244, 266
 K. R., 31
 W., 97, 201
- Woodwark, P. A. S., 293-5
- Woolfenden, P. B., 97; 207
- Woolley, S. K., 191, 286
- Wray, L. E., 76
- Wright, D. H., 87
 J. D. 158, 161, 163, 167, 187, 190,
 192, 275
 J. G., 253-4
 S. D., 211
- Wright, S. P., 213
- Wulff, E. R., 215
- Wyman, C. P., 250, 251
- YATES, G. P. A., 207
- Young, F. B., 234, 241, 253
 J., 319
 J. E. M., 323
 R. F., 99
- Younge, J. C., 258, 259
- Yule, A. C., 28
- ZACHARUK, A., 211
- Zary, H. P., 130, *f.* 238, 239
- Zeller, W. R., 286
- Zimmer, R., 52
- Ziomko, W. J., 87
- Zulauf, R. A., 78