

Free as a bird

PHILIP
WILLS



**THE
AVIATION BOOKSHOP**
656 HOLLOWAY ROAD
LONDON N19 3PD
01-272 3630

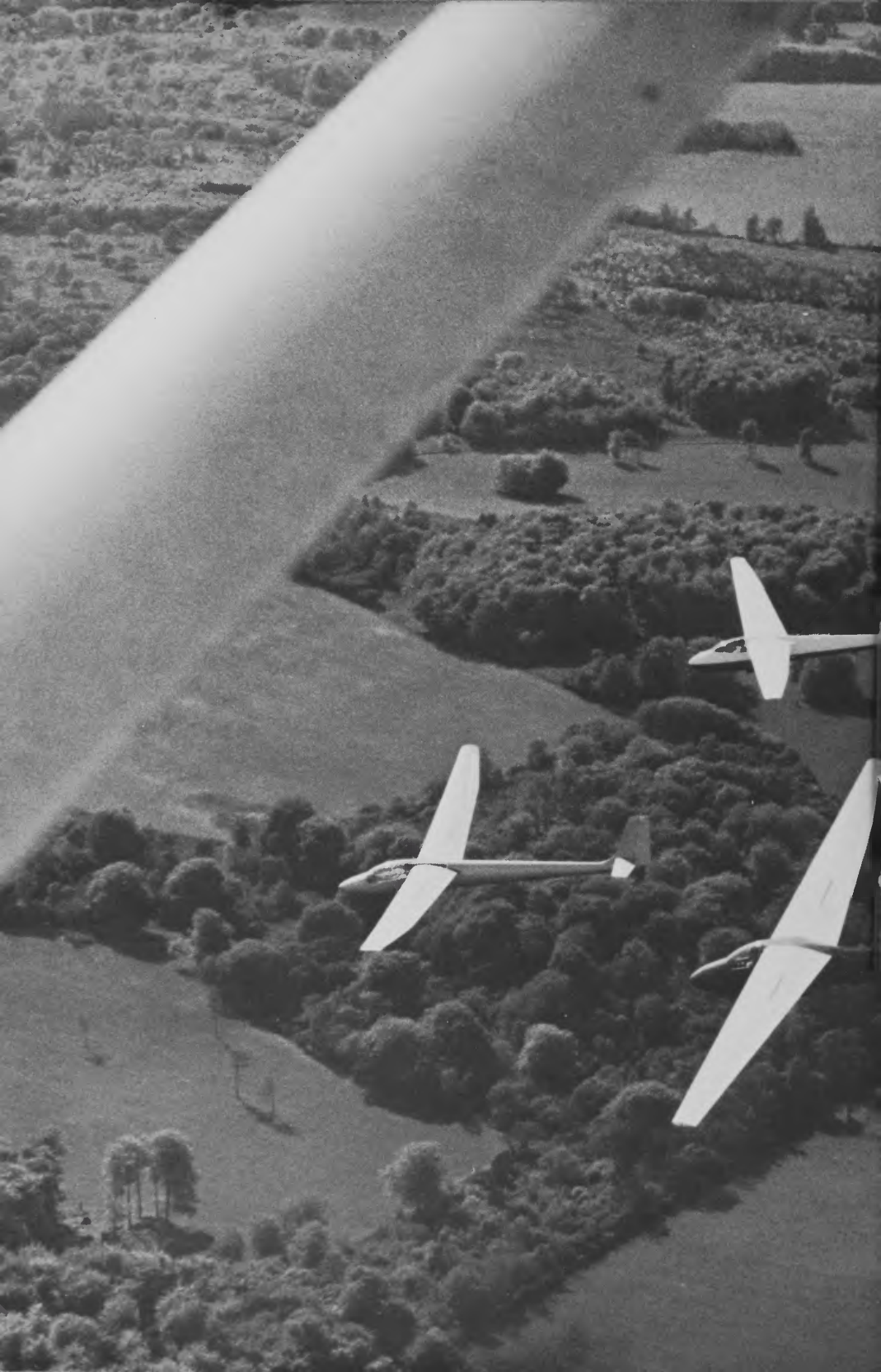
BY THE SAME AUTHOR
Where No Birds Fly

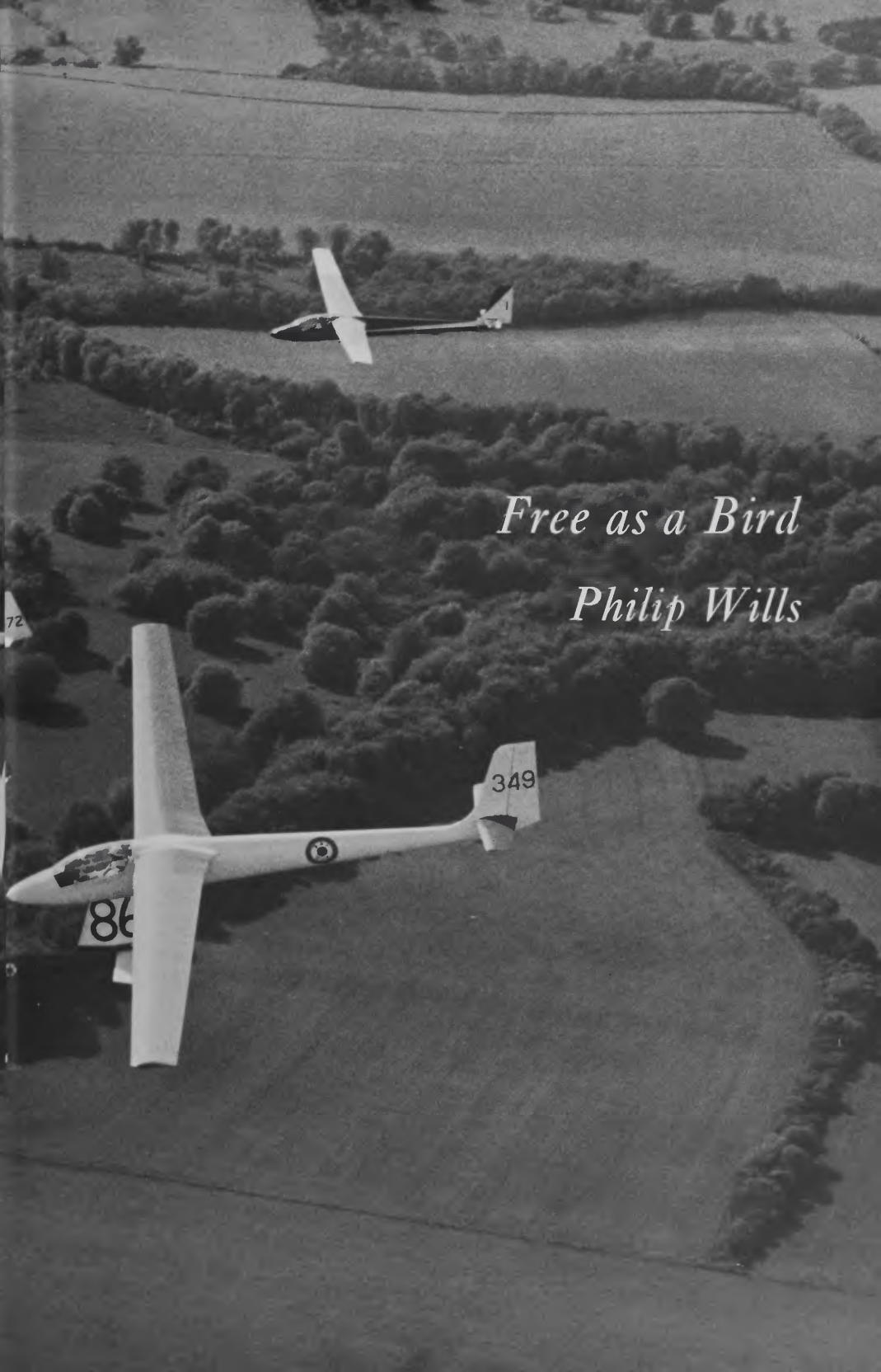
© Philip Wills 1973

All rights reserved. No part of this
publication may be reproduced, stored in
a retrieval system, or transmitted, in any
form or by any means, electronic, mechanical,
photocopying, recording or otherwise,
without the prior permission of
JOHN MURRAY (PUBLISHERS) LTD.,
50 Albemarle Street, London, W1X 4BD.

Printed in Great Britain by
William Clowes & Sons Limited, London, Beccles and Colchester

o 7195 2823 2





Free as a Bird

Philip Wills

72

86

349

To
The Igguldens of Australia
The Georgesons of New Zealand
The Laschs of South Africa
The Orsis of Italy
all fellow Romantics of the Air

Contents

Prologue A SUMMER DAY I

PART ONE GETTING AIRBORNE

1	THE PIONEERS	
	<i>A short history of British gliding</i>	7
	<i>Aeroclub of Nice, 1934</i>	14
	<i>Thirty years later : Camphill 1964</i>	16
2	RUNNING THE SHOW	
	<i>On structures</i>	21
	<i>The Fédération Aéronautique Internationale</i>	28
	<i>On being Chairman</i>	32
	<i>How not to open an AGM</i>	33
	<i>When to start</i>	37
	<i>When to stop</i>	38
	<i>A major error of timing</i>	41
	<i>On having a patron</i>	44
3	ON LIBERTY AND SAFETY	
	<i>Risk</i>	47
	<i>Values</i>	49
	<i>Discipline</i>	59
	<i>Self-discipline</i>	61
	<i>Accident prevention</i>	63
	<i>A better thing than to arrive</i>	68
4	THE POWERS THAT BE	
	<i>Our undercrowded air</i>	73
	<i>Don't confuse me with the facts !</i>	75
	<i>Safety factors and logic</i>	79

	<i>The probability of collision</i>	82
	<i>Lyneham: The crunch</i>	87
	<i>Airworthiness</i>	91
5	LAND HO!	
	<i>Sutton Bank and Lasham</i>	97
	<i>The Battle of Dunstable</i>	105
6	FAIR COMPETITION	
	<i>BGA Council and marking systems</i>	121
	<i>Fair marks</i>	123
	<i>Placing systems</i>	126
	<i>A really splendid bit of bad luck</i>	128
	<i>Speed versus romance</i>	133
PART TWO		
WHAT IT'S ALL ABOUT		
7	THE ROMANTIC AIR OF ITALY	
	<i>Love at first sight</i>	139
	<i>The Orsis</i>	144
	<i>The furies of Mte Corno</i>	148
	<i>1966 Rieti Free Distance</i>	151
8	THE WEIHE	
	<i>The saga of a sailplane</i>	158
9	THE HIGH AIR OF NEW ZEALAND	
	<i>Altitude in undress</i>	166
	<i>Mountain rescue</i>	173
	<i>World record</i>	177
10	WHICH SAILPLANE IS THE BEST?	
	<i>Well, which?</i>	184
	<i>Performance: the elusive polar</i>	186
	<i>Cold feet</i>	190
	<i>Future trends</i>	192

CONTENTS

ix

II THE CHARMS OF RADIO

<i>Small beginnings</i>	194
<i>Bramcote-Dunstable, June 1947</i>	195
<i>The Killing, June 1962</i>	198
<i>Mallard to Drake, April 1963</i>	203
<i>From powder-monkey to admiral, May 1963</i>	205
<i>Radio location</i>	207

12 THE GLIDING TYPE

<i>Powered gliders</i>	212
<i>Heli Lasch</i>	214
<i>Women pilots</i>	215

<i>Epilogue FREE AS A BIRD</i>	218
--------------------------------	-----

PART THREE

APPENDICES

I <i>BGA: Structure and terms of reference of Committees</i>	233
II <i>Glider registration</i>	236
III <i>Glider pilots' medical standards</i>	237
IV <i>The Airmiss Working Group</i>	244
<i>Index</i>	245

Illustrations

PHOTOGRAPHS

	<i>title page</i>
Wings over Hampshire woods. <i>Photo: Daily Telegraph</i>	<i>f. p. 42</i>
Free as a bird: Italian eagle	43
Philip Wills and the Scud II, 1933	43
Eric Collins and the Rhonadler, 1934	58
Rhonsperber (Kit Nicholson), and Hjordis (Philip Wills), Camphill, 1936	58
The Minimoa at Huish, 1937	59
Dr A. E. Slater with Kitty Wills at the World Championships, Spain, 1952	59
The British team, Poland, 1958. <i>Photo: Flight</i>	90
Viking proving flight, Lisbon, 1947	90
Lorne Welch at the 1948 World Championships in Samaden	91
Sutton Bank, 1937	91
Kit Nicholson and Gull IV, 1948	106
St Francis of Assisi would have been surprised . . .	106
Pronzati, Adele and Georgio Orsi, with the Skylark 3	107
Italian eagle and British Dart share a thermal in the Apennines	154
The Wasserkuppe: International competitions, 1937	154
Pilot and plane-makers: Philip Wills, Horace Buckingham and Fred Slingsby	155
The Weihe landing at Redhill, 1947	155
Sigma: a shot at the ultimate. <i>Photo: Ann Welch</i>	170
Slingsby sailplanes, old and new methods of manufacture: in wood, 1956; in resin-bonded glass fibre, 1971. <i>Bottom Photo: Vickers</i>	171
The Slingsby Kestrel, 1971. <i>Photo: Daily Express</i>	186
Looking south over Mount Cook to the Mackenzie country of New Zealand	186
Matthew Wills, Peter, Dick and Helen Georgeson, at Simons Hill, 1954	187
The Skylark 4 landing at Lasham	187
Justin Wills in the Dart, Lasham, 1967	202
Primary trainer, Dunstable, 1933	202
Falke powered trainer, 1971	203
Heli Lasch. <i>Photo: R. E. Lomba</i>	203

FIGURES

1. British European Airways fleet programme, 1949-58	44
2. British European Airways forecast and annual results, 1947-57	44
3. Amenity versus economics	50
4. Chief centres of air traffic, 1967	76
5. Cost versus risk	96
6. The profile of Mte Corvo and Mte Corno	150
7. Polar curves	187

MAPS

Area of random glider flying in the U.K.	83
Goodhart's map of prospective air traffic control plans in 1967	89
Rieti, Italy, and its environs to the north	130
Italy, three flights	152-3
Mount Cook	169
Omarama-Hanmer-Omarama world record, 1962	180
Aston Down to Crantock, 1962	201

Acknowledgements

Some of the historic source material in the first part of Chapter 1 is from Ann and Lorne Welch's excellent *The Story of Gliding* (John Murray, 1965), and my thanks are due to them for having done all the hard work to make it readily available.

Many of the flight descriptions, and some of the other material, have appeared before in various journals: *Country Life*, *The Times*, *Guardian*, *Flight*, and *Sailplane & Gliding*. I am grateful to the Secretary of the British Air Line Pilots Association; to Mr Walter Tye; the Editors of the *Daily Telegraph*, *Evening News*, London, and *New Scientist* (whose article first appeared on 14 August, 1969), for the courtesy of allowing me to reproduce their copyright material.

'Altitude in Undress' was published in *The Beauty of Gliding* (Max Parrish), which has been out of print for some years. I have included it in Chapter 9 because it rounds off this chapter.

Rika Harwood has combed out many mistakes, but memory being what it is I will have made others, for which I remain responsible.

I also have to thank Alex Aldott for permission to use one of his many extraordinarily beautiful colour photographs for the dust-jacket of this book.

P.W.

PROLOGUE

A summer day

Summer is the season for gliding. Many people still have the idea that gliding depends on hills for upcurrents, but this is not so. The main (though not the only) source of energy in the rising air used on most cross-country flight comes from the sun. Warm air is lighter than cold, as anyone who has made a hot-air balloon will know. When the sun shines on a dappled earth, ploughed fields and the roofs of towns, the tarmac of an airfield runway, the slope of a hill facing the sun, these and a hundred other 'thermal sources' will get warmer than surrounding green fields, forests and lakes, and the air above them will tend to rise. In certain weather conditions, this rising air will entrain further volumes of the surrounding atmosphere, and coalesce into vast rising bubbles that can go on climbing until, as they cool, they form the cumulus 'woolpack' clouds of summer and sometimes develop even further into the towering cumulo-nimbus clouds of the thunderstorm, rising 30,000 ft or more into the sky.

It took a surprisingly long time for man to discover this daily cycle of the dynamic air. How often have you noticed the clear blue sky of an early summer's day? Then, as the sun climbs and the earth begins to warm up, comes the first hint of a fluffy cloud; later on the sky is dappled with bulging pincushions of white cumulus; finally, as the sun sets, these clouds begin to topple and die, until with the last light the sky is again a clear and possibly dusty blue. During the night, the dust that has been carried up during the day by the marching fountains of rising air slowly settles, and so by dawn the air is again clear and visibility unhindered to the horizon. The same sequence is to be repeated.

If you are wise you will jump into your car and get to your gliding club as quickly as you can, because in such weather the queue of members eager to fly starts early. As soon as you arrive you get your name on the list, and then join with your fellow-members in the

hundred and one tasks involved in getting the aircraft into the air. For in gliding nearly all the work is carried out voluntarily by club-members; this is part of the fun and keeps the cost of flying to the minimum.

The gliders have first to be assembled (unless the club has enough hangar space to store them fully rigged) and then checked for air-worthiness. The tow-cars, launching winches or towing aeroplanes have to be serviced and checked; pilots and drivers allotted parachutes and barographs (for recording heights achieved during flights) installed. The gliders have to be towed to the launch point, the winches towed to the downwind end of the site, and the winch wire run out for perhaps 3,000 ft to be connected to the nose of the glider.

At last your turn arrives. Parachute on, barograph ticking, you are strapped in, check your controls, shut the cockpit cover, check the launch-wire on the hook. A batman at your wingtip signals to the distant winch, the wire tightens. 'All-out'; with a jerk your aircraft trundles forward, you ease back the stick, and in a steepening climb you leave the earth. Just before you started you looked around the local sky, and to one side you saw a couple of sailplanes circling serenely. They had found a rising thermal and, like the rooks, had put their machines into a circle in order to stay within it. They are marking the course for you.

At 1,000 ft on the wire you are nearly over the launching winch, and you pull the release knob. As the wire falls away, your glider jumps up as if for joy. Instantly you turn towards your lucky friends, who by now have climbed well above you. But as you reach the air beneath them your aircraft suddenly comes alive. The wings tremble, the controls twitch under your hands, the needle of the rate-of-climb indicator (variometer) moves from a steady three down to zero, up a bit, down, up again. The starboard wing has lifted, so the rising air is probably to that side. You thrust it down and turn into the lift. The variometer needle, after various hiccups, settles to a quiet two up and, as you circle round, the earth starts to recede below you. You have made contact, you have latched on to the lift, you are away, with no sound about you other than the rush of the wind over the wings of your aircraft.

You are now no longer a man; you are an intellectually advanced

bird. You have not the instincts of a bird (although as the years go by you take an increasing number of decisions instinctively), but you have a considerably better intelligence. To keep aloft you have to continue to find rising air, and you know a good deal about the natural laws that create it. In order to avoid the trouble and expense of an away landing and a retrieve by road, you have decided to fly a triangle of, say, 100 miles, round turning points you have already declared before you took off. The first thermal takes you, in circling flight, up to the fluffy base of a shallow cumulus cloud. You are still not far from your take-off point, and it is not permissible to go into a cloud so near to home, for if this were done by everyone the collision risk would be too high. So you straighten up on course and set off in the direction of your first turning point. At 60 knots, the gliding site is left behind you, and the green and brown chequered countryside slides quietly past beneath. Ahead, below, and somewhat to starboard, is a small country town; slightly to port, and above, is another cumulus. Over the first, or under the second, is likely to be another column of lift. Which to try?

The problem is solved by the sight of two buzzards peacefully circling, ahead and slightly to port. You fly over and join them in their gyrations, and immediately the variometer swings to 'climb'. The three birds swing round in space amicably together, then once more at cloudbase you straighten up on course and leave the pair to their meditations. And so the flight continues. It is a summer's day. You are not trying to race, to break records, to take risks; you are just enjoying yourself. The glory of the earth and the freedom of the air are, for two or three hours, all yours. Towards evening, as the rising thermals carry up myriads of insects from the fields below, they become full of darting swallows, not circling for pleasure like the soaring buzzards or seagulls, but jerking to and fro with beaks agape to pick up their suppers on the wing.

The evening clouds are building up to their climactic height, before the setting sun drains their lives out of them and they topple and die. If you felt like it, you could switch on your gyroscope and circle up inside, in milky silence, to 10,000 ft or more. But, five miles ahead, the club-house on the edge of the airfield glints pinkly in the setting sun. The faithful two-seater is still taking off, circling and landing with its pupil aboard. One or two sailplanes are approaching to land;

others are being towed across the field towards the hangar. Tea and buns call, and the chatter of exchanged experiences of the day. You put the nose of your sailplane down and strike for home. The airfield boundary sweeps below, you pull out your airbrakes, the grass beneath leaps up, the skid kisses the field; a bump or two, and the life fades out of the aircraft. You are down, once more an earth-bound gregarious biped. One wing slowly drops and touches the ground. One of your friends comes up. 'Nice fly?' A typically British understatement.



You have just had a day of freedom in excelsis: yours has been the sky and all that therein is. It will seem in retrospect as harmless and as natural a glory as man could aspire to. This book will try to show how that freedom has been won and retained and to foreshadow the work and struggle that lies ahead to preserve it. For if it is taken for granted, it will stage by stage be worn away and like the evening cumulus will die.

The first six chapters of this book in the main attempt to show the work and the philosophy behind it, and from Chapter 7 onwards I try to paint the picture of what it is all about: why we have done, and must continue to do this basically dull work, so that the air can remain available to us within the limits of other and more severely practical demands on it. The philosophy roots back to one statement made long ago: Man does not live by bread alone.

So if some of my readers find that parts of the first six chapters are hard going, be very glad that others are prepared to carry the burden.

PART ONE



Getting airborne



The Pioneers

A short history of British gliding

For the first several hundred years of the history of gliding, the design of motorless aircraft was attempted simply because these were, in the absence of any conceivable engine, the only possible devices through which the secrets of controlled flight by human beings might be discovered. In this chapter I do not propose to record any of the doings in this field. For, as one of the most unexpected outcomes of the first World War, gliding was reborn in the shape which developed it as it is today, as the greatest sport of all time, involving the use of the energy stored in the atmosphere to maintain sustained flight.

Although, in the modern jargon, gliding produces a considerable 'fallout' in the fields of meteorology, aerodynamics, structures and materials, and even sociology, it is now regarded all over the world as a sport—and possibly the only true aerial sport—and it is the development of gliding in this country in this sense that I propose to cover briefly.

In 1922 world records stood at six minutes' duration, 6 miles distance, and 1,000 ft climb. In 1972 duration records have been abandoned as mere pole-squatting, having been raised in 1952 to 56 hr 15 min; the world distance record is 633 miles (over 1,000 km),* and the world height record 46,266 ft, while speed records round triangular courses, of 100, 300 and 500 km, exceed 65 mph. During the 1965 World Gliding Championships, held at RAF South Cerney, 86 pilots from 28 nations flew 48,500 miles over six competition days. While they were flying about half the air traffic over the British Isles consisted of gliders, and there were nearly three times

* At the time of going to press, a flight of over 1400 kms has been made and is awaiting homologation.

The Wally Kahn/British Gliding Association eBook Library has been unable to obtain copyright approval to provide the reader with the complete eBook.

By scanning a number of pages we have endeavoured to provide you with the flavour and content of this book so that you can decide whether or not to purchase a copy.

It may be that the Publisher and/or Author are intending to print a further edition so we recommend you contact the Publisher first.

The next step is to search online to see if you can find a second hand copy. Addall, a book search and price comparison web site at <http://www.addall.com> is very good for gliding books.

Copyright of this book sample and the book remains that of the Publisher(s) and Author(s) shown in this sample extract.

No use other than personal use should be made of this document without written permission of all parties. They are not to be amended or used on other websites.