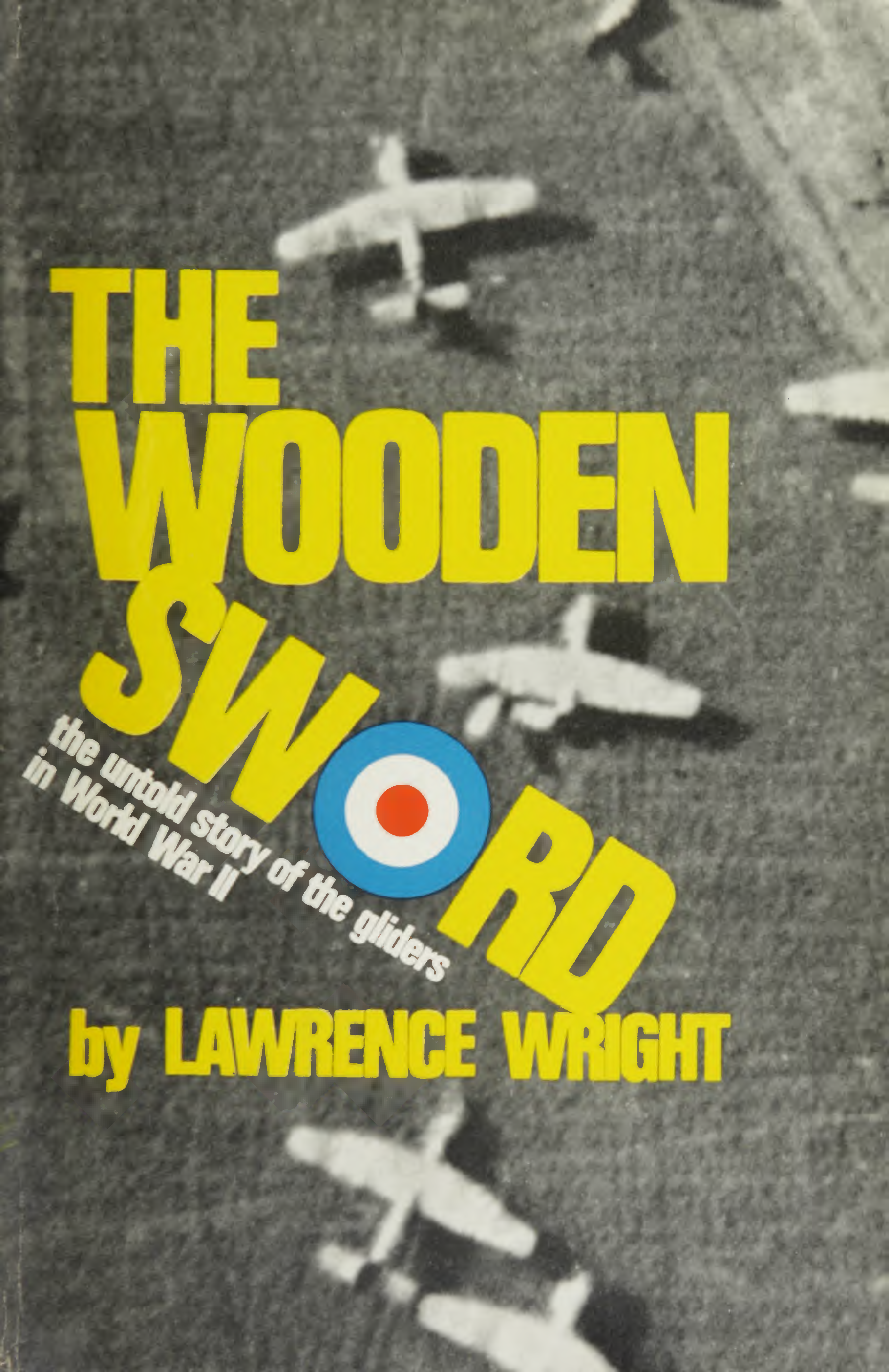


# THE WOODEN SWORD

the untold story of the gliders in World War II

by LAWRENCE WRIGHT

# THE WOODEN SWORD

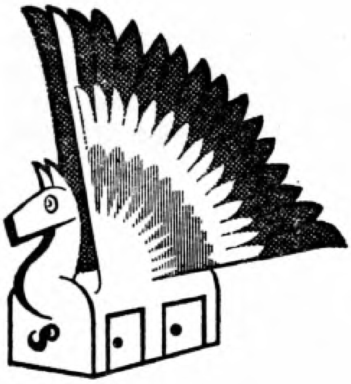
In 1939, at the outbreak of war, gliding 'was not taken so seriously at the Air Ministry as to deserve even to be stopped', in the words of Lawrence Wright, one of the dedicated band of amateur glider pilots who spent weekends before the war soaring at Dunstable Downs. Yet, by 1943, official scepticism over the strategic usefulness of gliders had largely disappeared and before the end of the fighting thousands of Allied troops and tons of equipment had been delivered to battle areas in Horsas or Hamilcars, and such historic battles as Arnhem and the Rhine crossings had been fought by gliderborne forces.

Lawrence Wright tells the inside story of the war gliders – how it all began, the men who planned and those who died, and how it ended – for the first time. It is, he writes, 'a very personal account of what one non-combatant Air Force officer saw of the Allied airborne forces in general and of British gliderborne forces in particular'. Written with wry humour and no false heroics this is a fascinating story – a war book with a difference.

*Illustrated* 42s net

LAWRENCE WRIGHT

# THE WOODEN SWORD



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# CONTENTS

Author's preface xi
1 PER ARDUA 1
2 DROPPINGS, RINGWAY 8
3 SILLY HADDENHAM 29
4 THE FIRST OF THE MANY 42
5 GROWING PAINS 59
6 WING OPS 85
7 UNCLE SAM'S ORDERS 113
8 OPERATION 'BEGGAR' 139
9 OPERATIONS 'LADBROKE' AND 'FUSTIAN' 149
10 SOLD DOWN THE RIVER 163
11 ENTER FAIRY GODMOTHER 176
12 PRELUDE TO 'NEPTUNE' 190
13 OPERATION 'NEPTUNE' 199
14 SIXTEEN ABORTIONS 214
15 ARNHEM 224
16 THE BEGINNING OF THE END 237
17 OUT 245
Index 249

# ILLUSTRATIONS

1 The first German glider operation, May 1940 20

2 British military exercise with gliders, October 1940 20

3 Ringway, Manchester, October 1940 21

4 Tactical exercise with a Hurricane and gliders, Duxford, February 1941 21

5 The first Army pilot to go solo, Haddenham, March 1941 36

6 Winston Churchill at Airborne demonstration at Ringway 36

7 King George VI and Queen Elizabeth at Haddenham, June 1941 37

8 Hotspur with Hawker Hector tug 37

9 The American 15-seater Hadrian 52

10 Training for the Sicily landings, Froha, Algeria, 1943 52

11 1st Air Landing Brigade emplaning for Operation 'Ladbroke' 52

12 Horsas and Albemarle tugs marshalling at Hurn, 1944 53

13 Glider assault on the bridge over the Orne Canal, June 1944 68

14 Horsas and Hamilcars at Arnhem, September 1944 69

15 The line-up for Operation 'Varsity', March 1945 69

# THE WOODEN SWORD

is a very personal account of what one non-combatant Air Force officer, a 'VR' or amateur, saw of Allied Airborne forces in general and of British gliderborne forces in particular, from 1940 to 1945. It is not meant to be a full or balanced history of either. My qualification for writing it is that from the little beginnings with a few sporting gliders in 1940, to the great Airborne crossing of the Rhine in 1945, I was always by chance at a good vantage point when something important happened; never in the battle (where they seldom know quite what is going on) but never in the supreme headquarters (where they may know even less, and where a mere Airborne Division is only one pawn in the game, its exploits rating only a paragraph in the post-war memoirs). Most previously published accounts begin at least a year later than mine, and many pioneers have died without fair recognition of what they did in the uphill days.

If I seem to have lifted material from the first official account of Airborne, and perhaps whole sentences from the operational reports, I explain that I gave an outline history to the author of the former, and wrote many of the latter. If I seem to have known more about broad issues and higher policy in the early days, than my humble post could have allowed, I reply that I shared a billet with John Rock, and enjoyed Nigel Norman's confidences long before I worked for him; Rock on the Army side, and Norman on the Air side, were the first clear-thinking enthusiasts for this new way of war. I have tried to avoid hindsight, and to describe events as they seemed at the time, except in a few paragraphs of afterthoughts. I put the basic material on paper during the war. I have been trying for twenty years to avoid writing a book that I hoped somebody else would do better. I do not think it will have suffered from being so long mulled over.

I thank these good friends who have kindly read and commented on the manuscript, while absolving them from any blame for errors that remain:

Squadron Leader E. W. Armstrong; Wing Commander J. R. Ashwell-Cooke; Wing Commander G. H. Briggs, D.F.C.; Group Captain G. M. Buxton; Brigadier G. J. S. Chatterton, D.S.O.; Major R. P. Cooper, T.D.; G. B. S. Errington; Squadron

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# 1 PER ARDUA

What *use* had gliding, they used to ask us in the 1930s, and we would answer, none, we hoped. In the Spring of 1940 it still seemed we were right. The war was a professionals' preserve, a closed shop. The distinction between those who dropped bombs, and those who stayed at home to read about their exploits, was still quite clear in the days when no bombs had yet fallen on those readers. Amateur help was not needed. Glider pilots, as such, were about as welcome to the Air Force as sword-swallowers to the Army, or fly-fishermen to the Navy. The R.A.F. preferred virgin pupils who knew nothing save that they knew nothing, did not answer back, and had formed no unorthodox habits in unsupervised cockpits. Such our cockpits were, when we had graduated that far from our open flying broomsticks, for we went solo from the start, had no serious dual instruction, and once past the ground-hopping stage and borne aloft, found guidance only in the unlikely event of spotting our Chief Flying Instructor Tim Hervey, on the tilted field below, and interpreting the wavings of his red flag. What was the R.A.F. likely to make of a pupil who headed instinctively towards clouds, and positively preferred to approach and land with the engine off?

Private flying had of course been banned. We had avoided enquiry as to whether this applied to us, and continued local soaring, until in January 1940 the Air Ministry forbade us even ground-hopping, for a reason still not clear. With Spring cumulus overhead, this became intolerable. Somebody discovered the secret telephone number of Fighter Command at Bushey, and asked in a matter-of-fact tone for permission to glide that week-end. To his surprise this was granted, and granted again each week-end till Whitsun, though two restrictions were indeed imposed: the first limited our height to three hundred feet, and the second (a compliment to our skill, in view of the first) forbade cross-country flights. On a good soaring day at Dunstable Downs, observance of this ceiling meant keeping our noses well down, humming to and fro along the hill crest like angry wasps, at hitherto undared speeds: to relax and slow up for a minute was to rise into the airspace reserved for the Blenheims and Wellingtons. These we would watch, in their twos and threes, heading presumably to and from Germany; wreaking dire havoc on enemy morale, we did not doubt, when they unloaded their leaflets.

We felt conspicuously useless, and we were moreover in some disfavour in the nearby villages of Dagnall and Totternhoe. They did not send us white feathers, but they nearly sent us swastikas: for in 1937 they had seen us welcoming a batch of young Germans, and teaching them to glide. The ugly implication of this was becoming clear: that with our aid, these Hitler Jugend must have spied out the immediate terrain and targets, before reporting back for duty with the Luftwaffe. Suspicion was to become certainty later, when a bomb fell near Whipsnade Zoo (which shared our hill) and a Messerschmitt pilot machine-gunned the streets of nearby Luton—a friend of the gliding club, no doubt.

But it was not until May 1940 that this shooting-war began, and when it did, the news jumped to our eyes that the Germans were using troop-carrying gliders. So that was why their clubs had been so richly subsidised by the Reich! Glider pilots are even more dedicated and obsessed than golfers; their girl-friends complain that they have only two ideas in their minds, and their wives that they have only one. Here was our wartime vocation. Some of us were already entrusted with passengers in the two-seater. Perhaps we might be entrusted with troops?

Meanwhile Fighter Command's permission to fly had been rescinded. Our week-end numbers were dwindling; the missing ones sometimes reappeared in uniform, usually R.A.F. uniform, some of them impressive as Pilot Officers on Probation. But these, it seemed, had wisely reported for interview without their gliding log books, and to the stock question about favourite sports, had confessed only to the licit love of cricket, or at worst to rugger. Even those seemingly safe answers needed care; for one applicant, thus questioned by a selection board and casually choosing cricket, was instantly asked —Batsman or bowler? chose bowler, and was taken aback when his inquisitor opened a desk drawer, threw a ball at him, and snapped —How would you put a spin on that?

But few of us had got that far beyond our first, quickly-damped enquiries at the recruiting centres. My King and Country had for some time been particularly unaware of any need of me. Soon after the Munich crisis I had raised a team of six architect-artists who thought themselves likely to become competent in camouflage; we had offered ourselves in a package-deal, simultaneously to Admiralty, War Office, Air Ministry and Home Office. Of the two who replied, one said that the list for the inter-service Corps of Camoufleurs was long since full, the other that our names would be noted when this list started. Prospects were even worse now in war than in peace for an architect who, notwithstanding the expiry of his practice, was in a Reserved Occupation, and so ineligible even for potato-peeling. The war was for knocking things down, not for putting them up; nor could anybody be allowed to know anything outside his stated trade. But twenty years' experience in photography, I thought, sounded good if you said it quickly (that first Box Brownie at St. Anne's-on-Sea!) and might win me some humble niche in an Air Force darkroom, if no more lofty view of battle. It would be unwise to boast that I remembered Autochrome plates and three-colour carbon prints, which would prove me on the wrong side of thirty, but I could talk panchromatics and micro-5 with the best of them. I proffered this skill first to a languid youth in a velvet jacket, at a counter in Adastral House. He was amused, but firm: professional photographers were indeed wanted, but with a war on, the R.A.F. could hardly train amateurs. He supposed I might try at the recruiting office at Acton if I insisted (why Acton, I still wonder?) but I would be wasting my time and theirs.

At Acton I changed my story: I was a professional photographer. Questioned, I stood my ground, and even enlarged my claims—I was a film cameraman too. (A grain of truth there.)

—35 millimetre?

—Of course.

Forms were filled in; I was passed from desk to desk, and at last to an inner room where I half expected to be measured for uniform. Would it be tactful to ask about pay? The room held one desk, one chair, one man and one large book.

—Trade?

—Photographer. *Professional* photographer.

He thumbed through the book.

—Sorry, old man, better go back to your job. You're in a Reserved Occupation.

*Per ardua* indeed. Meanwhile, at the gliding club, rumour at the bar had it that something was going on in the Air Force that had something to do with gliders. Careless Talk May Give Away Vital Secrets, advised the posters, so Buzz Lacey and I, determined to get in on this project be what it might, agreed to spy independently and pool our findings. Three clues soon offered. The club engineer and bar-man was being conspicuously secretive about the Kestrel, a vintage glider that had been brought down from among the hangar roof-trusses, dusted, de-moused, packed in a trailer, and sent off to an unknown place for unimaginable reasons; the least imaginable being that anybody was willing to fly it. Clue Two: Mungo Buxton, a regular Wing Commander and a revered gliding pioneer, had been seen around gliding clubs of late. Clue Three: Gurney Grice, who built gliders and trailers, was up to something in a shuttered workshop. Could these pieces be fitted into some great overall plan? The trail of the Kestrel led to Cardington, where Buzz lurked fruitlessly in the lanes near the great airship hangars. The trail of Mungo led to Slingsby's glider factory at Kirbymoorside in Yorkshire, but it petered out at Christchurch in Hampshire. Grice could not be drawn. Were enemy spies, we wondered, doing any better than we were?

I turned aside to seek some other chink in the fence against unwanted recruits. At the Aero Club, I was assured, they always knew all the dirt, and the man to see was Harold (the Hearty) Perrin, the Secretary-General. He was believed to serve on a selection board. To this hospitable and genial character, then, I put it that, ignorant as I was of the service structure, common-sense insisted that the R.A.F. must by now have somewhere a set-up of some sort, where somebody must be studying photographs and maps and plans and reports of enemy installations, and from them drawing further maps and plans and perspectives, making and photographing models—all jobs up my street. As for the drawback of being an architect, I need only resign from the R.I.B.A. for the duration, and hope they would let me in again without taking an exam.

Perrin shook his head.

—Never heard of such a thing. Isn't such a branch. Never has been. Why not stick to your Reserved Occupation?

The best I could answer was only —I think I shall offer my services to the enemy.

But before I could find what difficulties they, too, put in one's way, events had taken charge. Gliding instructor Tim Hervey was back in uniform (which he had doffed in 1918) and from him I had a cryptic message to stand by. Something to do with service gliding, I guessed. Within days I was summoned to Air Ministry.

The first ordeal was a medical. The hearing test had a memorable moment: you stood at one end of a room, while a doctor sat at the other, murmuring. You had to repeat his words, while a cold-fingered airman behind you closed your ears, in turn, and sometimes in mid-sentence. I seemed to be doing well, but something was worrying the doctor. He beckoned to the airman, who brought back a message —Please speak up, sir; the doctor can't hear you.

In a room that looked at first glance like a saloon bar, another airman was wholly occupied in obtaining, labelling and arranging samples of urine in glass beakers; recruitment was brisk, and if the flow continued at this rate, he seemed to have a job till the armistice; would the next generation, I wondered, revive the old question —What did you do in the Great War, daddy?

It was the eye test that worried me. If my glasses are broken or lost, I can still board a bus, but somebody has to tell me its number. Fortunately, the only time I ever lost them when flying a glider was on forced-landing, after a dud launch, into a deep ripe cornfield: everything stopped promptly except my glasses. These flew on, at thirty miles an hour, and until I had them on again I could not look for them. I had lost them awhile in an Avro 504, but only as a passenger taking movies, and because I had tied them to the aircraft with string to avoid that very mishap, and then leaned out too far. Thereafter I always carried a spare pair in my flying jacket. I could only hope now that mere glider pilots would enjoy some special dispensation. The oculist unglassed me so suddenly, that I did not immediately locate the chart. My guarded opening response, that I thought the big topmost letter was an H, but if not, a badly-designed N, did not go down well. Perhaps my performance was so unconvincingly poor for a man without a white stick, that he rated me high to foil malingering; for I was still wanted for interview. My companions in the waiting-room, would-be fighter pilots, looked disconcertingly boyish and fit. One smooth type, who had gone through before, was giving advice.

—Careful, chaps, if you've got a chum inside pulling strings. The Old Pals Act isn't in favour just now. They'll ask you —Do you know Air Commodore Robinson? and if you say —What, old Stinker Robinson, known him for years, he was my father's fag —you're out.

My first interrogator was alone, and was brief.

—Glider pilot?

—Yes, sir.

—Do you know Group Captain Jones?

(Startled pause.) —No, sir.

And I was sent home, ignorant of my fate. There I found a two-days'-old letter from Tim Hervey, ending with directions as to how to find one Group Captain Jones at Adastral House: if I had a word with him before my interview, it might help. I wondered whether it would have done.

I was summoned again. Glider pilots, I had learned, were being winkled out from every cranny of the services and of civil life, regardless of their present duties. But too many of these were still wriggling in the fine mesh of the selectors' net. Age, physique, education, class, even moral worth, have never shown any relation to flying ability in the gliding clubs. Medical standards had to be lowered a little; I was the first to try the coarser mesh. I profited by experience. Anticipating the 6-ounce beaker, I did not repeat the mistake of drinking a pint of lager at lunch. I knew now that the oculist's room was near the waiting-room; its door was ajar. I jotted down the letters on the chart, and devoted half an hour to a silly mnemonic. (Bicycles Seldom Decapitate Jaywalking Victims, still sticks in the memory.) Alas, the oculist was a man of small, suspicious mind, who played a trick unworthy of his high calling, that was to relegate me to the Admin and Special Duties Branch and cost me several shillings a week: he changed the chart. Luckily he did so a moment before I took my glasses off; my failure was complete, but not so disastrous as if I had recited BSDJV and all that, from the wrong chart.

Almost on the doorstep, I was surprised to be handed His Majesty's Commission, and a Posting Order. The latter was signed, I was interested to see, by none other than Group Captain Jones. I am sorry never to have met him, even at school.

I was ordered to report on October 20, 1940, at Ringway Hall Farm near Manchester, to something called C.L.E. My last job in London, on my first day in uniform, was to salvage a few drawings from my bomb-damaged office. As I left a bus, a nice old lady seized me by the hand —I *do* just want to *thank* you! this with an explanatory glance at the sky, where contrails marked the last phase of the Battle of Britain.

# 2 DROPPINGS, RINGWAY

My taxi cruised up and down the lanes round Ringway airport, dotted with aircraft so miscellaneous as to offer no clue as to what went on. An aged labourer dimly recalled Ringway Hall Farm, but his palsied pointings led us repeatedly back to a guard-room where farm and C.L.E. were alike unknown. Air Ministry (Movements) had perhaps erred; it seemed best to report to R.A.F. Ringway. I did, and there, amorphous perhaps, inchoate, but nascent, was C.L.E. I was in.

Ringway Hall Farm remained a mystery for some weeks, until an out-of-date Ordnance map revealed by chance that it had stood, long since, on the site of the present (pre-war) station built for the local Auxiliary Squadron. Probably an advance surveying party had been billeted there, since when Air Ministry (Movements) had not been notified of any progress.

The ordeal of induction was negligible, rather like joining a club. In the next few days, I supposed, I would be sent to some desolate barracks to be broken on the wheel, disciplined into a mindless observance of procedure, drill, saluting and so forth. It was a pity that at school I had taken much more trouble to avoid such things, than the Right Sort of Boy took to learn them. Meanwhile, although the life of the permanent station seemed to be one of spit-and-polish, centred on the parade ground, a certain informality pervaded its lodger-unit. A friendly Intelligence officer took me under his wing: I must come round and meet some of the chaps. As we left his room he stopped me.

—I should bring your cap, old boy. You salute a chap when you go into his room, and you can't salute without a cap.

That, I supposed, was the first of the many rules I would soon be taught. It was in fact also the last; for the next five years I went on no courses, was officially instructed in nothing, and muddled along on such scraps of know-how as I chanced to pick up on the way. So, no doubt, did countless others who wore brass VRs on their tunics. The regulars were too busy, and soon, for that matter, so were we.

Our first call was on Wing Commander Sir Nigel Norman, the Senior Air Staff Officer, tall, clean-shaven, aquiline of feature. He was so pleased with a letter that he had just written, that he handed it to me, watching keenly for my reaction. It seemed that a gale had stripped some cladding from one of the hangars; his letter complained of careless supervision by the architects. My reaction was negative, until he explained that the architects concerned were the well-known partners Norman and Dawbarn. Next he produced an air photograph, over which many of us were to pore and argue for some time to come: taken in May, it showed Fort Eben Emael on the Albert Canal in Belgium, a supposed obstacle to the German armoured invasion. Dotted about inside the fort were six or seven German gliders, of two types, about 90-ft. span. The shadows showed that each had one wingtip on the ground, the other high, so they had landed on skids like sailplanes. A report from a Belgian officer said that they carried engineers with special explosives, who blew in the cupolas, and made a breach for the entry of gliderborne and parachute troops landed outside the defences. The Wing Commander's third exhibit was a set of prints from a vertical survey of the parachute-dropping zone (which I soon learned to call a D.Z.) in nearby Tatton Park. These he required me to assemble as a single photo-mosaic; either as a leg-pull or as an I.Q. test, for he must have known that the aircraft had been so low and the lens angle so wide, that the task was impossible. Following a brief account of an ingenious way of removing cloud-shadows from air photographs, his attention now fell on a piece of braided string lying by chance on his desk, and he improvised an exposition of its special tensional strength, method of manufacture, and aesthetic quality. Never a dull moment with Nigel in the weeks that followed: Nigel provoking discussion in the mess, stealing the odd idea but giving three in return; putting an iron in every fire and a finger in every pie; inventing his Fly Gun, a minute high-precision vest-pocket air-pistol with a bore to take gramophone needles, for indoor marksmanship; Nigel the host at tea in London, inviting one's opinion of the synthetic half-cherries in the cake.

—A by-product of one of our enterprises; I guarantee that they contain no nutriment whatever.

Nigel in a frightful poacher's jacket, penetrating the airfield defences on his stomach, on the night of a practice alert; Nigel resplendent in the scarlet-silk-lined cloak of 601 (Auxiliary) Squadron, his old command, off to a reunion at its birthplace, White's; Nigel at the Cotton Research Institute talking them into making, quickly and free of charge, a gadget for service use that seemed likely to drift for years in the proper channels; and there, happening on some canvas bags that might serve for airborne supply-dropping, filling them with water and flinging them from windows at successively higher levels, regardless of passers-by, until one exploded. You either went along wholeheartedly with Nigel, as I and most others did, or you just could not stand him.

Next there was Louis Strange, already a legend in the service, his chest a patchwork-quilt of ribbons. (Tim Hervey, before being commissioned, had been Louis' rigger in France in 1915.) He had lately added a bar to his old D.F.C. by flying Hurricanes out of France under the noses of the Germans. A Squadron Leader at the moment, his inveterate naughtiness had made his career a snakes-and-ladders game of demotion and re-promotion. The compilers of the Air Force List, unable to believe that Pilot Officer L. A. Strange could be the same person as the famous D.S.O., M.C., D.F.C., sometime Lieutenant Colonel, had lately managed to include him twice over, and Louis boasted that for twelve months he had enjoyed two pay-packets. Though he scorned all regulations, he had been in and out of the service since 1914 and knew them backwards; knew for example that an officer in billets is entitled to draw rations in kind, in precisely stipulated quantities, in lieu of the usual cash allowance. Until he tired of the joke, his exasperated superiors were forced to countenance the sending of a regular van from Ringway to Gatley to deliver him half-a-pound of this, an ounce of that, and measured screws of salt and pepper. When officers were authorised to wear blue battledress, Louis sketched out for Gieves an entirely unorthodox pattern, to be made up in barathea, and very handsome he looked in it. When parachute holes were wanted in

Whitley bombers, Louis submitted no demand, but called on Armstrong-Whitworths; it was said that Whitleys with holes underneath were leaving the factory before he did. —This officer, complained an Air Ministry missive —has no respect whatever for proper procedure. To which Louis appended the note —I have if it proceeds.

He had two colourful characters in his Parachute School, in Harry Ward and Bill Hire, pre-war professional jumpers. They would amuse themselves as they dropped by climbing up their rigging lines, collapsing their chutes to drop like stones, then letting them go so that they opened again just before the ground came up. Their act in Cobham's Circus had been to drop together, and vie as to which would pull his rip-cord last, to a loud-speaker commentary:

—A death-defying race to earth for a purse of fifty pounds! (and we knew, said Harry, there wasn't a tenner in the gate.)

Harry had also done the Bird Man act, flying awhile about the sky, or so it seemed, on a bat-wing cloak, before opening his chute. He confided that the wings did have a just perceptible influence on the angle of fall, which from some viewpoints could give a momentary illusion that he was going up as the commentator claimed.

—The Bird Man will now sign autographs! Who knows what romance a shilling postcard may not bring?

I was alone in Mungo Buxton's office on my first day, when Peter Davis appeared in the doorway. I had last seen him flying at Dunstable before the war, where I knew him as lively, impatient, abrupt of speech, quick to laugh, but as quick to become waspish. He came in now with the demeanour of a condemned man, and his hollow answer to my greeting was —This is the end! It seemed he had taxied an Avro 504 into a hut, doing no good to its occupants, and was therefore on Mungo's carpet; I withdrew. But it was not the end for Peter, yet.

I had been installed with Mungo to carry out my first order, a welcome one: to put myself in the picture, and while I was about it, to jot down an outline of the plot—or at least that of the curtain-raiser—and whisper it to the late-comers who were trickling in. I probably failed to appreciate, at the time, the oddity of allowing junior officers to understand the purpose underlying the orders given them. Encouraged thus at the outset to reason why, some of us were to retain the habit, to the irritation of more orthodox commanders in later days. I read the files, aided by Toby Ashwell-Cooke, a founder of British gliding, who had a week's start of me—and Toby could find out a lot in a week if he tried.

It seemed that in June, a few weeks after the first German airborne landings in Holland and Belgium, Churchill had thumped the table and insisted on a British force of 5,000 paratroops, and a proportionate gliderborne force, to be ready by the Spring of 1941. For the month of Dunkirk this was a bold demand, but the top-level papers were marked P.M.W., meaning Prime Minister's Wish and no arguing. For once, War Office and Air Ministry were unanimous in conference, and knocked a nought off before reluctantly handing the task to the Director of Combined Operations. The R.A.F. contributed such aircraft as could be spared for long-term plans of attack in these days of imminent defence: four Whitleys, obsolescent twin-engined bombers, wherewith to start a parachute school at Ringway. This 'Central Landing School', under Louis Strange, began to drop its first pupils, volunteers from the commandos, in July. Major John Rock, R.E., took charge of the army side, and enjoyed the rare privilege of direct contact with the War Office. In October the set-up changed: Group Captain 'Stiffy' Harvey came in to command the newly-titled 'Central Landing Establishment', comprising Strange's parachute school, a technical and tactical Development Unit under Mungo Buxton, and a Glider Training Squadron under Tim Hervey. The new camouflaged title, like the old one, caused some confusion: one airman posted to Central Landing School had reported gloomily to what he had misheard as the Central Sunday School, and now C.L.E. had a memo from War Office addressed to the Central Laundering Establishment. For the telegraphic address, Stiffy chose 'Droppings, Ringway'.

(It need hardly be said, that though one must write of 'Stiffy', 'Nigel', 'Mungo' and 'Tim', the only names used in our junior circle, relations were not on such an Old Boy level, even at C.L.E., that any of them was ever addressed as anything but 'sir'. The one exception was while we learned, with lapses, to call Tim Hervey 'sir', a difficulty to recur when, after years, we tried to call him 'Tim' again.)

Even had it been up to its paper strength, the glider side of C.L.E. was hardly commensurate with the tasks proposed, nor likely to be for some time. A serious airborne operation would need at least a brigade; say 5,000 troops with supporting arms, transport and light artillery. We had no all-purpose civil transport aeroplane like the rugged Ju52, which had poured German troops into the Low Countries. But it is a curious fact that an aeroplane towing a glider can lift a much greater load than it could carry, if there were room for it, in its own cabin. The glider, in effect, increases the wing-area and reduces the wing-loading. The glider and its tug must be roughly matched for weight and size. To build special transport-tugs now was out of the question, and it had to be hoped that Bomber Command would oblige when it came to glider operations, though they were unlikely to divert bombers to mere glider training. To match such bomber tugs as were likely to be had, a 25-seater glider seemed about the right size. Simple arithmetic might suggest that 5,000 troops could be lifted by 200 of these; but for every aircraft that goes into battle, a surprising number stay in reserve or in the workshops: an Air Landing Brigade might need, for one operation only, about 600 such gliders, apart from preliminary training. All this was still guesswork; the War Office had not decided what an Air Landing Brigade was to be, or even whether it was to be, and was far from agreed that gliderborne troops were a good idea at all. It was certainly not enough to take an ordinary infantry brigade and merely deprive it of all items of its equipment that would not go into an aircraft (though the Italians, later, did just that). Nor did anybody know yet what the capacity or performance of the military glider would be.

Rather than defer all trials until it should appear, it was proposed to simulate it by towing a bomber with its engines stopped: a Battle, perhaps, or a Wellesley. Two safety precautions offered, though they could not usefully be combined: to empty the petrol tanks, or to fit a self-starter. Already, several little light aircraft, B.A. Swallows, had been 'sterilised' by removing their propellers, and no less than five of these had been towed at the same time by one Heyford. Their engines, it was suggested, might be removed altogether, and a passenger (unhappy wretch!) seated between the engine-bearers to restore the trim. There would have to be trial towing in cloud, and at night. A sector-light was being tested, that shone from the tail of the tug; if the glider pilot was in the right position he saw green; if too high, amber; if too low, red; but unfortunately, if in cloud he saw nothing at all. Kronfeld, the former Austrian gliding ace and founder of the Oxford Gliding Club, was in uniform at Ringway, seeking a better answer in a device to show the angle of the towrope. To determine how long a towrope should be, tows were made with excessive lengths that still dragged alarmingly on the ground when tug and glider, both airborne, neared the boundary; after progressive shortening, the opposite limit was found (about 15 yards) when the glider took the air, somewhat drunkenly, as soon as the tug revved up and before it had even moved. Among the more daring proposals for the use of gliders were, that they might carry extra fuel to be pumped into the tug before releasing; that they might be towed all the way to and from a target on which they would drop an extra bomb-load; that the glider itself might serve as an aimed bomb, the pilot presumably baling out at the last moment and explaining himself as best he could.

Slingsby was designing a 15-seater, but only as an insurance against any failure of the 25-seater. Later there would have to be tank-carriers, far larger affairs. But these were long-term headaches, and not ours. Training came first.

The training glider, like the troop-carrier, would have to be matched to the tugs likely to be available: standard trainers like the Miles Master, or obsolete biplane fighters like the Hart variants. About the biggest troop-carrier that these could pull would be an 8-seater, with a wing-span of 50 to 60 feet, no more than that of our existing two-seater sailplanes, but the wing-loading and the speed would be much higher. As well as for training, it might have to serve for operations, and several purely military requirements were written into the specification, to which General Aircraft had designed the Hotspur. A blind order had been given at the drawing-board stage, in June; it had to be hoped that the Hotspurs would fly when they came. Being of wood, they could be built in furniture factories, and so not interfere with war production. Nevertheless it might well be a year before they reached us in useful numbers. All we could do in the meantime, then, was to commandeer a mixed fleet of single- and two-seater sailplanes (that is, comparatively high-performance gliders designed to stay up, not merely to come down), tow them with light aircraft such as Tiger Moths, and train as best we could a nucleus of glider instructors and tug pilots. We would have to devise a syllabus and a patter book, a marshalling and launching procedure; we must moreover train ground crews, and regular engineer officers who were a conservative lot, in the ground-handling and maintenance of a kind of aircraft for which there were no rules in the book. There were no Pilots' Notes, no Maintenance or Repair Schedules for gliders. A service pilot must never take off without first signing Form 700, but observance of its terms would prohibit a motorless aircraft from taking off at all. I remarked that *King's Regulations* made only two references to gliders: officially, a glider was either a wandering obstruction which at night must display a red light visible in all directions, or an approved way of getting killed in service sport; if a serviceman was killed in a glider at a civil club, it did not count.

—We will rewrite *King's Regulations*, said Nigel Norman grandly.

The Glider Training Squadron fleet, even in war-paint and roundels, looked unimpressive among the big black Whitleys in the Ringway hangar. We had seven single-seaters, three of them made in Germany: Philip Wills' stately Minimoa, her lovely polished pale gold spruce about to be sprayed with dreary, drag-making camouflage; the Pasold brothers' Rhonbussard, and Eustace Thomas' red Condor. This last was suspect, and not being flown, though there had been good reason for accepting it. On the eve of the 1938 competitions at Dunstable, Eustace had hit the hillside, cracking the fuselage. With a large crowd and the press watching, his one thought was to get it out of sight. With an axe, he chopped it into two sections and had them hurried away, leaving some vital fragments on the grass. No drawings existed in England, so when it came to repairs, the only guide to the original length of the fuselage was the arguable length of the cut and kinked control-cables. The Condor being now perhaps a foot too long, or too short, its behaviour was unpredictable. The Air Ministry had accepted it as a gift from Eustace, only because the offer included the cost of a new Spitfire. We had one of Roy Scott's two Vikings, the latest thing in design when war broke out, and three of Slingsby's strutted, gull-winged, open-cockpit Kirby Kites. We had one Viking two-seater, but not for long: it shed its ailerons during an aerobatic orgy by 'Wilkie' (A. B. Wilkinson, of the Imperial College Gliding Club, and a regular R.A.F. instructor) whose Corporal passenger had never been in the air before; Ringway saw two unscheduled parachute drops, the first from a glider in British history. More requisitioned Kites were coming in, to become our standard type. One had been politely refused, together with the proffered services of its owner-pilot; a registered conscientious objector (and respected as such) he had intimated that he might overcome his scruples and serve, on the understanding that his war effort should be confined to non-combatant flying in his own glider.

All the trails that Buzz and I had followed had been false ones. The Kestrel had indeed gone to Cardington, and if we had been there on the right day, we might have seen it taken aloft under a balloon, and cast adrift unmanned, on its first flight for years and its last flight ever, in the hope that empty gliders flying at random would make good targets for anti-aircraft guns. As there were at least a thousand man-hours in a normal glider, a hit would be expensive. Grice was therefore knocking up some cheap, flimsy, bulbous ones that might cost no more than the ammunition expended in bringing them down. Even the old Kestrel, if she happened to fly in a straight line, should do some twelve miles from a launch at 5,000 ft, so it was to be hoped that the artillery ranges were amid lightly-populated parts.

As for the trail of Mungo Buxton, it seemed that in June he had taken a detachment with gliders ('Mungo's Circus') to the South coast, where they had been aero-towed far out to sea, and released to glide back; the object was to learn whether our R.D.F. (as radar was then known) could spot a German gliderborne invasion, a real possibility, for the enemy was believed to have two airborne divisions already in being. Slingsby had built for these trials a special non-metallic Kirby Kite, with wooden push-rods instead of control-cables. Mungo's Circus had bequeathed us a few gliders and an Avro 504, together with glider pilots Peter Davis, Robin Fender, Dougie Davie and Cyril Ruffle, but apart from this, none of these prior activities had anything to do with those now planned for us.

We boasted a Headquarters and an Orderly Room, housed in bleak compartments inside No. 4 hangar. The Orderly Room was manned by two clerks whose qualifications were identical: they had both failed a clerks' course. In their first day they put our one typewriter unserviceable. Fortunately Toby and I both had portables; we collaborated with Tim to draft out a scheme of training.

A firm faith existed at higher levels, diminishing towards the lower, that the only operational task for a glider pilot would be to follow his tug, (and what else could he do, day or night, unless the rope broke?) release the rope, steer the thing for some miles, and crash-land at his objective. How he was to find the objective was not stated. He and his passengers would then emerge unhurt from the write-off, and the enemy would be surprised. (So would we.) It is significant that in 1940 he was not even to be called a pilot, but a 'glider coxswain'. We were for a start to train some 400 of these simple stalwarts by the end of 1941. One school of thought still had it that the initial training could all be done on nacelled ground-hoppers such as the pre-war clubs bought for £50 apiece; if any dual instruction in aeroplanes were really needed, five hours would be ample. The opposite school, strongly represented by Toby, had it that coxswains would need at least 75 hours at an Elementary Flying Training School (its syllabus slightly modified) before even seeing a glider. Tim's report plumped for this view.

Sergeant Pop Furlong and I were detailed to instruct our newly-arrived ground crews in the art of rigging, inspecting and de-rigging a glider. A Kirby Kite is strong in the right places, and better-built than most aeroplanes, but its wings should not be walked on by anything heavier than a cat; its trailing-edges and tailplane are not designed as lifting-handles, and if its wing-root pins are stiff to insert, it is better to polish and grease them than to slam them home with a 20-lb. sledgehammer. The rude mechanicals eventually grasped these novel principles, but Pop and I gave them a hand in the last rigging operation of the day. That was a mistake. Peter Davis, taking this Kite out to fly it, was stopped by our new engineer officer.

—That one can't fly. It's unserviceable.

—Oh? What's the matter with it?

—It's been rigged by unqualified personnel.

Meaning Pop and me. This officer—and I do not suggest that his attitude was abnormal on that occasion—was not to be with us for long. Our Group Captain, though a winged pilot, was also an engineer officer. Relying on the recognised freemasonry of this branch, the newcomer ventured a confidential aside to his fellow-plumber C.O., somewhat to this effect

—Of course, old hands like you and I, sir, can see that this airborne forces idea is nonsense, but it's a cushy job, so we won't let on, will we?

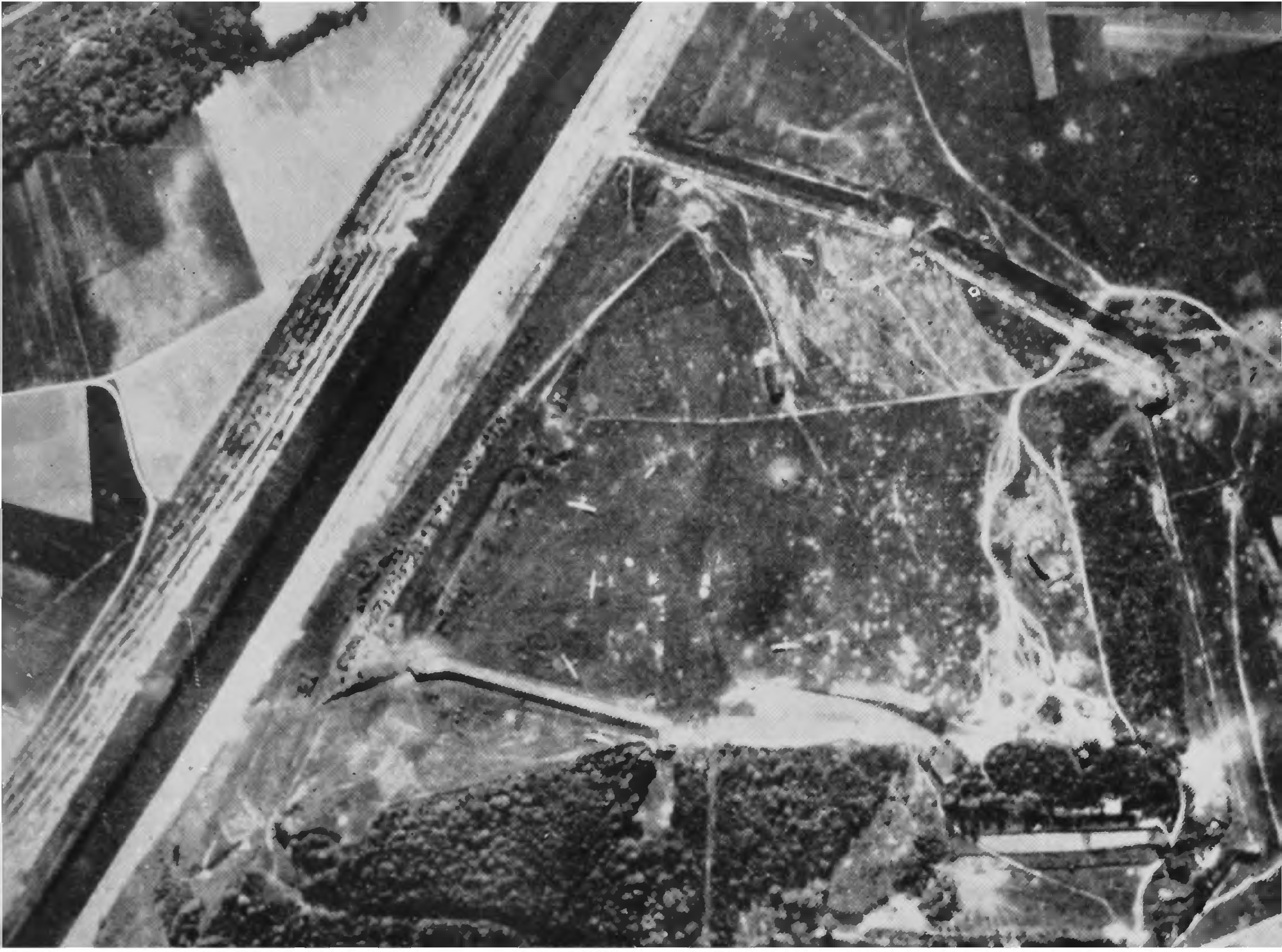
To his astonishment, he was fired on the spot. He went straight to bed with a 'heart attack' brought on by the shock; a diagnosis not borne out by the quantity of beer sent up to him from the bar until the hour of his going.

Days passed before I came face to face with the Group Captain. Four rings were a rare and awful distinction then, and to be summoned without warning, and alone, into the presence, induced guilty forebodings. The door of the Throne Room bore an ingenious bell-push that lit up a sign that sometimes read COME IN, at other times SEE S/L ADMIN. I got COME IN, and a profuse apology for having been brought all this way (it was perhaps two hundred yards) to raise a minor point; but would this photo gear I was askin' for cost more than fifty quid? because he had only fifty a day for sundry shoppin'—fifty would cover it? Good; terribly sorry for botherin' you like this, and thank you so much. Do let me know if I can help at any time.

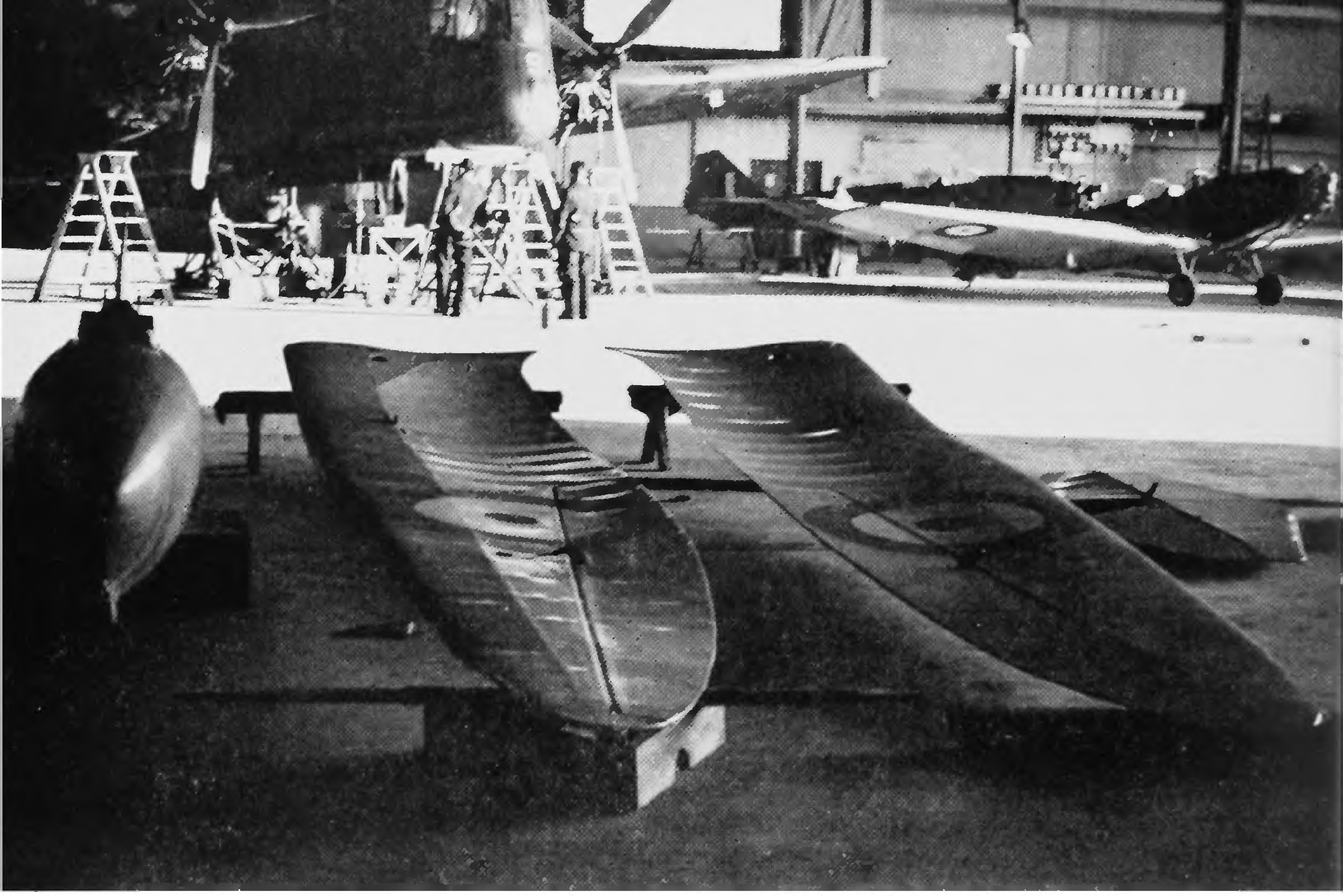
And in such manner we were ruled by Stiffy. We certainly contributed to his headaches; a regular, with an engineer's special orthodoxy despite his breezy address, he must have blushed at times when excusing to his superiors the oddities of a unit that ran its affairs on the casual pattern of a gliding club. He did just once complain mildly, in the mess, of the burdens he bore, but the newly-arrived glider pilot Buster Briggs made short work of that:

—Well, sir, that's what they gave you four rings for!

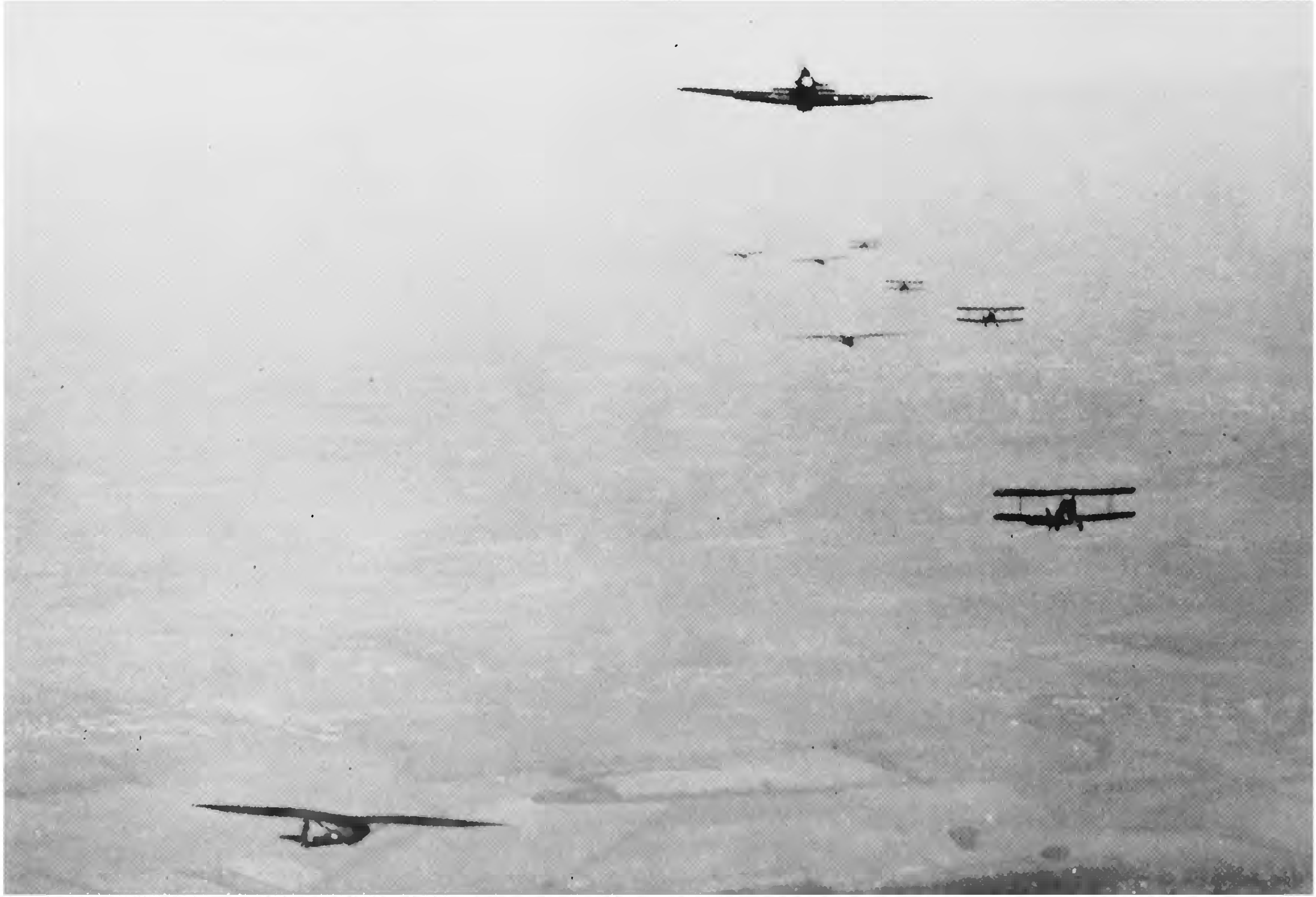
Tim Hervey was the obvious commander for the new unit. A Royal Flying Corps pilot with a Military Cross, he combined the patience acquired behind German barbed wire with the resource needed to get outside it, as he repeatedly had. It was to teach this very art to others that he had lately resumed uniform. Between the wars, he had flown every kind of aircraft that existed except, to his regret, balloons. —But have you ever done a parachute jump? somebody asked him. —Do you know, he answered —I never *really* felt the *inclination.* He pioneered circus flying in Australia in the days when the public disapproved to the extent of throwing bricks; he had belatedly found one inside a wing. On the huge mountainsides of Geelong, near Melbourne, he had soared open ground-hopping gliders as if they had sailplane performance. As Chief Flying Instructor at Dunstable, he curbed our suicidal tendencies to the limited extent that our all-solo system allowed, and when we sinned in his sight, his reproof was none the less effective for being restrained: when a German pupil had completed, and barely survived, a flight that might have been a court-martial affair in Germany, Tim's only comment, accompanied by a sad head-shake, was —Oh, Mr. *Koch*! and perhaps this mildness was to prove a flaw in the eyes of his superiors. Our new Establishment gave him Squadron Leader rank and command of about two hundred in all. John Saffery, late of the London Gliding Club and now in the Fleet Air Arm, was to be his Chief Flying Instructor. I was to fill the unglamorous role of Chief Ground Instructor: in good weather, I would have half of the pupils on my hands, and in bad weather, the lot. All the flying I seemed likely to get was an occasional circuit in a two-seater glider. The last thing I expected was to go dicing in a bomber, albeit bombless and over home ground, within my first week. But my camera got me a job. R.A.F. Photo Sections could take miles of air-survey pictures at short notice, and print them by the gross, but they did not shine at tasks that were not in their book, nor did they have miniature cameras which at times are indispensable. My Leica and my Bolex were in immediate and continuing demand, nor did I object to an extra chore that was to give me a front view of many interesting events. To be exact, it was a back view on this first occasion, and a dizzy one at that. The parachute training, it seemed, had run into trouble. A door at the rear of the narrow dark Whitley fuselage led on to a small open-air platform, whence the rear gun-turret had been removed. There was just room for two to stand there, but the hundred-mile-an-hour wind was disconcerting. From here the first drops had been made, by the old and simple method of pulling the rip-cord so that the chute opened and dragged the victim off. At least he had the assurance that his chute *was* open from the start. But the method was not liked, nor could more than one man drop at a time. A stick of paratroops should be dropped close to each other and to their equipment containers, for quick assembly. Therefore the drops were now being made through a hole in the floor; ten men could go down in about ten seconds, from 300 feet, the first and last landing about 500 yards apart. After 135 drops, the next had gone into the earth of Tatton Park with a partly-opened chute. At a demonstration next day for Sir Roger Keyes, Chief of Combined Ops, dummies had been dropped instead, and three more chutes had failed. 'Static lines', anchored to a bar in the aircraft, were being used to pull the chutes automatically from their bags; the next failure came when a bar pulled out, and went through the hole to follow three more dummies with closed chutes. One Whitley landed with a dummy that might have been a man, hung on its tail. By October there had been three more 'fatals', and some thirty refusals to jump. A camera might show what was going wrong. My job, then, was to stand on the little open platform and photograph or film every chute as it came past just below. The fuselage was crammed with troops, so I had to stay on my perch throughout the take-off. Though I tied myself unobtrusively to the aircraft, there was a limit to leaning out, and the chutes were always fully developed before they came into view. Had one failed, the camera would have missed the crucial moment. Nevertheless these fruitless flights gave birth to an idea that was to find good use long after. The view astern, when the Whitley was just above the treetops, made an exciting film, marred only by the fact that, like the Great Woofle Bird that flies backwards, one could be interested only in where one had been. But to reverse the film was to produce a replica of the pilot's forward view—had he been going the other way. There was a practical use for this. Pilots of parachute aircraft have a special navigational problem. Drops with the 'statichute' were made from 300 feet, low enough for accurate jumping, high enough for safe opening. While the aircraft was settling down to its proper height, low speed and tail-up attitude, it might fly several miles. If it were off course by even a hundred yards, it could not swerve back at the last moment. For some minutes, then, the pilot or the navigator must anticipate and recognise every village, lane, crossroads, as they flashed by. Why not make films of complete approaches, to be screened for map-



The first German glider operation: Fort Eben Emael, on the Albert Canal in Belgium, was captured by airborne troops in May 1940. Gliders landed inside the fort, carrying demolition squads who blew in the gun cupolas, and breached the defences for the entry of troops landed or dropped outside them. Churchill promptly demanded a British airborne force. But the first of our military exercises with gliders, in October 1940, (below) could muster only two single-seater sailplanes. (In front, left to right: Furlong, Wilkinson, Rock, Buxton, Davis and Norman.)



Ringway, Manchester, October 1940: A Kirby Kite has been dismantled for painting with camouflage and R.A.F. roundels. Behind it, a Parachute Training School Whitley, and two B.A. Swallows from which the propellers have been removed for trials in which they are to simulate military gliders. (Below:) The Air Fighting Development Unit at Duxford tests the chances of shooting down German gliders, and seeks tactics for our own glider pilots, in February 1941. A Hurricane, flying slowly with flaps down, has just 'destroyed' with its camera-guns a formation of Kirby Kites towed by Tiger Moths. But once they had released from tow, the gliders were not such easy meat.



reading practice; and one day, for operational briefing? Picking several objectives, we flew *from* them in turn, as low as the pilot would go; quite low enough for me, although I knew that we could not hit any of the treetops or spires that *I* saw. It worked. In any case, it made an exhilarating introduction to a career that seemed likely to be spent mainly indoors.

Another event of an eventful first week was the first glider exercise in British military history. Although, as Mungo put it, this verged on the unimportant, it brought staff from the War Office to observe this new form of warfare. Two companies of sappers were to land in gliders alongside a railway viaduct near Macclesfield, and blow it up. As troops, explosives and troop-carrying gliders were all lacking, the force was to be simulated by two single-seater gliders, Rhonbussard and Kite; the viaduct at least was real. Nigel, accompanied by Pop as ground observer and myself as photographer, was late in leaving Ringway, and as we sped along a lane to the objective, the gliders were already in sight. As we scrambled up the high embankment Nigel gasped out

—What time are they due to land?

—1430 hours, sir. (But in those days I more likely called it half-past-two.)

He altered his wrist-watch with care, then we emerged on to the tracks. They were side-slipping in over the hedge below as we joined the little group, and at the exact moment of touchdown, Nigel displayed his watch under the War Office noses:

—1430 hours precisely, gentlemen!

Although these gliders had no wheels, two civilians had always been sufficient to drag, and three ample to lift one. It was interesting now that seven officers and one n.c.o. should be employed. It was also noteworthy that, 45 minutes after the landings, the local Home Guard remained indifferent. Reaction had been quicker a few weeks before in Bedfordshire, when Home Guard and police had converged promptly as my two-foot-span model landed on Flitwick Moor. I was to be back on that home ground sooner than I deserved: after only ten days came 48 hours' leave, barely time to hitch-hike home, but Mungo was going south in a Magister; we dodged up the Pennine valleys under low cloud, across invisible shires, and he dropped me on the deserted flying field at Barton-in-the-Clay, almost in sight of the cottage. If service life always went on like this . . . but it didn't.

An ordeal was looming up that could no longer be avoided. Despite the informality of life within C.L.E., its officers were required to attend the Station Commander's weekly parades. Not having the faintest memory of any evolution more complex than forming fours, and assuming that some sort of rehearsal would be arranged for new boys, I cut the first parade. Finding that no official guidance was to be expected, I repaired with Wilkie to a pub, where he outlined the customary manoeuvres. These were rehearsed later, in armchairs, with a couple of others as ignorant as myself. But the next parade was to include an inspection by the Vice Chief of the Imperial General Staff, so we judged it prudent to cut that too. According to Stiffy, a dialogue between the V.C.I.G.S. and a newly-posted A.C.2 went thus:

—And how long have you been gliding?

—Gliding? *Me*, sir? Never 'ave, sir.

—Then how long have you been here?

—Since yesterday, sir.

—And how do you like it here?

—Don't like it at all, sir.

Slightly taken aback, but still trying, the V.C.I.G.S. turns to Wing Commander Buxton.

—How many men have you on parade?

Mungo does not answer. For the next few minutes he is seen to be craning his neck to see to the rear rank, whilst totting up on his fingers. By the time his estimate comes out the subject has been changed, and no meaning is conveyed.

But Stiffy's stories were not to be taken too literally. Mungo might indeed have gone to an Air Ministry conference on his bike, but not surely with a beehive on the carrier? One might say that Mungo's unquestioned brilliance as an engineer and skill as a pilot did combine with a touch of unorthodoxy. But Mungo commanded our especial respect, for had he not taken the tricky little Scud sailplane, with only an airspeed indicator and an altimeter to guide him, into a huge black storm-cloud over Sutton Bank, and having been ejected from it in a spin, gone in again to be tossed up to 8,000 feet? That record stood for four years, until Philip Wills, in the comparative comfort of the stable Minimoa, added a couple of thousand feet in 1938. A club of former Scud owners might have been formed within C.L.E., for Peter Davis, Pop Furlong and I had all at times owned or shared that little flying canoe. We had puzzled over the purpose of some fine copper pipes that opened flush with the wing surfaces, until we learned that Mungo, wearing a stethoscope while he flew, had plugged this in to a miniature telephone exchange on the instrument panel, to listen for the stall at various points on the wing. The most notorious of all feats in the Scud was, alas, mine; for I had all-too-memorably landed it upside down in the bison paddock at Whipsnade Zoo. —Keep an eye on those bison! the curator had warned, quite unnecessarily, from outside the high fence —Two of them had a fight to the death last week!

At the third opportunity to parade, it was made clear that absence would be a court-martial offence. About eight of us lined up, standing at ease, in a separate formation, awaiting the rehearsed orders. At the last moment, the C.L.E. officer detailed to command us was missing. A runner sent to the mess brought a panting substitute. He knew his drill, but unfortunately it was not ours—not the one we had sketchily memorised. This led to complete confusion. Robin Fender, believing that when given an order you must do *something*, you can't just stand there, was responding so smartly that we assumed it safe to imitate him. The outcome left us in line, rigidly to attention, but with our backs to the parade. The hundreds ranged round the square waited in a long tense silence. Eventually a scarlet-faced Warrant Officer was literally putting us in our places, one at a time, like tailor's dummies. Marched off at last, we became orderly, kept step, began to hold our heads high. But a long strip on the parade ground had been ploughed up and sown with cabbages, and our line of march exactly coincided with its major axis. We did that crop no good as we tripped and stumbled through it, impeded by swinging gas-mask packs, rolled gas-capes and steel helmets. Little Kronfeld, in his oversize greatcoat, nearly went down. It was almost too silly for laughter, and having no taste for public clowning, most of us ignored the parades thereafter; the Station Commander seemed to prefer it that way.

Judging that any intelligent recruit should be interested to know (as the incoming glider pilots had been) and would work the better for knowing, what long-term purpose lay behind the job, I was giving a short talk to each new batch of airmen destined for glider work.

—You're wasting your time, said Robin Fender —all they want to know is what time the Naafi opens.

Scorning such cynicism, I persevered awhile, but how right he was! and even after his rightness dawned, I was still green enough sometimes to question a new man as to his special skill, seeking to keep square pegs from round holes. Not that the precisely right job was available for everybody; the Pastrycook's Labourer, for example, whom we detailed to the cookhouse, complained of misemployment when they put him to carrying meat. I did not expect literacy from clerks, after our first two, but again I went wrong: to one who served me for weeks, I continued to spell out the hard words, until I learned by chance that he had been a lecturer in history at the University of Bristol. One sometimes heard jibes at those who missed no chance to fix themselves up with better jobs. If a better job means a more responsible one, I would think this an able man's duty. Criticism might more justly have been aimed at those who let their skills be wasted in dead ends. In these days of expansion, it was a rare unit that did not have some worthwhile place waiting to be filled, if the right man would come forward and speak up for himself. A posting is not an inexorable Act of God, even at A.C.2 level, and any fool can remain a passive misfit. There might be an occasional masochist, some latter-day Air Mechanic Ross or Private C. E. Montague, revelling in self-abasement or at least in freedom from responsibility. But I came to see that the potential Squadron Leader caught in the toils of the sanitary squad, his protests ignored, was a myth.

Our establishment was filling, but we could not take the air. Glider training does not mix happily with other kinds of flying, least of all with such droppings and testings as went on at Ringway, nor was Manchester weather ideal, and G.T.S. had to be found an airfield of its own. (Our interim plan to take a detachment to Long Mynd, the finest soaring site in the country, 'to practise uphill landings', had surreptitiously advanced to the stage where a Movement Order could be presented nonchalantly to the C.O. for signature, but he tore it up on the grounds that there was a war on.) In times like these, gliders were unlikely to be given any bit of ground that could possibly be flown from by anything else. We might perhaps get Inverness, about 750 yards long, with 70-foot radio masts on one side, a tall chimney at one corner, and nearly surrounded by mud-flats. Of several such fields, the least uninviting was Side Hill, an emergency landing ground at Newmarket. Bombers operated from those parts, but their Group did not object to us provided we would knock off at nightfall. The surroundings gallops offered ample margin for pilot error. Sam Darling's desirable and almost empty training establishment adjoined the field and could be requisitioned. Side Hill was agreed, and in mid-November our advance party moved in.

Squadron Leader Admin came down from Ringway to discuss our affairs. Joined at the bar of the Rutland Arms by an authoritative civilian whom everybody assumed to be from Air Ministry or Works or something, and to be known to all the others, the conference adjourned to a private room. The newcomer was taciturn but attentive. He was staying, he mentioned, in Room 3. He was never seen again after the meeting, and Room 3 proved to be one of the public rooms on the ground floor. It was unanimously agreed that nobody had said anything that really mattered.

A detachment with two or three officers cannot be operated in watertight compartments; they have to muck in. Thus at Side Hill the erection of latrines fell to me. A load of buckets had arrived, and the same number of whitewood seats, but no supports for the latter. The queue of airmen at the stable-lads' latrine was long and restive. —Never sit down to eat until your men are fed, said military tradition; did the same principle apply? The design of an eight-holer should be within the powers of a Bachelor of Architecture, but to be sure of conformity, I turned to the *Field Service Pocket Book*, my father's copy which I had luckily thrown into my bag as I left civil life. This compendium covered everything, from First Aid to Last Post. True, it was a War office publication, but the facts of sanitary life must be much the same in the Air Force of 1941 as in the Army of 1914.

Sure enough, it gave a clear diagram of a multi-holer, extensible at will. Having the seats, we needed only so many feet of three-by-two, so many of two-by-two, and a few pounds of nails. How did an isolated unit do its shopping? It would be no bad thing to know the drill for that. I discovered the machinery of the Local Purchase Order and set it in motion. I would need transport too; warming to my staff work, I was soon versed in the use of Form 658, which produced a truck. Meanwhile an n.c.o. could be deputed to improvise the enclosure: who better than my late gliding partner Sergeant Furlong? Pop received this order with a straight face but with an ugly look in his eye. Timber proved scarce in Cambridgeshire, and Local Purchase Orders unfamiliar currency, but at last, glowing with competence, I arrived back with my load—to find the latrine already complete and in operation. What you had to do, explained Pop patiently, was to take each wooden seat so, and put it on the top of a bucket so, and sit down so. —Where did you want all this timber, sir? asked the truck-driver. Pop's face was as expressionless as before, but his eye was now calm, almost happy.

In off-duty hours at Newmarket, our newly-qualified Adjutant compacted with me to learn the essentials of *King's Regulations* by a process of question and answer: pay a halfpenny if you don't know, take threepence if you do. There were some safe halfpennies to be had, as

—What is the procedure for the burial of Jews at sea?

I also found time for Art, and I drew a rather fine picture in soft carbon pencil. I have never wanted to draw in the style of any other artist, but if I did, it would be after Muirhead Bone. I had seen a magnificent Bone subject one night in a hangar at Ringway. A little group of our gliders, their wings nicely intersecting, lay in a pool of light in the foreground. Behind, towering into the darkness, loomed a monumental bomber, unprecedented in that it had *four* engines; even the huge hush-hush Manchester had only two. This one was so new that it was nameless, so secret that civilian technicians ordered uniformed officers away from it. I had not dared even a hasty sketch on the spot, but it seemed allowable to concoct the scene from memory at this safe distance. Pop put me right on one or two details, though I doubt if Short Brothers would have recognised their Stirling.

Then, after a fortnight of preparation, before one glider had taken the air at Newmarket, we were recalled to base. It was popularly (and I hope wrongly) believed that it was an influential member of the Jockey Club who was behind the order; perhaps some descendant of that Baroness Burdett-Coutts who, told of a riot, had said that she didn't mind what the people did, so long as they didn't do it in the streets and frighten the horses. G.T.S. was homeless again.

Arriving late at Ringway, I hurriedly dumped an unwanted bag in the office and was driven to my billet, unconscious of fateful events pending. The Station Commander, hearing of loaded revolvers and secret files being left overnight in unlocked rooms, had planned a police swoop, and that night it swung into action. Toby reported that there was an ominous atmosphere as the Station Commander's weekly conference assembled next day. A biting speech about slackness in security matters was directed towards our Group Captain, whose extra stripe alone seemed to protect him from stronger terms. The climax came when a flat parcel, swathed with string and sealing-wax, was opened. At the breaking of the seventh seal, my drawing emerged. There was a shocked silence. —Poor old Lawrence, thought Toby—after only three weeks' service . . . then at last the Group Captain spoke:

—I don't know what you gentlemen think, but I think it's bloody good. Tell Wright I want it for my mantelpiece, and to make a copy for the Imperial War Museum.

And that was that.

Next day came another parachute failure—with dire results, as Harry Ward put it, to the poor coon on the end of the string. Harry had been impressed by the quickness of the padre, watching the drop, who had his hat off before the victim reached the ground.

A new way had occurred to somebody of filming all the drops, until the causes of failure should be found. A net of rope would be slung below the open bomb-doors, in which a cameraman would lie prone, head aft, submerged in slipstream. His tummy should just clear the grass during take-off and landing. A job for a smallish cameraman, one about my weight, I guessed. It seemed to me more urgent than ever that G.T.S. should move off to a new home, and I with it, as far as possible from Ringway. Tim and Toby had been looking at a promising field at Haddenham, near Thame in Oxfordshire. A timely decision that this would serve—had it been much bigger we could not have had it, had it been much smaller we could not have used it—sent me there, immediately after Christmas, to join another little advance party.

# 3 SILLY HADDENHAM

We now had a Royal Air Force station all of our own. In the dismal light of a wet winter, it looked a small field; less than half a mile each way. There were trees on two sides, a factory in one corner, and on a third side a deep railway cutting that recalled the title of the surrealist picture 'Garden Aeroplane Trap'. When a train passed, a wall of steam rose in the cold damp air and blotted out the approach view with a suddenness that promised to be disconcerting. The run was ample for Tigers, which could pull sailplanes out of half its length, but it might be tight for the eight-seater when it came. There were no tracks or paths; you drove in through a field-gate across a threshold of mud and cowdung. The ground varied from old ridge-and-furrow, alternately hard and soft, to patches of new grass and standing pools. The normal test for an airfield surface, to drive a car across it at thirty miles an hour 'without discomfort to the passengers', was unthinkable. To make it finally and completely uninviting to incoming (enemy) aircraft, the field was dotted haphazard with old motor-cars; it looked like the fairground Dodgems when the current is switched off. These had been wheeled into place, but few would ever be wheeled out, for the tyres and wheels had been plundered, and the relics stood forlornly on their brake-drums or axle-stubs. A tractor had lately begun to haul some of them away, ploughing great furrows in the squelchy turf. There had been immediate outcry from the local defence headquarters, at this laying bare of English soil to the invader, so the tractor had resumed more productive ploughing, and the obstructions stayed. There was a tiny hangar for light aircraft, three of them if their wings folded; but no other building, not a hut, not a tent, and of course no services. The solution to the latrine problem was the same as that offered in the French inn where the *patron*, opening the door with an expansive gesture, cried —*Mais monsieur, vous avez toute la France*! We ploshed around, paced out a hangar site, talked of field-drains and hard-core and tree-felling. We explored the straggling village, famous in legend as 'Silly Haddenham' where they had thatched the village pond to keep the ducks dry, and had filled in a pit that obstructed the common, with earth obtained by digging another alongside. We found billets, and our advance party settled down in this reputed home of absurd undertakings.

Thanks to the hospitality of a local searchlight battery, our airmen were quartered awhile in the Workhouse, its paupers gone, but overcrowded with troops to the extent that, as Orderly Officer, I found ours standing up to eat a midday meal of bully-beef sandwiches in a heavily-disinfected wash-place; the routine call of 'any complaints?' met with silence. Nor did our host the Battery Commander ever allow us to forget that when our Group Captain paid a visit there, he remarked that he supposed it wouldn't do the chaps much harm to pig it for a bit. (—Do you do Orderly Officer duty, like the real Air Force? asked my billet hostess, whose son was a regular.)

On the frosty morning of New Year's Day 1941, when our squadron was due to fly in, the motor-cars were still there, by reaffirmed order, black hulks all over the white ground. Taking the chance that Hitler's airborne armada might seize the opening offered, we had just one row of wrecks hauled to the hedge, making a landing-lane. Labourers from Silly Haddenham, called in to help, took naturally to the task of making furrows and filling them up again. As there was no windsock, and nothing to mark the airfield as such, we gathered armfuls of aeroplane bones, a legacy from the Aylesbury Flying Club, and built a bonfire. The warmth was welcome while we waited, and refuelling generous. Nearby we made a pile of rubber, leather and horsehair soaked in engine oil, ingredients ready to hand on all sides. When our air fleet appeared as specks to the north, we flung this foul mixture liberally into the white-hot embers. The effect was magnificent. Dense cauliflower clouds of stinking smoke rolled downwind, but instead of guidance and welcome, caused utter dismay to the incoming pilots, who assumed a fatal crash.

Landing rather reluctantly, they bounced in across the ridges, meandered away between the obstructions, and lined up at dispersal: five Tiger Moths. Our war was on.

Five Kirby Kites arrived by road in their assorted trailers and were rigged in the open. These being now in uniform paint, the riggers were unable to distinguish them apart, and assumed them to be identical. They were not, and when for instance Ann Edmonds' struts were fitted by brute force to Donald Greig's wings, and vice versa, one Kite would have double dihedral, the other a sorry droop. Fortunately the Kites seemed to fly much as before. A wood-and-canvas hangar of 1914–1918 pattern was rearing its ribs, but its canvas was needed to cover stores, and for the first time in their lives the Kites passed a night in the open. Overnight snow fell thickly, and it lasted for a week. It is difficult now to think that we need have hurried, but early next morning while the navigation lights of the Tigers were still bright against the sky, gliders and tugs were being brushed and scraped free from snow and ice. Pilots in Sidcot suits plodded out like figures from Scott's Last Journey, and their Tigers rattled aloft and circuited through snow-squalls under a low grey ceiling. The first glider was towed away in a slipstream of snowdust, and its pilot was unthankful for his open cockpit, though he would have fared worse under a blinded hood. A row of mufflered natives watched from the fence, and when an over-zealous young officer strode across to warn them away from our secret activities, they forestalled him cheerily with —How much for a ride, son?

Cover was found for the C.O. and the Adjutant in a little study in the retired Colonel's house hard by the field. Lone outpost we were, but not forgotten, for a despatch rider roared up with a Priority signal from Ringway, reporting the take-off of the Tigers that had arrived the day before. We took the Colonel's garage as a guard-room, and his car stood in the open. Lorries turned on his gravel drive. Men came to fell obstructing trees, misread their orders, and had made timber of half the Colonel's elms—which unless the house were to be felled too, could not possibly have affected flying—before they were stopped and re-directed. He took all this, though after a week he did put in his bill for depreciation, at the rate of sixpence for the first day, a shilling for the second, and so by daily doubling to a total of three pounds three and six for the first week. We acknowledged this document and filed it.

A bell-tent rose on the field, completing the South Pole picture, but it was reserved for rustable stores. Huts were issued only on Priority, which was something we did not seem to have. A builder's yard in Thame (improper channel) yielded our first one, which became both Glider Repair Shop and Crew Room: to get to the stove you ducked under a Kite wing, into a crowded den hung with steaming Sidcot suits. When the snow gave way to mud, the busiest corner of the field, at the entrance, revealed itself as the Natural Catchment Area, and there was hurried trenching and piping. Tractors sent out to retrieve gliders were doing no good to the ground, and we seriously considered using a horse for this duty. There was some precedent: the Germans on the Wasserkuppe and the Midlanders on Long Mynd had both done so. Indeed, the Long Mynd horse had not only retrieved gliders but had launched them: a rope ran from its harness through a pulley, and returned to the elastic 'bunjy' hooked to the glider; the horse moved away from the brink of the hill, and the glider, when released at the tail, was catapulted towards it. The ballistics depended on the mood of the horse. When it felt lazy, the glider would barely slide over the brink, and had to toboggan to get flying speed. When it felt fresh, one horse-power could fling the glider skyward at a surprising rate. Once, the horse went off at such a spanking trot that the elastic snapped, flew back through the pulley, and dealt it a resounding smack on the rump, so that the trot became a panic gallop and the horse itself had to be retrieved, from a distant quarter of the moor. But in simple haulage there would be no such risks. Who could say that we might not in time train our roundelled horse as a true retriever, to trot unbidden to each glider as it landed? But our proposal did not get far along the channels. No horse arrived to add to the legends of Silly Haddenham.

We moved Headquarters to a bijou semi-detached in Thame. Paper was flowing in, and our files were growing. The choice of titles for new ones, needing some judgement, was left to the Orderly Room; thus one file called 'Airborne Forces' was already a foot thick, another called 'Blue Webbing Gaiters for Airmen' held a single quarto sheet, though admittedly on that very subject. We learned that the rules as to who could write what, how, and to whom, were cramping; but that you had only to put 'D.O.' (demi-official) at the top, and you could write what the hell you liked to anybody, and keep the whole matter to yourself in your own D.O. file; an admirable custom. People like Nigel seemed to handle all the really important things on a D.O. basis.

We already suspected that Army Co-operation Command did not intend to let co-operation with the Army in this glider business lead to such expansion as might make it an embarrassment to them (though I did not see, until long after, the document in which it was put almost in those words). When we wanted equipment, 'proper channels' proved to be dry wadis. It was, typically, Toby Ashwell-Cooke who showed the way to get things quickly: to call in person at Air Ministry, fill in a pink slip, and contact the right Wing Commander or Group Captain. —I'm afraid I've no proper authority, sir, but I'm told you can help us. This opening always produced a cup of tea and an affable chat. Every corner of every corridor at Adastral House had a little room devoted to brooms and tea-brewing. One might be introduced to other willing helpers, taking tea with each, and within the hour emerge with a typewriter, or cans of film, or the printing of one's Glider Training Manual in a format that would impress but puzzle Group H.Q. when they were allowed to see it. It used to be said that the safest place in a raid was Air Ministry, 'The House of Shame', because the enemy would never be so silly as to attack an ally; perhaps that sneer had stung them, so that they set out to disprove it.

It was Toby who instituted the C.O.'s Weekly Conference. About half of those present being former members of the committee of the London Gliding Club, the procedure tended to be similar:

—Oh, no, sir, you can't do that. What we decided . . . I mean, what you agreed last week, sir, was . . .
but this democratic institution did not outlast Toby's departure.

The informal air of the camp was matched by its inmates, the instructors-to-be—and a rum lot they were, as the Devil said when he first saw the Ten Commandments. Their clothing was the opposite of uniform. All of them glider pilots, hurriedly secured by posting, by attachment, by seconding, or by shadier means, from various levels of the various services or direct from civil life, they included four comparatively seasoned and winged Flying Officers: Peter Davis and Wilkie, to be Flight Commanders; Donald Greig, and Freddie Gardiner (Battle of Britain). Pilot Officer Robin Fender was not yet winged. These officers' caps ranged from bandbox freshness to filthy operational shapelessness; Robin's would have looked well on a French platelayer. The n.c.o.s were Pop Furlong and Cyril Ruffle, and the R.A.F. contingent was completed by Buzz Lacey; all three were in due course to be commissioned and winged. In khaki we had Lieutenant Buster Briggs in Guards uniform and moustache, C.Q.M.S. Roger Dixon (Civil Air Guard), and Gunner Turner, who as a civil engineer had worked out the stressing of the Wren sailplane from basic bridge-building principles, and had owned an aeroplane; so had Toby, now self-styled the 'Technical Adjutant', hiding his humble Army rank, until his R.A.F. commission should come through, under a lounge suit. From the Fleet Air Arm, as well as Flight Lieutenant John Saffery as C.F.I., came Flying Officer John Sproule. It would clearly be unwise to put this nondescript lot on parade, or even to stand them in a row for any purpose but entertainment. Their very flying kit was assorted: Sidcot inners, Sidcot outers, Irvin jackets, and private-venture pre-war flying suits. One could only be thankful that the Fleet Air Arm did not assert their right to beards.

Into this happy band came two unhappy winged pilots who had not flown gliders, had never wanted to, and had not volunteered to fly them now. They made no secret of their dismay at being sent to clown in such a circus during a serious war. The situation demanded more tact than was available on either side, and they lived, as ornithologists put it, only in loose association, finding rich material for mockery in the activities of those they called 'The Glider Girls'.

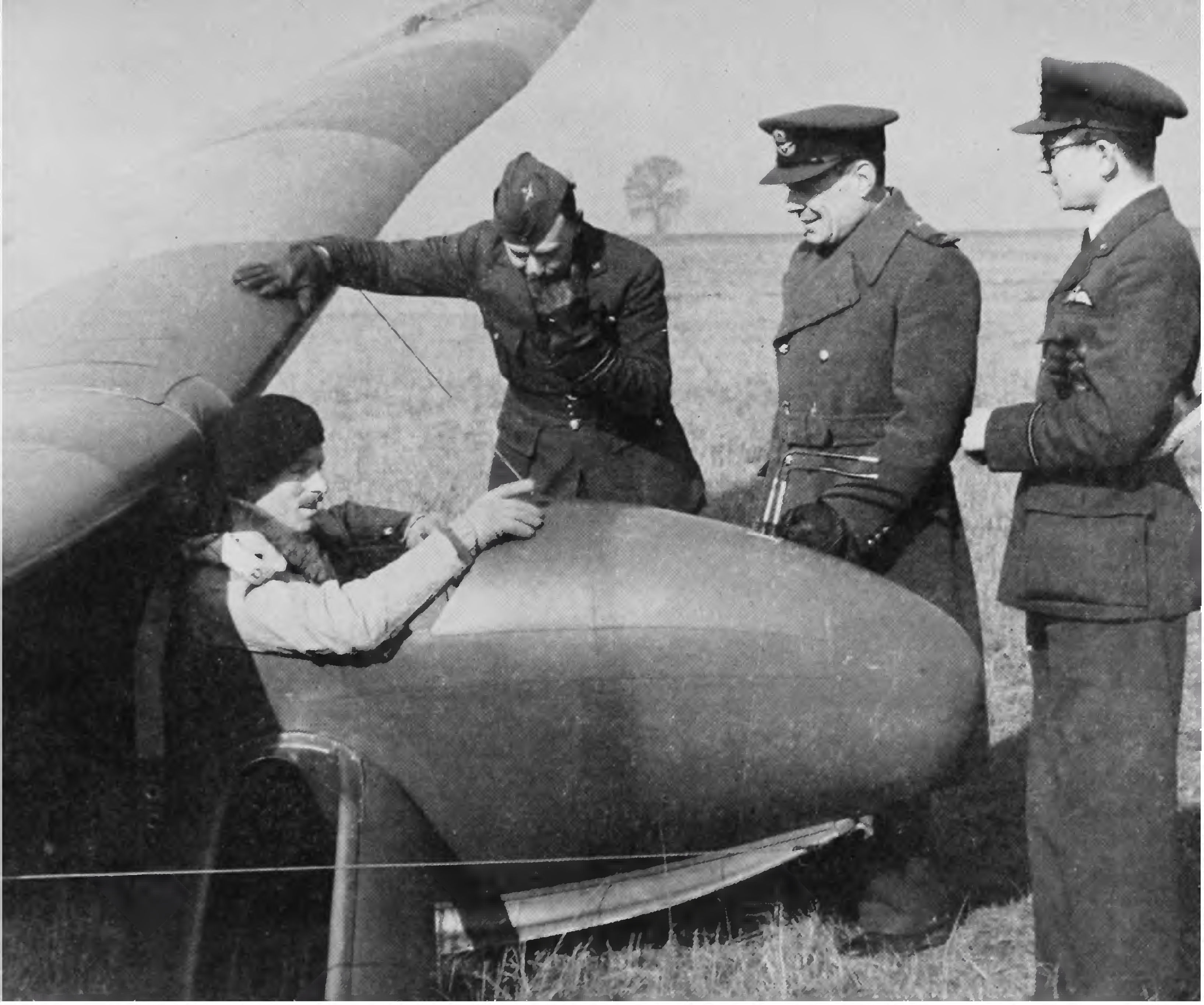
Within a month, all the novice instructors and tug pilots were ready for their wings, and it was ruled that G.T.S. should pass them out, to normal E.F.T.S. standard. Thus it fell to me to lay on the corresponding ground instruction. Some of this I could depute; for the rest, I kept one page ahead of my pupils. But pilots do not readily take instruction from non-pilots, and I did not care to teach things I never did myself. Tim Hervey would have to be persuaded to authorise me to go solo in the King's gliders (which I had flown often enough before he owned them). Tim bravely agreed to carry this can; if I had broken one there would have been awkward questions —Who authorised an Admin officer to fly? Where is his log book? Thus whenever I did fly, Tim was always sitting behind in my imagination, an inevitable casualty if I pranged. There was plenty of Tiger flying to be had too, usually with Wilkie. Foreseeing the need, when Hotspurs came, for a consistent sequence of almost verbatim instruction, he and I joined forces to prepare a Glider Patter Book. The existing Central Flying School patter made an excellent basis as far as it applied. Tigerborne, we would climb behind an imaginary tug, stop the engine in a simulated release from tow, and make long glides back, rehearsing and timing the patter all the way. But you needed a strong stomach to fly with Wilkie. His flying was all of a piece with his character, far from being brutal, but as far from being delicate. —I think my flying improved, remarked Sproule —after Wilkie said I flew a Tiger like an old woman! With his thin mop of straw hair and his collar likewise unruly, a broken front tooth untended, he lived always at full steam, seemingly near bursting-point. He would charge savagely but accurately into the job in hand, with no patience for less competent or more exhaustible persons. He would drive a car to its limit, screaming to a stop, and before his passengers had their doors open, he would have jumped out and crashed through the entrance and got busy. His manner was impartially abrupt with all; airmen or Group Captains could take it or leave it. He got away with it; he could call a Waaf officer a 'closet', a favourite term of his, without offence. When he laughed, it was loudly and coarsely as if at a dirty joke. He would drink your beer and meet your indignation with that same guffaw, and snatch your cigarettes, but he would sort out and polish your gramophone discs, clean your revolver, and save his chocolate ration for your children; his kindness was without courtesy and yours went without thanks. When a pilot like Freddie Gardiner did aerobatics, it felt always as if the aircraft was being allowed to do what it wanted to; with Wilkie, it was obeying an overriding force. He would never warn you of an impulse to loop, roll or spin, or fly inverted, or dive to ground level just to have a look at an interesting Roman villa site, from the vantage of a vertical bank. Your homeward route might lie along the meanders of the

River Thame, with the slipstream ruffling the water, and if you had inter-com, the explanation might be granted—Kingfishers! We once went up at night when I could just distinguish the horizon; I was in front and there was no inter-com. At about a thousand feet he opened the throttle and put the nose down into the blackness. —Oh Lord, I thought —aerobatics already! and as we went into a loop and the floorboards pressed my feet down into my face, the propeller disc was suddenly a blinding yellow sun, and twin streams of sparks and smoke poured from beneath our lower mainplanes. As we began a second loop I could see the ground below lit by our Tiger burning bright. Had there been inter-com I would no doubt have heard that dirty laugh: I had not even known that our Tiger was fitted with wing-tip flares, for emergency, that could be set off from the cockpit.

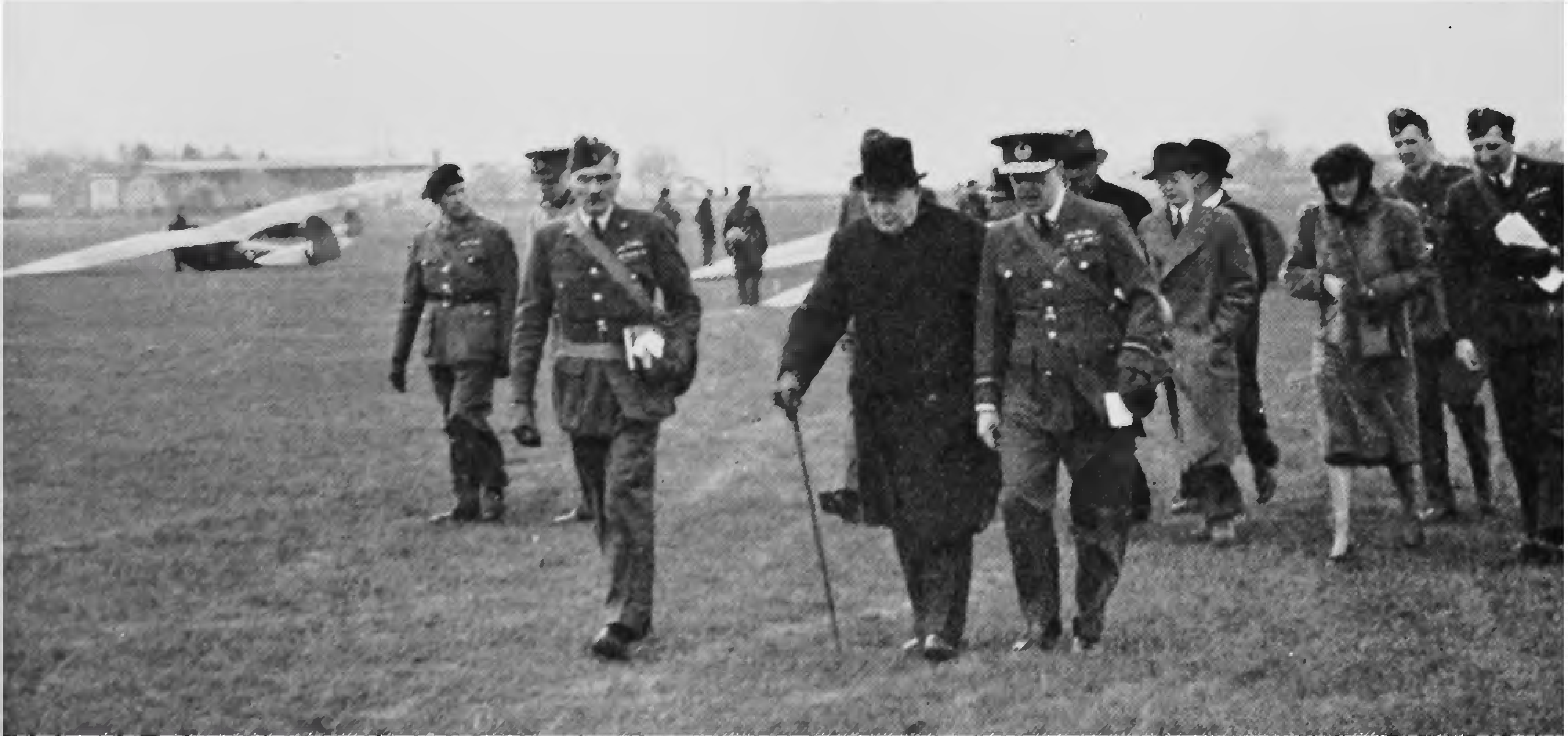
The patter-language, synchronised with control movements, lent itself to parody. Print cannot reproduce Wilkie's imitation (done in the air) of an instructor who first has to stretch his patter to fit the approach, and then tries in vain to stretch the landing to fit the patter. Choosing an occasion, he brought off another act: in the proper, measured C.F.S. tone he recited something to this effect:

—If the Control Column is then eased gently back
Until the Aircraft, although in a Climbing Attitude,
Is neither gaining nor losing Height,
The Rudder being used coarsely if required
To correct any tendency to drop a Wing
(all this carefully synchronised with its execution)
—And if the Pilot then carefully studies
The Apparent Motion of the Ground
In relation to the Leading Edge of the Lower Main Plane,
A curious Optical Illusion is observed:
The Aircraft has the appearance of travelling backwards.

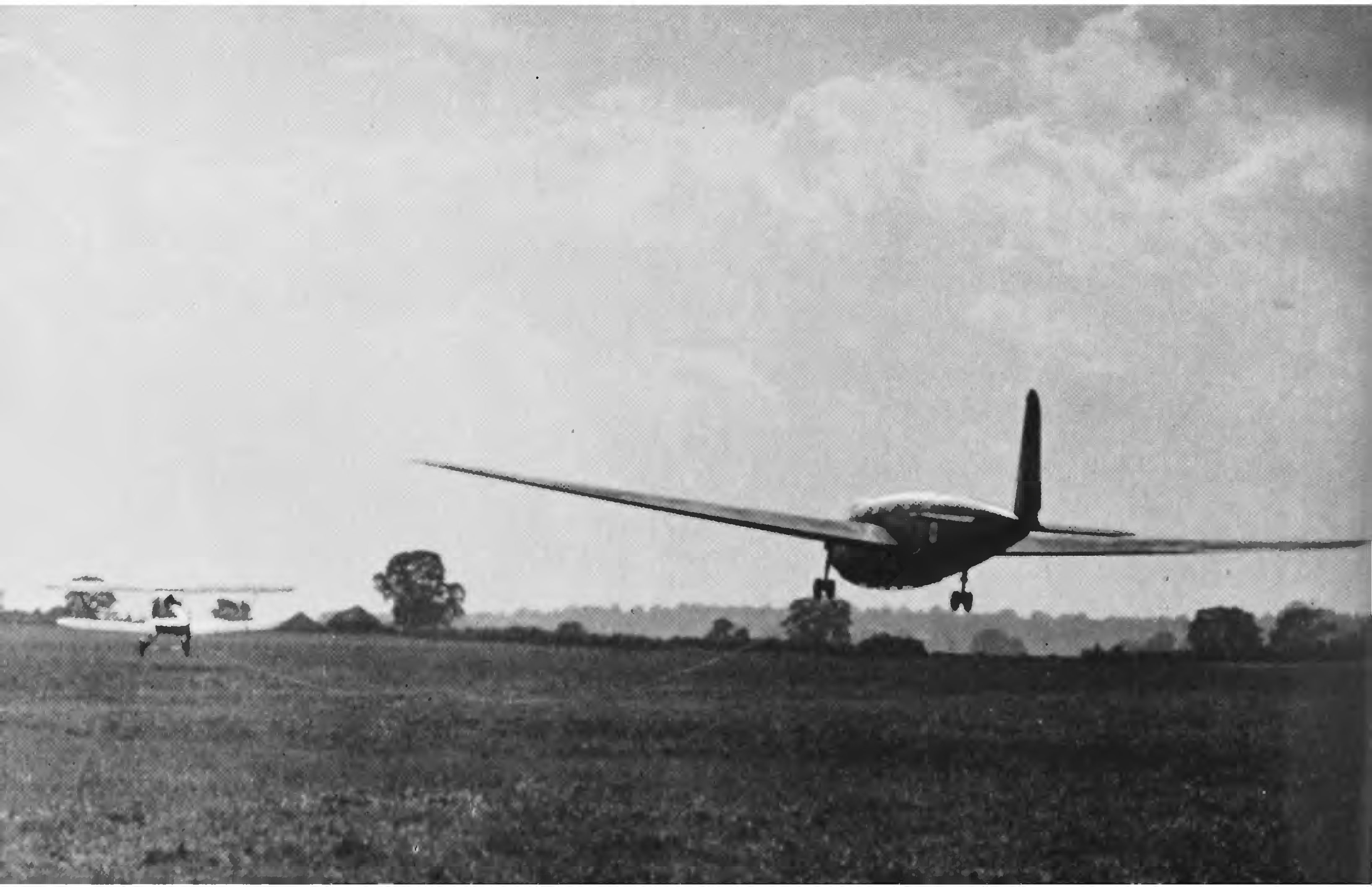
And blow me, so it has! Nor is it a momentary illusion; the ground is slowly but continuously appearing from the leading edge and travelling forwards, instead of passing backwards and disappearing under the wing. Reason insists that the thing is impossible. The solution dawns several seconds late: there is a strong headwind, and flying so slowly, we *are* travelling backwards. Simple when you think, but disturbing when you don't.



A historic occasion of a minor kind: The first solo by the first Army glider pilot to go solo, in the first course at Haddenham, in March 1941. Staff Sergeant Strathdee was to lose his life on the first British glider operation, in which two Horsa gliders were towed to Norway with the object of sabotaging the German effort to produce atomic bombs. (Left to right: Strathdee, Saffery, Hervey, Sproule.) (Below:) With five Whitleys dropping paratroops, five Kirby Kites in formation, and one 8-seater Hotspur glider, a demonstration was given to the Prime Minister at Ringway. (On Churchill's right is Louis Strange, and on Mrs. Churchill's left is Nigel Norman.)



King George VI and Queen Elizabeth inspect the cockpit of the Hotspur Mark I at Haddenham, in June 1941. (Below:) The eight-seater Hotspur was towed by the Hawker Hector, an obsolete biplane fighter, on a 250-foot hemp rope, at about 110 m.p.h. The fence ahead of the tug marks a deep railway cutting that was a hazard in a light wind, and with a fully-loaded glider the 800 yards of Haddenham airfield was quite inadequate.



Breaking the seal of the confessional (for the sins of the pupil should not be discussed by his instructor) Wilkie averred that when he had ordered Buster Briggs to demonstrate and patter five ways of losing height, Buster had duly power-dived, glided, side-slipped, and waffled down in a controlled stall, pattering each manoeuvre; but had seemed stuck for the fifth. Finally he had executed something quite novel.

—I asked him what the hell he was doing, and he said he was losing height by side-slipping during a climbing turn!

Authorised aerobatics at ground level were a treat afforded by a mock attack on the airfield by the Ox and Bucks. Our Tigers were to aid the defence, and we loaded up with thunderflashes. Spotting the main force from a height, Wilkie crept up on them behind a ridge, and popped over it to catch them at a crossroads, where our bombs produced a scene of panic reminiscent of Matania's battle-pieces of the first war. But on the next occasion for this exciting but exacting game, Buzz Lacey flew into power cables, crashed and died, our first casualty.

In February the squadron had an interesting day out. A German airborne invasion still being expected, the Air Fighting Development Unit at Duxford was required to study the chances of shooting down gliders, towed and free, and to recommend tactics for both sides. In perfect visibility, five of our Tigers towing five Kites flew in formation to a rendezvous at Royston, to be met and attacked by fighters armed with camera-guns. My proposal to retaliate with Verey pistols from the tugs was rejected, but I was allowed to bring my Leica to bear. A Hurricane, with flaps down, came at the formation head-on, and doubtless scored hits on our leaders, but I got him fair and square with my first shot. The gliders then released, and proved almost hopeless targets when free. A fixed-gun fighter flying four times as fast as a glider cannot keep on its tail as it circles. It has to break away after a short burst, and begin each attack afresh. But a free-gun fighter, turning outside the glider on the same centre, can keep constant deflection and take steady aim. This was proved after a second take-off, from Duxford, when Professor Melville-Jones picked gliders off at leisure from a Defiant.

On the way home we passed over Dunstable Downs. Our club had been requisitioned as a prisoner-of-war camp, where the tougher Luftwaffe pilots were said to be sent; some of them, perhaps, not for the first time. A barbed-wire compound almost filled the landing ground. A few members still met at week-ends in a makeshift clubroom in farmer Tom Turvey's barn at Totternhoe, the club's original home. News was to be had there of prewar German acquaintances, for founder-member Doc Slater was getting letters from our former visitor Wolf Hirth, the German glider pilot and manufacturer, notable to us for his Minimoa; these came by way of Belgrade and Switzerland, and had the censor been more alert, Doc might have been interned. Week-end leave gave an opportunity to go and see how our property was being treated by the military, and three of us, in civilian dress, drove up to the main gate. Our driver leaned out and bawled at the sentry in German, something to the effect that we had come to arrange a mass-escape. The sentry, after some shrugging and head-shaking, opened the gate and advised us to find the sergeant. We did, but he too was ignorant of German, and the officers were out. So we had a long look round; they were doing the place no good, we noted; and left with a final German curse at the sentry for not saluting.

For a while I was Gas and Fire Officer at Haddenham, and I could perhaps claim to have improved the efficiency of the fire-tender crew. I had occasion to reprimand a corporal for his over-leisurely reaction to a potential crash. Next day we made a mass take-off with six gliders in line abreast, and one of the tugs stuck in the mud before its glider had moved. The pilot made the mistake of opening the throttle, and next moment the propeller was churning the mud and the tail pointing at the sky. In the back seat, I found myself hanging ridiculously in my straps, looking straight down into the muzzle of a foam extinguisher held by that same corporal, alert now and trigger-happy; deterred only by my order, calmly given I hope —Not unless we catch fire! But my scholastic duties grew, and Buster took over this job. On certain unheralded Defence Days, the Gas and Fire Officer was required to release a little tear-gas, and all persons within range to work awhile in masks. Buster was over-keen; without warning, he would carry belching smoke-candles into the huts, and throw thunder-flashes through the windows, to drive the maskless occupants out into the gas-belt. This needed discouraging. By virtue of my late office, I learned the date of the next attack, and when Buster had seen his gas nicely started up, and then put on his mask, it had a cork inside the air-tube. He gave no further trouble. But the airmen could not get used to Buster's manner of address: what would be a polite request in the Guards was a filthy insult to the Air Force. They organised a formal complaint when the ambulance got bogged down and a squad of sweating pushers-out heard themselves classed as '****-faced baboons'. And the drivers of a convoy of glider trailers, led by Buster, felt it an intrusion on personal matters when he brought them to a roadside halt and marched down the line, barking the order to each in turn —Get out and have a pee!

The gas-mask case, obligatory outdoor wear at all times, was a nuisance, especially when wearing a greatcoat, carrying a steel helmet and riding a push-bike as one did on week-end leave. I modified mine, removing the contents and fitting a balsa-wood frame to retain the shape. This was less burdensome, and useful for camera gear, pyjamas, toothbrush, sandwiches. —I hope, said a disapproving fellow-officer —that Hitler will only drop balsa-wood gas-bombs. But I was one of those who felt that if it came to unrestricted gas warfare, the best thing to do might be to go outside and take a deep breath.

There came the meteoric transit of Jackie Hall. A bomber boy, as operational a type as you could meet, he had done fine brave things in Blenheims. Shot down into the sea, he had paddled for days in a dinghy, and he laughed all through the story of it. They had given him a D.F.C. and that was one of his big jokes too. By way of a well-earned respite from danger, they sent him to us for a short course on gliders; pointless, but a nice change. Perhaps he was sent as a sort of china egg, to encourage our pilots and wake us all up a bit, which latter he certainly did. It was he who invented the sport of baiting the camp guards. Grudgingly allotted by the army, these seemed a shade unseasoned, fresh from the plough. When you did your Orderly round, crunching over the frosty airfield under the moon, they tended to slink away into the shadows rather than face the embarrassment of a challenge. One night I would have won a rifle, leaning outside the guard hut while the sentry drank tea by the stove, had it not seemed unfair and undignified to come and go on tiptoe. Jackie's plan was that four or five of us should share the Orderly Officer's midnight transport from Thame to the airfield, drive round it, and drop off singly. The circuit made, he would start Red Indian cries and torch signals from his allotted hedge, to be taken up in turn from all corners of the field. Despite their advantage of internal communications the guard, if indeed they ever mustered in sufficient number to dare a sortie, never made contact, and by the time we had all been picked up again, they must have been desperately unhappy. But they raised no alarms, and the only shot fired was one directed, in the course of an argument, at one of their own side. It missed, enabling the near-recipient to offer an explanation at our C.O.'s preliminary enquiry —It's all right, sir, he was shooting at me.

When we confirmed to Jackie that we really did hook ropes on to aeroplanes to pull gliders into the air, it was the biggest laugh of all, and he could not wait to try it. We put him into a Kite, with such brief advice as his experience seemed to permit. As he bumped away along the ground and into the air, he was uttering shrill screams of mock terror, to the dismay of the uninformed ground-crew. The tug pulled him into cloud, at which he should have released the rope, but he hung on, probably laughing like hell. The tug reappeared going the wrong way, with a broken rope. Jackie cavorted merrily down and landed neatly, roaring to be off again. When he could not be in a glider, he was at the bar of the Swan, cheerful at noon, hilarious after lunch, and at the top of his form all evening. He was too plump and swarthy to be handsome, but he had charm. Men liked him, and barmaids found him irresistible. He told wild entertaining tales about his flying, and disarmed comment by insisting at the climax of every adventure, how bloody frightened he had been. He did not need to buy drinks; there was always a pint from some listener, waiting at his elbow. Because he had been posted from unit to unit, his allowances from home had been going astray, but he had willing credit from all. He would add up how much he owed us, roaring with laughter at the staggering total. When one of his cheques came back to me marked 'R.D.' he was apologetic: his pay would be at the bank in a few days, and if it were tendered again about Wednesday, it would be met. It was he who made this little matter public, the joke of the day, posing as a professional crook and con-man, winding up by writing a batch of post-dated cheques for all who would take them, on scraps of paper because his cheque book was empty. Like mine, they were all signed in full, 'John Hall, D.F.C.' with a flourish below. The payees provided the twopenny stamps. Before Wednesday he had been posted away; to night fighters, he said; and we never saw him again. His cheques were soon being offered around for cash, at alarming discounts. A few weeks later we heard that he had been killed in action. Those who had not yet torn up their dud cheques did so then. Jackie didn't owe us anything.

Some months afterwards I met one who had known him elsewhere.

—Who told you he was killed? he asked.

—Oh, I forget, but everybody heard about it.

He grinned. —Yes, they always do.

# 4 THE FIRST OF THE MANY

By March we were ready for our first Army pupils. We had huts and cinder-tracks; the latter served to warm the former, as they contained a separable proportion of unburned coke. We now had twelve Tigers, one little Swallow, and one Avro 504N that before the war had towed advertising banners for Air Publicity, and gliders for our club. Its design, being right in the first place, had been basically unchanged since 1913, though it no longer had a skid or a rotary engine. Powerful and slow, it made a fine tug; at Dunstable I had recorded on film that when towing a two-seater, and itself carrying a passenger, it could take off in a moderate wind towards the two-storey clubhouse 400 yards away, and lift the four men over the roof with an ample margin. At Ringway it had towed a train of three single-seaters, and at Farnborough a Hotspur on a test-hop. It was fun now to go visiting in this old-timer, and to be in period, one wore a cap turned back-to-front. At smart modern stations, one could impress the young by taking off across instead of along the runway, and reaching cloudbase and the airfield boundary at the same moment. We also had our first Hector, destined to be the standard tug for the Hotspur while the shop-soiled stock lasted. This big biplane fighter was, with the Hart variants and the Gladiator, the last of a great line, a culmination but a dead end in design progress, where mere increase of horse-power could no longer overcome the drag of struts and unstreamlined shapes; incredibly manoeuvrable, and unsurpassed for aerobatics. It offered a windy ride. In the rear cockpit, it was best to unstrap and curl up under the seat, to avoid the battering eddies that in a long flight rendered one punch-drunk. I learned to warn pilots of this habit of mine, when Freddie Gardiner turned round one day to see an empty cockpit, and until he had landed, thought I had fallen out. I was in this back seat one day, behind Wilkie, when it occurred to him that I might as well learn to fly a Hector. We had no inter-com, so he merely held his hands above his head. I got to our goal at Kidlington easily enough, and once in the circuit, waggled the stick for him to take over. My windscreen had been broken, and replaced by plywood, which did not improve the vision, and even in a Tiger, I needed cushions if I were to see much below the horizon. All he would do was to raise seven fingers; I rightly supposed this meant an approach speed of 70 m.p.h. That was all the instruction I got. The tail trimmer seemed ineffective; I was in fact closing the radiator gills. All that I damaged was an unseen marker supposed to indicate bad ground. Wilkie was like that. I don't know how he handled *over*-confident pupils.

We had collected twelve Kites, which now had lift-spoilers. These John Sproule had designed, and had seen a pair made, and fitted to the first Kite, within just four days of his arrival. They simplified formation flying: if the leader flew with a little spoiler on, the others could always keep up with him. Incidentally they reduced the average landing error from twenty yards to ten feet. The inventive Sproule, an ex-Vickers apprentice who had worked for Slingsby Sailplanes and for Airspeeds, was not overawed by the closed-shop magic of the aircraft engineers. He could never accept any machine as it was; he even modified our snow plough.

We had a Slingsby Falcon two-seater, useful for joy-riding important visitors, but of doubtful value for dual instruction because of its utter freedom from vice, and its indifference to control movements; even if you kept the stick right back, though it made perceptible phugoid oscillations, it still proceeded ahead. Lastly, we had a nacelled Dagling ground-hopper, brave in its camouflage and roundels, left over from the mercifully brief period when it had been planned to train Army pilots, in their hundreds, by the happy-go-lucky method of bunjy-hops and winch-circuits. This did one day take the air, when Ringway was about to test the Rotorchute, a rotary-wing parachute, and sent their test pilot to us for some winch-launches on the Dagling as being the nearest thing in performance to the Rotorchute; meaning a best glide of about one in six.

Translating the informal procedure of the gliding clubs into a rigid drill, we had created new if unauthorised R.A.F. trades such as Towmaster, Wingtip Runner and Towcar Driver's Mate, and had drawn up orders to define their novel duties. Marshalling, launching and retrieving had become a fairly orderly routine. Our ground instruction syllabus was ready, but in debate: our engineer officer scorned the absurd idea of teaching pilots—and in khaki! to rig and inspect and repair aircraft: would not R.A.F. riggers and workshops always be to hand? We thought they might not, and obstinately retained this item. We allotted more time to another subject than some thought it deserved: the interpretation of air photographs. When it came to gliding accurately into a pre-memorised field, these might well prove more useful than maps. Research into this subject led to an interesting discovery: there was, after all, a place where they studied photographs and reports of enemy installations, and from these made maps and plans and models. This Central Interpretation Unit at Medmenham was, moreover, asking for volunteers, a bit late as far as I was concerned. But perhaps it had come into existence since my call on Perrin.

It had been reluctantly agreed that before coming to us to start gliding, Army pupils would have done 75 hours or so on aeroplanes. But instructors were more than busy in 1941, and until special schools could be formed for this sole purpose, a makeshift had been adopted. The sixty-odd volunteers already accepted were distributed in little batches to Army Co-operation squadrons, where their instruction would be a casual spare-time job for pilots who, though not qualified instructors, might sometimes have nothing better to do. This hardly promised sound consistent training, nor much discipline, but it was argued that glider coxswains needed to know far less than power pilots; that 'powered approaches' and 'climbing turns', for example, could be struck off the syllabus. It was not widely noticed that apart from these two items there was little else that could be struck off, if they were to go solo in aeroplanes.

Three officers, two sergeants and seven corporals, thus trained, reported for our first course, and their log books showed the results. Three or four were already first-class pilots: Sergeant Strathdee, for example, had R.A.F. wings on his khaki, had resigned his commission when the Air Ministry refused to let him fly in the Spanish war, and had Messerschmitts on his log before Tiger Moths. Two or three were born non-pilots. The senior officer, known as The Mad Major, was a splendid person destined to do great things, but in him perfect courage was combined with imperfect vision, and he flew with a confidence that observant passengers might not share. The rest varied from doubtful to promising. One unlucky character, in his six months' training, had flown a total of thirteen hours with thirteen different instructors, and had not yet gone solo. Another mentioned that when airborne in a Magister, he had been asked for a few minutes' grace before beginning the lesson, whilst the instructor got the feel of the type, which he had not flown before. Most of them would have done better not to have flown at all, and a fresh start had to be made. We laid on another complete E.F.T.S. course, ground subjects and all, before converting them to gliders.

A historic if minor event came in mid-March when Strathdee made the first solo gliding flight by an Army pilot. A week later came another 'first', when Corporal Weston entered the Sergeants' Mess, a bad breach of etiquette even had he come through the door, but he came through the roof in a Kite: the first prang in the history of Army gliding.

On a partition in John Saffery's office was a fine Progress Board: on a couple of hundred nails hung coloured discs that showed the advance of each pupil through solo, formation flying, long tow, dive approach, timed landing—until somebody hammered up a shelf on the other side of the partition, and the record vanished as the discs went to the floor.

In April two more batches of pupils arrived; most of the previous dozen were ready for conversion to the Hotspur, but there was no Hotspur for them, and nowhere for them to go, so they stayed on. At this rather late stage, it occurred to somebody above that all these pupils should have some sort of medical. The standard was not exacting, but about one-third of the number failed to measure up to it and were grounded. Needless to say, they included some of the best pilots; after some arguing, we got a few of these into the air again, but several were sent disconsolate back to their units. No further pupils came from the A.C. squadrons; that method of training was dropped, and our input ceased. Until we had Hotspurs, this hardly mattered.

It must be said of these pioneer glider pilots (for by this time the unfortunate 'coxswain' idea had been quietly dropped) that however casual their selection in some respects, it had been unerring in respect of character. They had been led to expect flying pay, and promotion to Sergeant rank on completing the initial gliding course. Neither had been granted. They had been hanging about for six months, and nobody could tell them where they would go next, or when they would even see a troop-carrier. But there was no grousing. They cheerfully flew what there was to fly, and with Spring cumulus overhead, soon picked up the trick of soaring. They learned to tow with Tigers, and when more Hectors came, they flew these too. Most R.A.F. pilots won their wings with less flying than these corporals put in on 'service types'. Army Air Observer pilots wore special wings, but our wingless pilots in khaki sometimes puzzled the Air Force; as for Strathdee's mixed insignia, they were probably unique. He was flying me north when the weather put us down overnight at Catterick. Our reception in the Watch Office was normal until we peeled off our Sidcot suits; two officers conferred in low tones and one went out. I became aware, firstly that we were being detained in pointless conversation, secondly that an armed guard had been posted outside the door. There was a lot of telephoning before they would accept an Army sergeant with R.A.F. wings and a bespectacled Admin officer as the legitimate crew of a British fighter.

One day we put everything we had into the air, on what we called the Congestion Test. With an eye to the intensive training ahead, we wanted to know the limiting factors in rapid take-offs and landings. With gliders coming in, others being towed off, tugs dropping ropes and men retrieving them, tugs landing, and tractors crossing the field to retrieve gliders, where would the crucial bottleneck first occur? Pilots were briefed to tow to 2,000 feet, release, fly tugs and gliders down as fast as possible, and get into the air again, and again, until something or somebody broke down. It was a glorious soaring day. Within half an hour of the start the aerodrome, far from being congested, was empty. The tug pilots, tired of waiting for customers, had stopped their engines. Aloft, the happy insubordinates were circling at two, three, five thousand feet; wandering away in long spirals downwind, screaming back to circle up again, having the time of their lives.

One Army trio achieved near-perfection in formation gliding. Tip to tip, they would approach and land like one aircraft, aided by the natural inter-com, conversation rather than shouting, afforded by the open cockpits. On one occasion a towrope, inadvertently dropped on the formation so that it linked two of them together, proved no inconvenience. Dive-approaches and landings in formation became the star turn of our displays.

John Lander, the Mad Major, wore medal-ribbons of 1914–18, but he wore the new parachute badge too. He would take his young corporals on cross-country runs and wear them out; they devised the trick of giving him the lead while most of them dived into a haystack on the airfield boundary. An unlucky few, chosen by toss, still ran to give the semblance of a pack. As these few sweated home with the Major, the loafers would join up astern, but fresh as they were, and anxious to register their presence, they seldom passed him on the home stretch. He never went by car if there was time to walk. A 'stroll' with him was an ordeal that one learned not to repeat. He played football with schoolboy zest; he played pushball at Ringway against huge Polish paratroops, and when the resulting shoulder dislocation was put right, played it again. When he thought he was unobserved he wore glasses, but never when flying with an instructor or a passenger. He achieved a remarkable cross-country flight in a Tiger, with a compass that he had failed to lock and was slowly rotating by vibration; a line joining the landmarks that he identified later proved to be a spiral. Yet I cannot recall that he ever broke anything. I only once saw John Lander nervous. That was on the day when he went home and had to let his mother first see his parachute badge.

It still seemed a real threat, that the first troop-carrying gliders to appear at Haddenham might be full of Germans, nor could we look to the Army or even the R.A.F. Regiment to defend us. The order came that every man was to be issued with, and trained in the use of, a locally-made weapon for which blueprints were provided: a broomstick with a steel tube at one end, ground down in a V to form two sharp points. The idea was, it seemed, to wait until the airborne enemy closed to a two-yard range, and before he could bring his machine-carbine into play, run him through the heart. Our pikemen were to be backed up by armoured vehicles, in the shape of two old lorries walled in with concrete building-blocks, leaving embrasures for rifle fire. Doubting that such defences would prove adequate if the day came, Tim Hervey had a brighter idea: barbed wire should be woven and tangled into a long belt, and laid loosely all round the perimeter hedge, with each end attached to one of these lorries. When the enemy had dropped or glided on to our field, the lorries would run round in opposite and diminishing circles, gathering them tidily into a prison compound.

A further order came, that every officer and man in the unit should learn to use a rifle within the next fourteen days. Second Lieutenant 'Jonah' Oxenford of the first army course was allotted the task, and adjusting the standard to the weapons, ammunition and time available, he laid on Jonah's One-day Musketry Course. In the morning, you learned the whole theory; in the afternoon you fired five rounds aimed and five rapid; you were then qualified. My shooting might have won me some approval, had there been time to observe any results, for at home in the twenties we had enjoyed the illicit use of a varied armament. Left in our father's care when the local Volunteer Corps disbanded in 1918, it included .303 rifles, one with a .22 tube, revolvers .45, .38, .32 and .22, a Verey pistol, and ample ammunition for a large growing family. Had the former Commander only known it, most of his children of either sex were fairly proficient in all these weapons by the age of twelve. Thus one could feel rather superior now, to see tough-looking grown men gun-shy, shutting both eyes and wincing at the bangs.

It may have been judged undignified that officers should bear broomstick pikes, for Daily Routine Orders now laid down that before the next parade, each of us must contrive 'his own personal weapon, however crude', and parade with it. This rash invitation brought immediate activity to garages, workshops and improvised benches in Thame. Some of us had revolvers, but it was agreed that to rely on such toys would be sissy. There was much whittling in the mess (the chintzy little lounge of the Swan), for the majority favoured bows and arrows, the bows ranging from six inches to six feet. One bloodthirsty patriot, hunting desperately among the scrap-heaps, was planning a spiked ball to be whirled on a chain from a staff, but the salvage-drive had forestalled him. Most lethal of all promised to be Sproule's crossbow, a stout balk of timber holding a huge leaf-spring from a lorry, that should throw bricks at least. Alas, the C.O. got wind of all this, and a parade that might have recalled the eve of Agincourt was abruptly cancelled.

Our first Hotspur arrived at Thame (as Haddenham aerodrome was now renamed) in April 1941. It was a pretty thing; with its fuselage streamlined like a mackerel, and its narrow tapered mid-wing of 62 feet span, it looked in the air like an outsize sailplane. (It could in fact be soared, given a big active cloud or cloud-street; Wilkie was to make a speciality of soaring on tow; throttled-back tug, rope and glider with 30 degree bank, all going up together.) The pilots sat in tandem under perspex, and six troops in a claustrophobic little cabin with tiny portholes, from which they emerged by flinging open a two-piece lid. The two separate landing-wheels and the tailskid could be jettisoned, and the landing made on a central skid. The Hotspur was easy and pleasant to fly, on tow or free, but it had snags; these were to be expected, since it had to be built before anybody could say what loads the army would want, what tactics the air staff would plan for, and whether it was meant primarily for operations or for training. A basic requirement had been maximum range in free flight, on the assumption that surprise attack would demand a release from tow as far as possible from the target. Maximum range meant a flat glide, hence the expensive streamline construction, which did not look over-robust for training use, nor easy to repair. The nearest German counterpart to the Hotspur, the DFS-230 10-seater of which we now had photographs, had a welded tube fuselage, fabric-covered, much cheaper to make and mend. To tow the Hotspur about on its skid after landing, and to fit the wheels again for take-off, proved too long a job, and the wheels were never jettisoned on training circuits. Even on exercises with troops, it was found better to land on the wheels, and so keep control of direction despite the longer run. But if, as occasionally happened, one wheel dropped off by mistake, the triangle of cable connecting the wheels and the tailskid fell slack, and it was then impossible to jettison the remaining wheel; the one-wheel landing would end at best in a ground-loop. Flaps helped the take-off and steepened the final glide, but true air-brakes would have been better, which can be closed without risking a stall, to cure undershooting, the glider pilot's likeliest error. The rudder pedals were horizontal, flush with the floor; they demanded adhesive soles, or web feet, and in an inadvertent steep dive, a pilot with a slack belt could slip forward till he was astride the stick. (I was to serve on a Court of Enquiry into a crash with eight fatalities, which found this the probable cause.) The pilot's seat sometimes came adrift with unpleasant results, and the tail-trimmer and flap lever could get interlocked, so that a given degree of flap would demand a given degree of trim. Some of these teething troubles were cured, but the big snag arose when the Mark I Hotspur, of which few were built, gave way to the Mark II. Somebody had underestimated the strength requirements of tailplane and wing spars, the safety factors were too low, and unacceptable flying limitations had to be imposed. The only remedy for the wing spar was to reduce the span by about 16 feet. This put up the stalling speed to 72 m.p.h. with full load. As there were no wheel-brakes, and the under-carriage was too short to allow a proper landing attitude, the landing run was absurdly long, about the same as that of a Wellington. Thame, in a light wind, was quite inadequate for full-load landings. One of our pilots proved this fact in spectacular manner when trying a take-off with full load in a fresh wind. Something going wrong, he had to release the rope almost immediately, and with the railway cutting ahead, he made an impeccable 180-degree turn, landed downwind, and having twice used all the aerodrome, turned again on the ground with enough speed to take him half way back to the railway, travelling a total of 2,000 yards within an 800-yard field. This characteristic was to add a lot of excitement to demonstrations with troops aboard. When pictures of the Hotspur were eventually released to the press, we liked the caption in one of the glossies, saying that it could land in fifty yards 'because of its very flat glide'.

It was now required that the progress, if any, made by Airborne Forces in the first ten months should be demonstrated to their only begetter, the Prime Minister. With six Kites in assorted trailers, towed by assorted vehicles service and private, we set out one day in April 1941 for Ringway. My cameras gave me a free roving commission. First, five Whitleys were to take off, and return to drop a total of 40 paratroops. Nigel Norman, ready as always to promote the Airborne cause by shameless sales-talk, was at the microphone. Through the loud-speakers came his radio call to the leading Whitley, and the clear, unfortunate answer:

—Hullo, formation leader, are you ready to take off?

—No, I'm not. For your information, five of my blighters have fainted!

Perhaps another fainted in the air, for six of the promised number failed to emerge overhead. There was a stiff wind, and one man, obviously lamed by a drift landing, was frog-marched smartly away by his companions in the vain hope that the incident would be unobserved. One Hotspur made a circuit, landed, and despite the wind seemed to roll on, and on, and on. In contrast, our little Kites touched down and stopped, in two groups, exactly on their marks. Churchill turned aside and growled

—What is the use of obstructing all these fields?

Nobody dared the obvious answer, that a German troop-carrying glider might land more like the Hotspur than the Kirby Kite. Louis Strange might have said so had he been closer, for he was heard soon after, as he took Churchill by the elbow, opening an exposition with

—Now look, sir, this is a thing you know absolutely nothing about!

But by the time he left Ringway, the Prime Minister knew a lot, and there were to be repercussions in high places. The most memorable moment of the day, which I wished I could have photographed, had come when they showed him a secret display of Airborne equipment, including a long Commando dagger. His eyes lit up. He gripped it, lowered his hand, and with almost a snarl he suddenly thrust it upwards into the bowels of an imagined enemy.

In May, we took part in another little show, at Bray, near Windsor whence the King came to join a group of War Office observers and an acre of Home Guards. In a rehearsal at Thame, we learned one lesson that seemed obvious afterwards: that if gliders in line astern formation approach an airfield all at the same level, and the leader just clears the hedge, the others may not, and arse-end-Charlie certainly won't. Pop was the victim of this impossible situation, and ended up by colliding with the petrol pump that had been chosen to represent the King. But all went well on the day; the P.T.S. Whitleys dropped troops accurately and none of them fainted; Greig in a Hotspur made a circuit; our tight formation of Kites again stole the show. The King, inspecting our little company, asked of Greig

—Doesn't it feel a bit odd, flying around without an engine, without any noise?

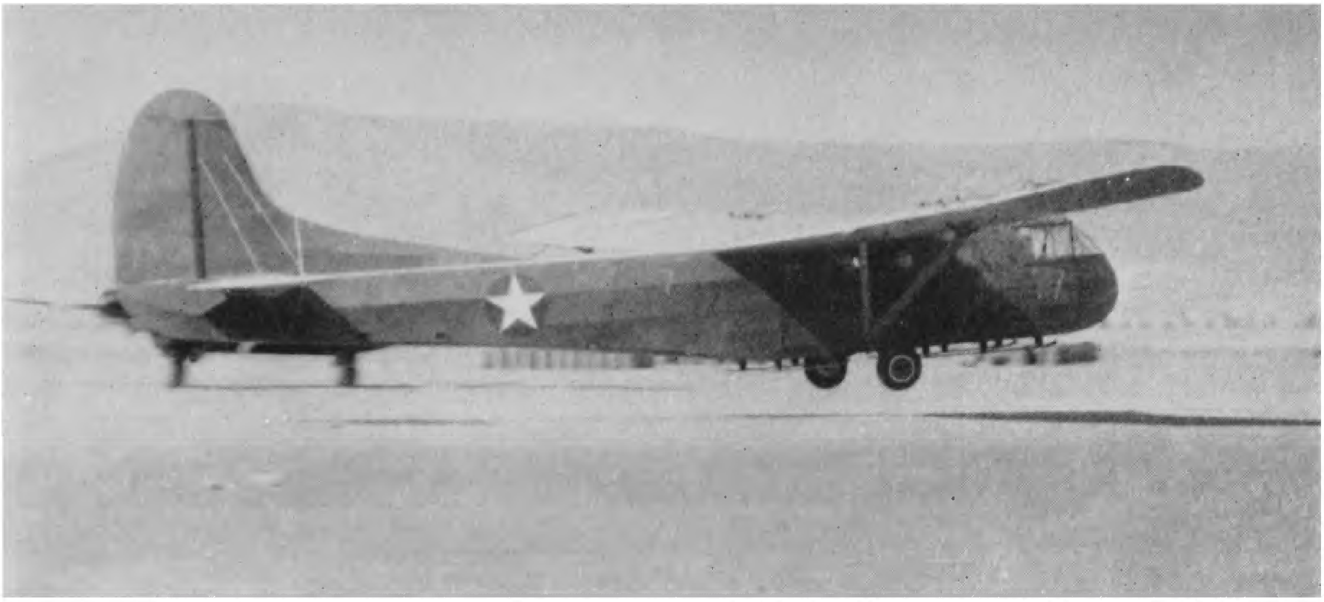
and Greig, with a slow headshake and a tolerant smile, answered

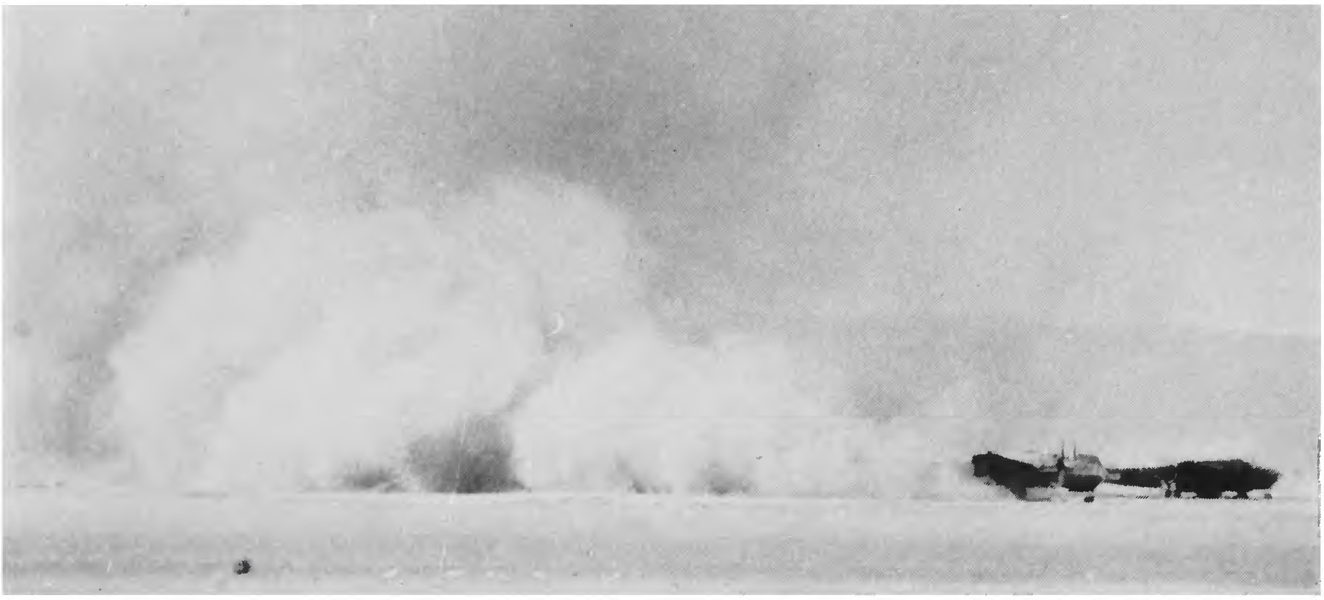
—Sir . . . (a pause; the King waited) . . . it's de*light*ful!

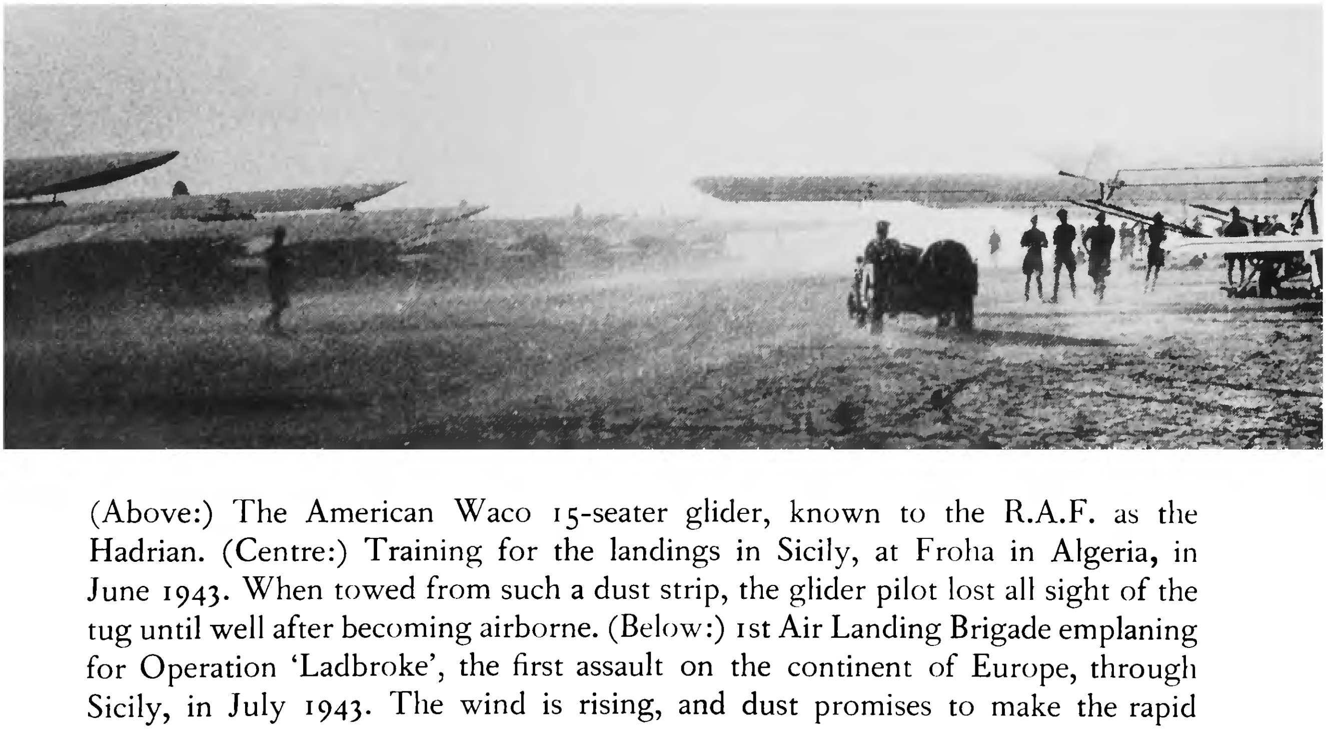
The imitable Greig's reply thereafter became our stock answer to all such questions, and indeed to almost any question it remotely fitted.

Meanwhile, news was coming in of the German airborne assault on Crete. Thirsty for details of the gliders and how they had fared, we could not learn much more than the newspapers had printed; nearly a year was to pass before the War Office circulated the full story to those who urgently needed to know. Gliders were used on the first day only, not because they failed, but because they were the spearhead. The departure aerodromes were 200 miles from the objective, and the indirect routes meant up to 3½ hours on tow. Ju52s towed 10-seater DFS-230 gliders; one could tow three, but on this long haul they towed only one each. The releases were in daylight, between two and five miles from the coast, some of them premature. The gliders landed on skids, wound with barbed wire to shorten the run; many on rocky ground, and all among well-prepared defences; their casualties were frightful. Thus a *Times* correspondent:

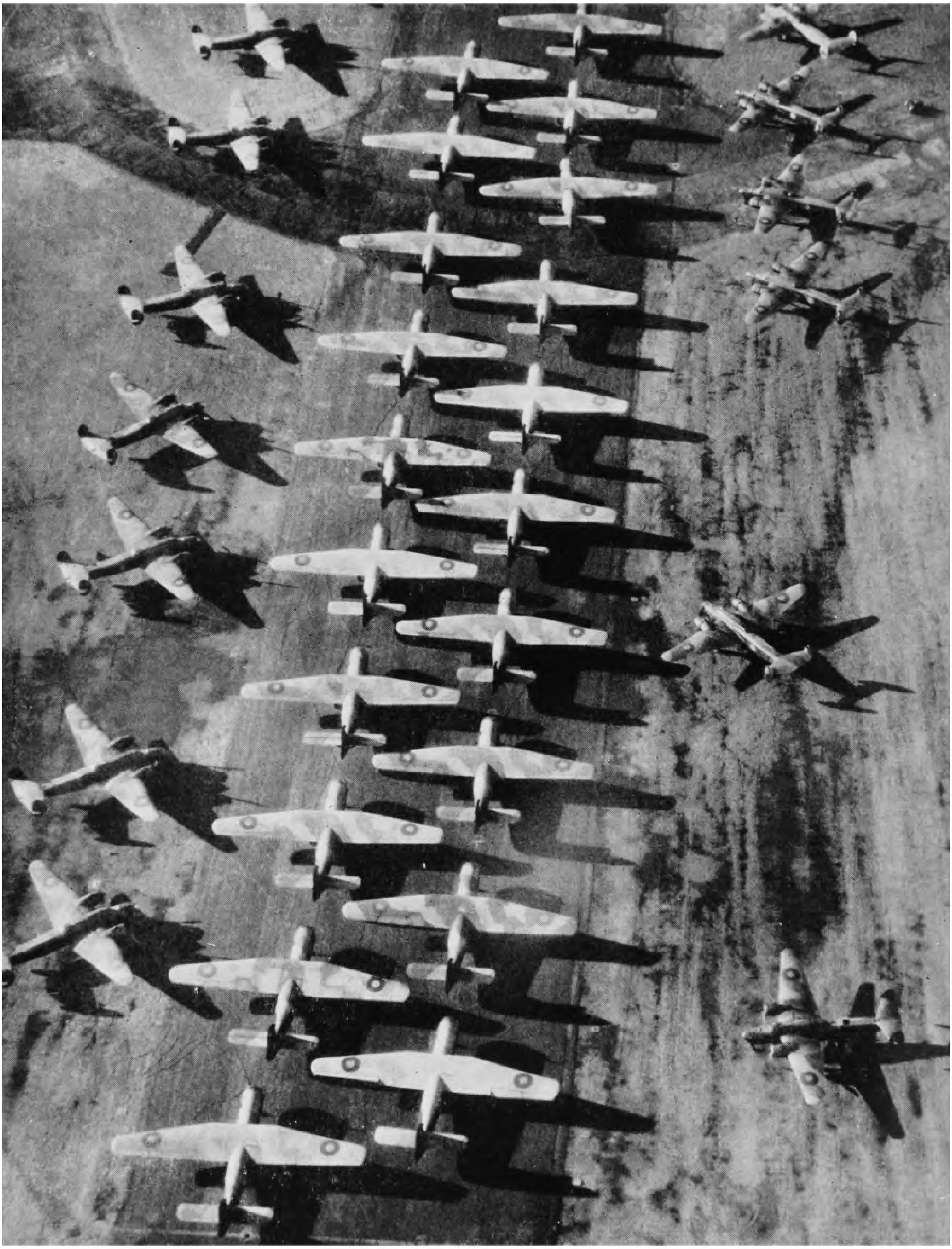
> Gliders were a failure, though, strangely they look far more ominous in the sky than the parachutists. I saw the first four gliders, big ones, with 70-foot wingspread, come over Suda Bay promontory. It seemed as if they were diving straight on top of me. But in the last minute they banked and wheeled over the hill-top. Hurrying up there I found all four gliders







(Above:) The American Waco 15-seater glider, known to the R.A.F. as the Hadrian. (Centre:) Training for the landings in Sicily, at Froha in Algeria, in June 1943. When towed from such a dust strip, the glider pilot lost all sight of the tug until well after becoming airborne. (Below:) 1st Air Landing Brigade emplaning for Operation 'Ladbroke', the first assault on the continent of Europe, through Sicily, in July 1943. The wind is rising, and dust promises to make the rapid successive take-offs tricky.



Airspeed Horsa 25-seater gliders, and Bristol Albemarle tugs, marshalling for a mass take-off at Hurn, Hampshire, early in 1944. The towropes are attached, and the inter-coms tested, beforehand. Gliders were got away at one-minute intervals; the limiting factor was the wake of the tug in front.

> crashed, and every man—there were some 60 altogether—killed.

Rather depressing data for our future use; we did not emphasise the details in the Glider Manual we were preparing for our pupils. Nor did we believe that glider operations need be suicide affairs.

Instructor training went on while we awaited more glider pilots, and settled down to a routine that did not foster the enthusiasm of the first months of improvisation and experiment. The sense of urgency imparted by the grandiose plans of 1940 had faded, and those plans themselves had evaporated in the heat of new events: reverses in the desert war, raids at home, losses at sea. All three services were still on the defensive, and the time for airborne attack might now be years ahead. None of the basic questions had yet been answered: What was the composition of a glider-borne Air Landing Brigade to be? what loads could the operational gliders carry, and how would they perform? what tactics would be used? would the glider pilots be airmen or soldiers? when they left us as Hotspur pilots, would Bomber Command be willing to convert them to the 25-seater Horsa? and to mount airborne operations from bomber bases? if not, where would the tugs come from? To confine ourselves to our own particular problems: when would the first real flow of pupils reach us? Certainly not until Autumn, and even if they did come then, they would soon start to pile up just as the first three courses had done, because no Horsas would be ready for them this year.

Only our domestic side at Thame expanded; huts multiplied, set out on a regular compact grid plan that made them proportionately more obvious from the air, and then painstakingly camouflaged; bodies multiplied to fill them, and if all flying had stopped, most of the bodies would have been as busy as before, looking after each other; just as has been observed of large country houses where staff duties are hardly affected by the presence or absence of the outnumbered family. Our Orderly Room Sergeant did, in fact, object to a revised flying programme, on the grounds that it interfered with the pay parade.

In relation to the war effort, we were still at best an amusing sideshow. In this capacity, we staged our circus act once more, at Thame in June, for the King and Queen. They would first visit the factory (which rather inappropriately made propellers) adjoining the airfield, and to oblige its ducal owner, my cameras would record their tour. They would then nip out (if such a term may be applied to Royalty) through a little wicket-gate directly on to the airfield. This meant uncertain timing, and a problem, for if the tug engines started too soon they would oil up; if too late, they might not start at all. It was decreed that I should leave the factory exactly ten minutes before the royal party, to give warning. All went well until, at a nod from the Duke, I made for the wicket-gate, expecting to slip through unseen and nod to the C.O. To my dismay, I was faced with half an acre of grass, and beyond it the entire formation, with A.O.C. and A.O.C.-in-C. to the fore, all frozen rigidly to attention; to a casual observer, they were receiving me. It was hardly the occasion for a mere jerk of the thumb to convey my message. No great matter, perhaps, to march smartly across, salute, speak, salute and retire; but I had not got rid of my gear. Encumbered by a Bolex, two Leicas and an exposure-meter hung round my neck, a swinging camera-case and an open tripod, I somehow reached the rigid A.O.C.-in-C., threw him a salute, delivered the amateur-operatics line

—Their Majesties will arrive in ten minutes, sir!

and made what exit I could.

After the Kites, Sproule did aerobatics in the Viking, with a smoke-candle on his tail. Starting with a loop off the towrope, he ended with a down-wind beat-up, stall-turn, and spot landing as near to the royal toes as was allowed. As the slight, bespectacled figure emerged, the King remarked

—Good Lord! I expected a great tough chap with whiskers!

We now boasted two Hotspurs, which as usual ended their landing run almost out of sight. Such was the most that we could show our King, in the same month in which a hundred and twenty German divisions went into Russia. We cannot have been worrying Hitler much.

But at Ringway there was rather more progress. Peter Davis had left us to command a Glider Exercise Unit there, hiving off Wilkie, Buster, Lander and the best of the Army pilots. Toby went as Adjutant. It was a happy little unit; Peter remarked that Toby was jolly good, really, if you knew how to handle him properly; Toby had already told me that if you only handled him properly, Peter was all right. They had two main tasks, show demonstrations and tactical trials. Air Ministry and War Office were still by no means won over to the Airborne idea, and the best way to sell it to them was to land troops before their eyes. Even then, it was as well to explain quite clearly what was going on. At a joint exercise with paratroops, Nigel's loudspeaker had announced the precise number of troops and containers about to drop, but as the first figure tumbled through the hatch overhead, a startled military voice had exclaimed —Good God, somebody's fallen out! Some stubborn misconceptions still had to be corrected: that a long train of gliders can be towed by one aeroplane; that they must release miles from their objective; that they always crash on landing. Rock had put some formidable but realistic questions to the Exercise Unit, and they were finding some answers: that the chances of success are far better if the tug, with its skilled navigator and his aids, brings the glider within sight of the objective, or to a landmark from which to start the final run-in, before the release; that correct weather forecasts are much more important for glider than for parachute operations; that calculated release heights should be doubled for safety margin. They could not yet answer Rock's questions about landing on treetops or the roofs of buildings (about which ample data were to come from the glider training units within the year) but they had, unintentionally, gained some experience of fences of wire, timber and concrete, with reassuring results. Lander, moreover, had demonstrated the permeability of a thickset hedge to a Hotspur-load of Army officers, when he took off as usual without his glasses, with his altimeter set a thousand feet too high. You could distinguish the Army from the Air Force observers at such exercises, apart from their uniforms, for when a loaded and brakeless Hotspur headed towards them, the soldiers would stand their ground in happy ignorance while the airmen unobtrusively drew aside.

It is axiomatic in the services that the formation immediately senior, from which one's orders come, is staffed by indoor scribblers, comfortably remote from the realities of the work with which they interfere. Conversely, formations immediately below are argumentative and dilatory, not being in a position to know the sound reasons on which one's neglected orders are based. Even on promotion from Squadron to Wing, Wing to Group, Group to Command, this situation recurs after a time-lag of a few days. At Thame, we did not regard C.L.E. as a higher formation, having lived with them, but as friendly chaps in the same game who happened to be senior; they gave us no trouble, they positively helped. But if some directive came from Group or Command and was selected for special circulation, this was more likely for laughs than for action: for instance one document, that cannot have passed through Rock's hands, on the action to be taken by a glider pilot after landing, to prevent his Hotspur from being of use to the enemy: he was to smash the main wing-spar *with his rifle-butt.* The author of that one should have joined us in the woodshed at our billet at Chearsley, where glider crashery was reduced to usable firewood, and the spars involved herculean labour with a two-handed saw. Then there was the draft list of the special physical and mental qualities that should be looked for when selecting a glider pilot. We were invited to add to this list, and additions were indeed necessary, for the combined brains above had so far arrived only at the stipulation that he must be light in weight. When we asked to be kept informed of the enemy's technical and tactical developments with gliders, though this was not strictly the business of a training unit, Command sent down an Intelligence Officer. First he produced some air photographs of bomb damage, interesting but not relevant. Our Sergeant who taught Photo Interpretation brought a stereoscope, into which the visitor fitted two prints.

—Excuse me, sir, interrupted the observant Sergeant —that isn't a stereo pair.

The expert checked the print numbers, and indignantly pointed out that they were identical. That was just what the Sergeant was objecting to, but by kicking him under the table, I checked his explanation of the basic principles of the stereoscope.

—And what about German gliders, sir?

He sent the Sergeant out, closed the door, opened a sealed packet, and cautiously uncovered a print of the gliders on Fort Eben

Emael in May 1940, that had been circulating in our Glider Manual for months.

An overnight stay in London with Nigel Norman led to a short cut past such proper channels. —Go along Horseferry Road to Monck Street, to a large empty building site, and go down the hole in the ground, said Nigel. He refused to amplify this odd directive. I found the site deserted, but the hole in the ground led down a flight of steps (no White Rabbit?) to the guarded entrance of a vast basement, intended for a building that had risen no further; it was air-conditioned, and lit by those strange new fluorescent lamps. I emerged an hour later with a splendid haul: details of the Gotha 242, a high-wing twin-boom glider with a large rear door for the quick exit of a 2½-ton load; air photographs of the 'Merseberg' glider of 175-ft. span; and reports of a 'Goliath' of 270-ft. span which, if it really existed, should lift some 18 tons, or 70 troops in each of its twin fuselages. Our peace-time gliding had always followed about five years behind the Germans; were we reducing the lead? It did not seem so.

Eric Kennington arrived at Thame in his role of official war artist; a very gentle person, but his pastels of our pilots were powerful, the sweat glistening on their brows, the battle-anger blazing in eyes that to the ordinary observer seemed mild enough. We talked about his friend T. E. Lawrence; the very man, he agreed, to have been with Airborne; the man who had written

> I began idly to calculate how many square miles: sixty: eighty: one hundred: perhaps one hundred and forty thousand square miles. And how would the Turks defend all that? No doubt by a trench line across the bottom, if we came like an army with banners; but suppose we were (as we might be) an influence, an idea, a thing intangible, invulnerable, without front or back, drifting about like a gas? Armies were like plants, immobile, firm-rooted, nourished through long stems to the head. We might be a vapour, blowing where we listed.
> ... In character our operations ... should be like naval

> war, in mobility, ubiquity, independence of bases and communications, ignoring of ground features, of strategic areas, of fixed points. 'He who commands the sea is at great liberty, and may take as much or as little of the war as he will'.

That I had already copied down, for quotation in the first chapter of our Glider Manual, begun as a makeshift class book, but becoming with the guidance of Norman and Rock an *omnium gatherum* of anything and everything we knew or guessed, from strategy to sick-bags, from tactics to towropes.

Before he went, Kennington designed a splendid badge for the glider units: the wooden horse of Troy, in the guise of a nursery Dobbin, legless but winged, with doors in his side and a hook on his chest. He painted it on one of our Hotspurs, and we copied and printed it for transfer to the noses of the growing fleet. But having no official status, it did not survive the introduction of the Pegasus badge, which was a pity.

It now seemed to me that Hotspurs were no longer so few and precious at Thame, as to debar me from flying them. I produced my old argument, that one should not teach something one never did oneself. This was an illegality too gross for Tim to carry; I would have to try it on the Group Captain. Since a hasty request to him might get an unarguable refusal, I bided my time, until a duty at Ringway gave me the chance of a lift back to Thame in the Group Captain's car. Thus cornered for hours, the wretched man could not evade my carefully-opened and fully-reasoned case, and his parting order to John Saffery was to get me solo on Hotspurs. This took nearly three hours of dual, but I like to think that they were being extra careful. From now on it was Stiffy, not Tim, who was in any trouble I might fly into. As I teed up to go off alone, Tim came across, as I supposed, to encourage me; but his only remark was —Don't land in the zoo! which I thought unhelpful. When most of your few hours have been done in a 250-lb. Scud, a ton of Hotspur is a bit out-facing. But I didn't break it.

# 5 GROWING PAINS

With 1942 some policy decisions emerged at last. The first Airborne Division (hereinafter referred to as '1st Airborne') was forming, under Major General 'Boy' Browning, as the sole command for all Airborne forces, comprising a Parachute Brigade, an Air Landing (gliderborne) Brigade Group, and sundry Divisional troops. Within a newly-formed Army Air Corps there was to be a Glider Pilot Regiment, commanded by Rock. This force was to be concentrated on Salisbury Plain, near the historic Netheravon aerodrome and its small satellite at Shrewton where the Glider Pilot Regiment would be based. An R.A.F. Wing under Norman (now a Group Captain), devoted solely to Airborne, would share Browning's H.Q., and would build up operational squadrons at Netheravon. As for glider training, this should logically be handed over to Flying Training Command. We were no longer to be a Squadron but a School, more apt if less glamorous. We would need a bigger airfield. A second G.T.S. was now in being, and two Glider Operational Training Units would form, one at Kidlington with Hotspurs, one at Brize Norton with Horsas. Four hundred army glider pilots must be trained by July 1942—our former target for December 1941. They would have to match up to the mental and physical standards of R.A.F. aircrews, and would be selected by a joint R.A.F. and Army board. They would train for twelve weeks at an E.F.T.S., four at a G.T.S., six at a G.O.T.U., then qualify for the Army Flying Badge, as worn by Air Observation pilots. Since the first batch of these aeroplane-trained soldiers could not reach us until March, our first few courses would consist of trained Air Force pilots. Some of these might be kept on for instructing and test-flying; the rest would be absorbed back when Army replacements came through.

These Air Force pilots, about half of them Australians or Canadians, were supposedly volunteers for gliding, but they were bloody-minded when they arrived at Thame, and enquiry revealed that they had filled in a questionnaire in which they were asked —Would you volunteer for a short course on gliders? and under the impression that this was a brief stopgap refresher until they could fly on ops, had agreed. It was an unhappy situation. Rock sent an officer to talk to them; he painted an inspiring picture of the honour to be won by flying troops into battle, but he invited questions, these became rude interruptions, the answers grew heated, the speaker's table collapsed under him, and the malcontents were dismissed more bloody-minded than ever. Some of them made the best of the situation with a good grace; many not. It was a relief when the first of the Glider Pilot Regiment appeared in March 1942. After fifteen frustrating months, we might be said to have started.

Rock, now a Lieutenant-Colonel and wearing the parachute badge, came early in the new flow of power-trained pupils. He had been through Staff College, and spoke four languages. He had come out of France through Dunkirk. He had spent six weeks in hospital after a parachute jump in a high wind. We were surprised to learn that the man chosen to run the Army side of Airborne at the outset had then no flying experience whatever. At his E.F.T.S. he had lost his engine on a night flight and had ended upside down in a farmyard, with a black eye. He passed out on Hotspurs as 'above average', as the commander of the glider pilots must. Small of stature, sparing of speech, and given to thinking before he answered, he was a little forbidding when he came to share the billet at Chearsley. His 'strong-silent-man' air did not survive the first dinner. Sir James Lochore, a fine, kindly, generous host but an outspoken one, soon broke that down. Rock was gruffly discussing soldiering in Ceylon when Sir James broke in

—D'you mind not tapping on the table with your knife when you are talking?

A moment of awful silence, then from Rock, laughing

—Sorry, habit of a lifetime!

and illogically, from then on, we all relaxed for good. I learned a lot from Rock in the ensuing months. He made a good corrective to the effervescence of Nigel Norman, and it promised to be a balanced partnership.

Our Kirby Kites had served us well, and the drill devised with them was to hold good for Hotspur and Horsa training, but they had had their day. They were—literally, alas—put out to grass. Despite the enormous total of hours they had flown, they were still airworthy, and might surely have been stored away against the day when the gliding clubs, having seen the things they gave their life to broken, might build them up again with worn-out tools. But unknown to us until too late, they were evicted from the hangar and dumped in the open, to soak and disintegrate before an unofficial salvage party could be organised by their former owners. That priceless relic, our Avro 504, suffered the same fate, on the excuse that a broken tail skid could not be repaired.

So from now on, it was Hotspur and Hector. The slow and sturdy Tiger had been equal to the ridge-and-furrow of Thame, but the fast heavy Hector was not. Greig, taking off with Corporal Harman, felt one leg of his undercarriage shatter, and at a comfortable height, remarked in his measured drawl

—Have you ever done a parachute drop, Harman? You're going to do one now! And the Hector flew on without them. The very next day Buster, flying solo, had precisely the same trouble, and adopted the same solution, breaking a Hector's leg on take-off and his own on landing. Flying Training Command had taken us over, and our new A.O.C. came to size us up. Despite low cloud and mist, he was given a circuit in a Hotspur. All had gone well, and they had rolled to a stop, when Freddie Kemp brought the tug down behind them through the mist. Its propeller rattled along the top of the glider with a noise like a stick along palings, and it flopped with folded wings a few yards in front of the startled visitor. The bites taken out of the plywood were nicely spaced; they just missed the cockpit. Unhurt save in dignity, Freddie in due course signed the photograph in the squadron album. Another Hector undercarriage collapsed under Greig, then yet another under Sergeant Ward; both got home, but their landings of course did further damage. Group were getting into the frame of mind of Mark Twain's Alpine traveller who, when for the fourth time a chamois fell through the canvas roof of the mountainside bivouac, declared —Boys, this is getting monotonous! The real need was, of course, a level airfield. Now it was Freddie Kemp's turn again: my clerk's cheerful features appeared in the doorway.

—If you was wanting *more* photos of Hector prangs, sir, there's one in the circuit now with its undercart all hanging down, sir.

So choosing a viewpoint at leisure while the fire-tender and ambulance warmed up, I recorded the careful cross-wind touchdown, the brief level run, and then the leg piercing the turf and the Hector emulating a corkscrew. Freddie signed that page of pictures too. (There is no picture of his unexpected meeting, long after, with a former fellow-pilot from Thame who, on an air-sea-rescue mission, lifted a body from the sea and recognised Freddie Kemp.)

Courses were a nuisance. Every few weeks, somebody with an urge to instruct others seemed to start up a course in some remote place, on some abstruse subject, and we would be ordered to send an officer—any officer—to attend it. There was even a course on the running of courses. Some of them no doubt were useful, but officers who had more urgent things to do wasted much time on subjects that had no bearing on our tasks, until we found the solution. A mild and tractable P/O Admin was posted to us, for whom no particular job existed, and we appointed him Course Officer. Always away on some new course, he saved a lot of time for others less dispensable. If he attended all his diverse lectures, he must have become quite knowledgeable.

Our new taskmasters at Training Command and 23 Group set out to mesh us to their machine, a successful gear-change in the end, though it cost a few teeth on both sides. We were impatient of their ignorance of motorless flight, and they classed us with the old man of Thermopylae, who never did anything properly. At a conference attended by the Chief Flying and Ground Instructors of all the glider units, existing and emerging, our syllabus was taken apart, argued, and more or less put together again. The old questions came up: You have riggers, so why teach soldiers to rig? They have Intelligence officers, so why teach them to read air photographs? They aren't allowed to spin the Hotspur, so why teach them spin recovery? This last one gave an opening that could not be resisted.

—The position is, sir, that they are not allowed to put the Hotspur into a spin, but that if it does spin, they are allowed to get it out. (One tooth to us.)

A short Air Commodore with a short name and a short temper arrived unheralded 'to find out why there isn't more flying going on'. It was midday; perhaps he had hoped that we stopped for lunch. I was sent to cope with him until the C.O. or C.F.I. should arrive. I was relieved to see that the towline was functioning merrily; two Hotspurs went off in quick succession, and a third had just cast off upwind, while a fourth approached; the tractors were retrieving industriously, and a tug dropped its rope and roared away again. But the visitor was not impressed. In the first momentary gap between take-offs he asked why flying had stopped. They did far more circuits an hour at an E.F.T.S. Why did the gliders finish at the upwind end of the field instead of stopping near the downwind end ready to be towed off again? Why were those aircraft at the dispersal not towing gliders? (They were two Tigers and the rotting Avro, left over from the Kirby Kite days.) A Wellington was wandering uncertainly round a mile or so away. —What's that aircraft doing? Why isn't it towing? I was glad to see Tim and John approaching.

To verify that the home-trained tug pilots at Thame were really up to wings standard, no less an authority than the C.F.I. from C.F.S. came to check them; rather as if their spiritual instruction had been tested by sending along the Archbishop of Canterbury. The great man arrived in a Dragon Rapide, and ended his landing run by tipping it on to its nose; rather as if the Archbishop had been taken in adultery. Our pilots were found free from sin.

Then the Group Navigation Officer telephoned to say that he would fly over within the hour to discuss our navigation syllabus. Visibility was not good, but the railway ran past our boundary. At the expected time a Tiger came very low along the line, but it went by; five minutes later it passed again going the other way. At five-minute intervals it made two more trips along the fence, and we gave it a green, but we saw it no more. After a period just right for its return to South Cerney (change at Bicester) another telephone call came: the Navigation Officer had not been able to get away, but would come by road in the afternoon.

No doubt our superiors told as many stories against us. We came to admit that it was a refreshing change for a training unit to find itself in a Command that understood something about training. Our methods were not beyond improvement, and things did speed up.

Miles Masters replaced the old Hectors; an unpleasant accident to one of these tandem two-seater tugs, with dual control, is memorable if only for the brevity of the survivor's comment. Indulging in unauthorised low flying, the pilot in front was decapitated by a power-cable, and the army glider pilot in the back seat flew home, drenched in the other's blood; landed, taxied in, climbed out and remarked —He's had it.

Our training programme included remote releases, descents on tow, and a new exercise that combined both, the 'tactical release'. Who thought this up I never knew, but it seemed as difficult a way of finding and landing on a precise spot, as could have been contrived. Even when the spot was one's own airfield, it was like throwing darts blindfolded. Some miles from home, the tug would tow your glider down to about a hundred feet. The throttle would then be opened, until you were screeching along all-out. If and when you recognised your release point, not easy at that height, you pulled the plug, and the tug left you flying straight and level, your speed steadily decreasing, with a long way to go. It was nice when the tug pilot went straight on ahead, disturbing when he seemed to think the airfield lay elsewhere. You now had nothing to do but wait, watching the airspeed indicator, resisting the temptation to climb up for a quick peek over the trees; you were supposed to be avoiding radar and flak. If all went well, after a minute that seemed an hour, the dear old familiar airfield came up and received you at the right moment. Few in fact ever landed short, though some went straight across the field at an altitude of one foot and out at the other end. If ever such tactics were to be used in operations, a glider pilot might well say —Give me radar and flak, and a view of the objective!

For Hotspurs with inadequate trimming-range, Group Captain Jack Noakes at Kidlington devised a beautifully simple cure. A veteran pilot, he went back to the front elevator of 1912: a shaft rotating in a tube put laterally through the nose carried two tiny aerofoils, so far forward that a slight tilt on them amply corrected the trim. Another simple dodge was to the credit of Austen, Engineer Officer to the Exercise Unit. They sometimes had to land Hotspurs on their skids, and the replacement of the wheels involved unwieldy jacks. Austen made a stout little timber ramp, and greased it. With a man at each wingtip, a tractor pulled the glider to the ramp, and the skid went up it. The wheels were attached, and the ramp was pulled away. The operation now took about a minute, and the construction of the apparatus perhaps half-an-hour. An engineer, they say, can do for a pound what any fool can do for five. It was Austen who provided Brigadier Hopkinson of the Air Landing Brigade with a novel cabin aircraft, by fixing a Hotspur canopy to his Tiger.

Long after all other founder-members at Thame had adopted Air Force blue in place of what a disapproving memo from above had called 'nondescript uniforms of the various services', one happy individualist stayed as he was: the kindly, bespectacled Gunner Turner. Still in khaki battledress, he had ceased instructing to become a permanent and most efficient Towmaster, hurrying to and fro all day and every day to keep up the take-off rate. Settling down in billets, he somehow contrived to draw Army pay while avoiding all other contact with the Army; indeed he found a home, took himself a charming wife, and dwelt on near Thame as a last relic of our happy-go-lucky pioneering days; I hope he is there still, with or without a Gunner's pay. A keen Towmaster such as he was needed, if quick intensive take-offs were not to produce accidents, and it is to be hoped that our fellow-units were as well served; there were some near-shaves. It was, for instance, customary for the riggers to squirm into the tail of each Hotspur in turn, between flights, to inspect the vulnerable tail-skid mechanism; the Mark II Hotspur had side doors. This practice led to the sight, one day, of a glider moving off and gathering speed with, as a bystander put it —erks pouring out of every crevice. Two towropes could be crossed on the ground, so that one pair of pilots, lying back to relax awhile, found their couch moving, and had some ten seconds in which to close the canopy, take their seats, and finding it too late to release, grab the controls and fly. At least once a Hotspur was towed off without a pilot; tail-heavy, it did a spectacular little climb, and when released by the unhappy tug pilot, made a poor landing. So did another from which two pupils baled out without the formality of signalling their intention to the tug pilot, who luckily got rid of his unruly air-anchor before it took full charge.

Some of the soldier-pilots, conditioned to obey orders, proved slow to disobey them when occasion demanded; unequal to the transition from an obedient member of a squad to a responsible captain of an aircraft. Arriving home too low for the regulation left-hand circuit, but well placed for a safe right-hand one, a stickler might attempt the former, and crash according to orders. The Army tended to frown on our relatively lax discipline, but we might have aggravated this difficulty, had we tried to reduce all airmanship to a drill. A spell of flat calm, following a week of strong winds, was the undoing of several of these less adaptable types, and there was a memorable series of overshoots. These usually ended with a swing into the dispersal area; one tended to look out of one's window now and then during this epidemic, and seeing a Hotspur coming in especially high, I picked up the telephone, and had the ambulance closely following it as it charged the wooden fence above the railway cutting. Lodging in one of the few stout steel supports, the glider stopped dead, except for its cockpit and nose, which showered like confetti down the bank and on to the track. Rolling unhurt to the bottom, the pilot scrambled up, and emerged to meet the stretcher-bearers at the fence; the sight seemed to upset him, for he promptly passed out.

At one of our fellow-schools a novel accident was recorded: the manageress of the Naafi, pedalling round the perimeter, had her bicycle whipped smartly from under her by a towrope flailing from a tug. Up on the hill at Chearsley, Sir James Lochore was gradually festooning the poles of a pergola pathway through his rose-garden, with rope after rope, as they dropped like manna from heaven. Not for him the unenterprising reaction of the dear old lady from Haddenham who knocked timidly at the guard hut to tell them —There's a towrope at the bottom of my garden! which we felt she should have sung. But let no man say that Sir James, in whose servantless household anything up to four officers at a time were entertained royally for some two years on end, could ever owe the Glider Training School anything.

At Kidlington, a Captain in the Glider Pilot Regiment made an unusual choice (if indeed he had any choice) for a forced-landing: he put his Hotspur down on the main avenue leading to Blenheim Palace. This most impressive of all the impressive equipages that must have rolled up that monumental way, surely deserved a Marlborough on the steps to greet it. The arrival was nearly marred by an Austin Seven going just ahead, but fortunately capable of surprising acceleration. The same pilot was less lucky on a later occasion: banking on the approach, putting the stick forward, then centralising it, he found that it would not come back because it had passed round the back of the instrument panel. (Hotspurs, it will by now be understood, differed.) The resulting impact was violent, and flung him yards from the wreck. His body was laid on a mortuary slab, until a diagnostic error was observed and it was transferred to a bed, from which in due course we were pleased to see him back on duty.

From time to time, sundry R.A.F. pilots were attached to us singly for glider courses; the reason escaped us, until some similarity in their not wholly spotless records led us to think that Thame was regarded as a sort of penal settlement. Flying without petrol was perhaps a punishment like living on bread and water. One of these human problems came with a pilot-rating to the effect that he was unfit to fly any sort of aeroplane; presumably any bloody fool was thought fit to fly a glider. Unfortunately, dual gliding did not reveal his flaw, and on being sent solo, he spun in and killed himself. Thereafter this dubious input ceased. This was our only fatal glider crash at Thame in two years' training.

We sought causes, we analysed accidents, and when we heard glider pilots boasting light-heartedly of their prangs, we started a salutary system whereby the culprit was sent to a glider factory to work, for a period proportionate to the damage, to see for himself and report back to others the cost in man-hours of a momentary carelessness. I shook the pupils of one course by calculating conservatively their probable cost to the nation; I forget the figure, which was guesswork anyway, but it cannot have been less than a thousand pounds apiece per week.

An incident at the Exercise Unit showed at least one Sergeant glider pilot ready to assume the authority of a captain of aircraft. Taking a full load of army officers who had never been in a glider before, he had a General in the second pilot's seat. There was no wind, and the tug seemed unequal to its task; as the hedge approached, both tug and glider pilot were reaching for their cable-releases. The General chose this moment to enquire casually

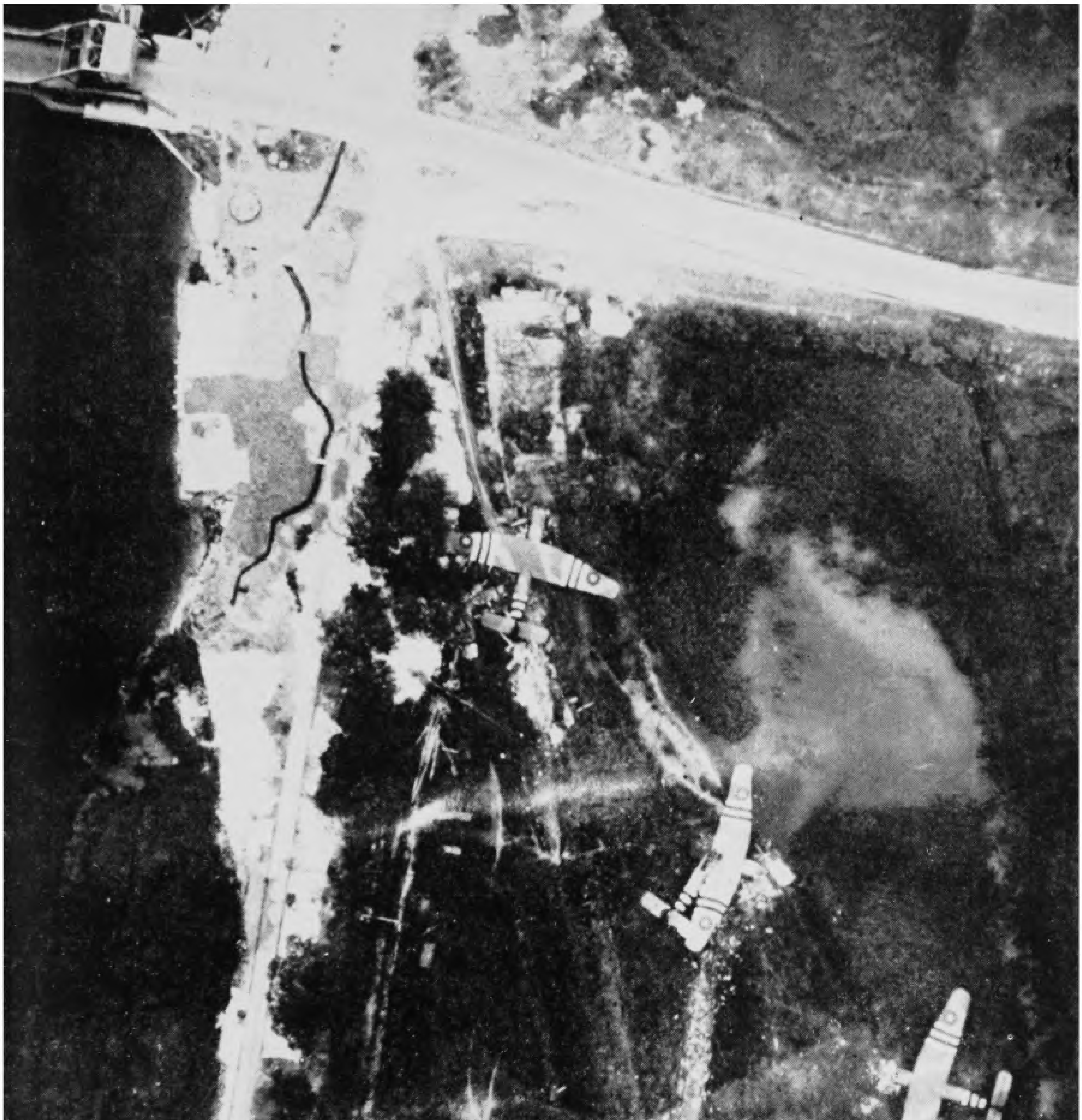
—Tell me, have you any means of communicating with the aeroplane if you are in trouble?

and got the stern reply

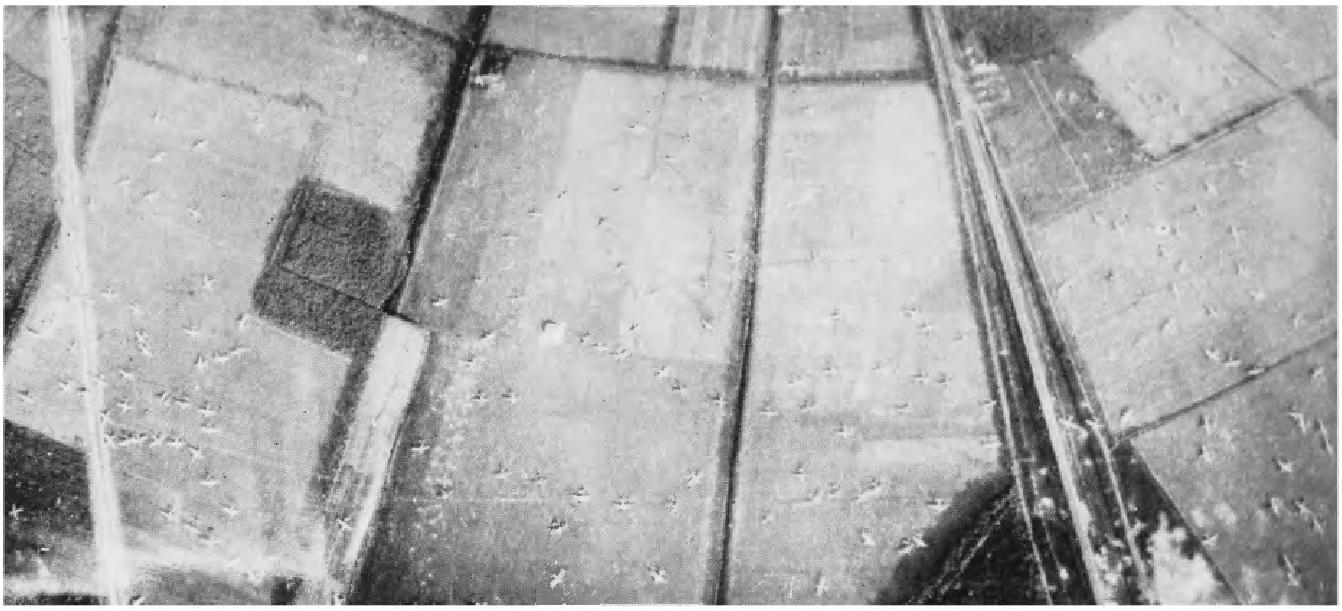
—Keep quiet, I *am* in trouble!

In the re-shuffle, C.L.E. had become Airborne Forces Experimental Establishment, devoted now only to technical trials. Neither Stiffy at A.F.E.E. nor Nigel at 38 Wing had any further parental authority over us, but we were still distantly related, and the nicest relations are the remoter ones that one meets because one wants to. So some of us kept unofficial contact, even at the expense of leave. We had got interested in this Airborne thing. Thame had become a pupil-factory; more important work was afoot at Ringway and Netheravon.

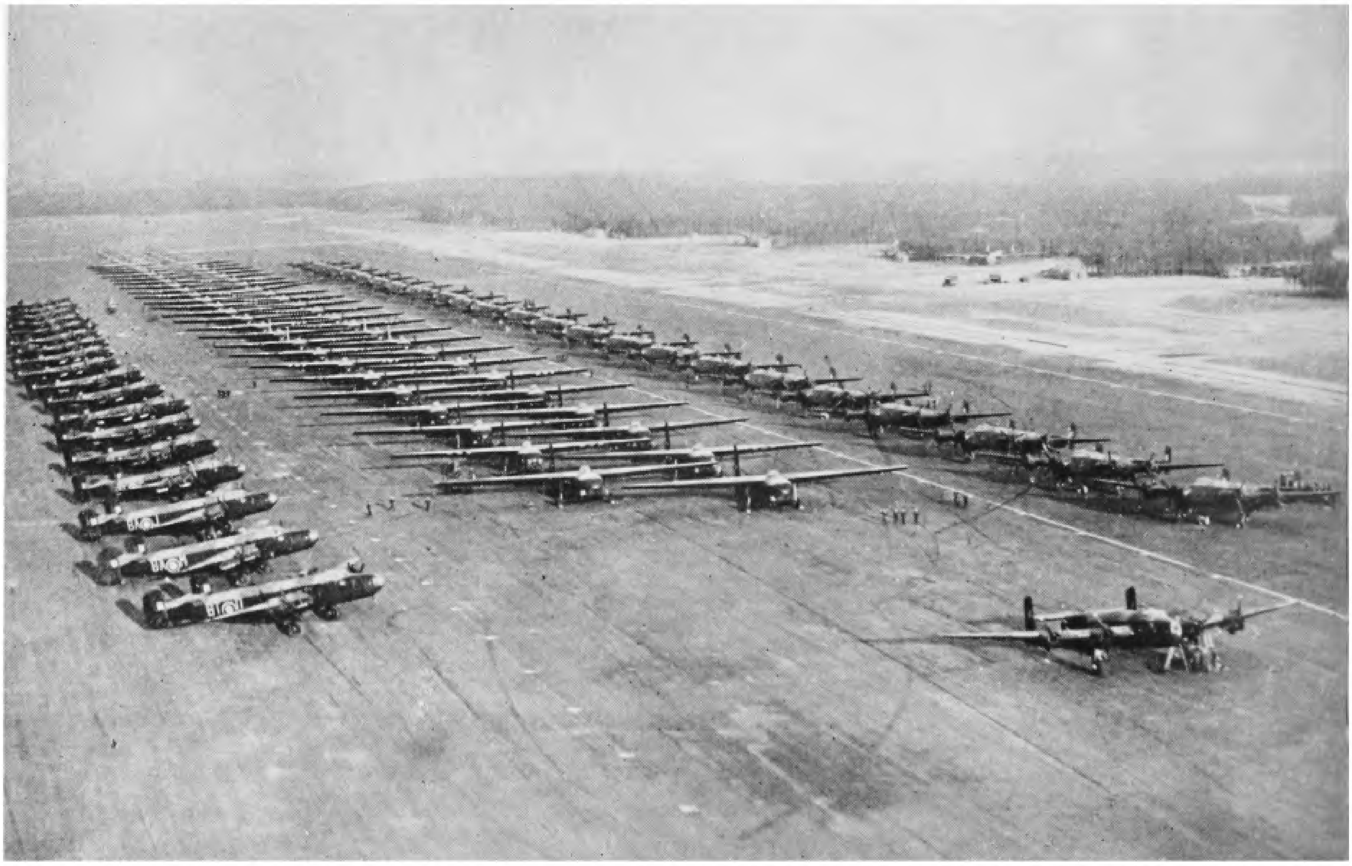
A.F.E.E. had their first Horsa. It was a high-wing monoplane glider of 88 feet span, with a conventional tail, a tricycle undercarriage with the main wheels jettisonable for landing on a short skid. It had split flaps as big as barn doors. The early Horsas had dive-brakes below the wings, but these had a way of opening themselves at the wrong moment, and were abandoned. The flaps alone were amply effective. Essentially a beast of burden, the Horsa could carry very nearly its own weight; in other words, the wing loading could be nearly doubled, a point to be borne well in mind by its pilot. It was up to him to nurse the tug, which would be pulling off the unprecedented total load of about seventeen tons. The cockpit was a roomy greenhouse, the pilots side by side. Inter-com to the tug was either by radio or by a telephone cable woven into the towrope. The 'yoke' towrope was in Y form, attached at two quick-release points on the leading edges of the glider wings; this tended to keep the glider laterally straight. For the tug pilot, the easiest towing position (as with any glider) was the one that kept the rope horizontal at the tug end; with the



The bridge over the Orne Canal near Caen, the crux of the airborne operations that were themselves the crux of the invasion of Normandy. On the night before D-day, June 1944, the three glider crews detailed to land in this hazardous little field, as close as possible to the bridge, after releasing in darkness more than five miles away, carried out this daunting task to perfection. The leading glider has felled a tree, and its nose is embedded in the barbed-wire defences. The bridge, like the adjoining river bridge where two out of three gliders arrived, was captured and held.



Horsa and Hamilcar gliders at Arnhem, after the second lift on September 18, 1944. Of 655 gliders detailed for these two lifts, 591 landed accurately as briefed. Many of the tail sections have been removed for unloading. Some (bottom right) have been destroyed by mortar fire, but most of these have been unloaded. (Below:) The last and greatest airborne operation. 48 Hamilcar tank-carrying gliders and Halifax tugs lined up at Woodbridge for Operation 'Varsity', the assault across the Rhine in March 1945 that carried the war into Germany and marked the beginning of the end.



Horsa this meant flying about twenty feet above the tug. If flown too low, the glider had to shoot the rapids in the slip-stream. This, incidentally, was found to be a wake caused by the huge volume of displaced air, rather than a backward vortex from the propellers; the twin-engined tugs in fact had a more turbulent wake than the four-engined. After take-off, the glider pilot could descend to the 'low-tow' position, easier in poor visibility or in cloud because he could see the rope better, and essential when using the 'angle-of-dangle' instrument, but any surging would cause constant pitching of the tug, and tire its pilot. Tow speeds up to 160 m.p.h. were safe, and unlikely to be reached. Release was best made from above the tug; release from below could lead to the left-hand pilot's left ear, and the right-hand pilot's right ear, being boxed by the heavy plugs as they came off the hooks. In free flight the best glide speed was about 80 m.p.h. when loaded, and the flight path about 1 in 13. Pilots had been chary of stalling the Hotspur, but with the Horsa complete stalls were quite innocuous. With the huge flaps down, at 100 m.p.h., the descent was fantastically steep, about 1 in 1½. This promised to make tactical landings easy. Making the last turn into wind with full flap, one had only to point the nose at the required touch-down spot, round out, land on the main wheels just above stalling incidence, rock on to the front wheel and apply the brakes. (The later mass-landings were made at higher speeds, giving much longer runs, but only to enable the gliders to reach their appointed places and leave the landing area clear for others.)

Airspeed had produced an excellent aircraft. The snag lay in the military loading, and this was not their fault, for they had done what was asked of them. Browning had been lent the very first of a new vehicle, the 'Blitz Buggy' (later known as the 'Jeep') which promised to be ideal for towing a gun. His attempt to get this into the mock-up of the Horsa had been stopped by the chief designer, who protested that the floor and ramp had been designed only for the maximum load hitherto agreed with the Army: a motor-cycle combination. If they had changed their minds, and would submit new load requirements to the makers, the Horsa might be modified to suit. They had; they did; it was. So many other belated requirements followed, that the delivery of Horsas was to be slowed down by some 2,000 'mods' and 'mods to mods'. At one stage Stiffy Harvey, exasperated by the arrival of a gun that would not quite go in, put his foot down and offered the Army his only solution: they must saw a bit off their gun. The first attempt by Airspeeds to push an anti-aircraft gun up the ramp and through the side door of the Horsa, failed for lack of manpower. A larger team gave it more impetus; it went in, and out again through the other (doorless) side. The fully modified Horsa I took a 75 mm. howitzer, a 6-lb. anti-tank gun, a 20 mm. Hispano, or a 40 mm. Bofors. But for the time being the motor-cycle combination was the limit. Eventually, a remarkable assortment of things were to appear on the Horsa Load Tables, as

Bags armourers bicycle filled
Block 2-ton
Brushes stencil
Hooks reaping
Machine circular sawing
Pots glue
Saws hack
Signs booby trap . . .

the Field Park Company, Royal Engineers, for whom these were carried, must have had a busy time after landing.

A.F.E.E. were trying out a cockpit canopy that they had modified in their own workshops, and Kronfeld's assistant test-pilot Blaicher offered me the second seat. The take-off was not impressive: with a three-quarters load that happened to be aboard, the Whitley took about a thousand yards to unstick, about 7 minutes to 2,000 feet . . . but at this height my observations were interrupted by a bang and a roar, and the canopy hatch burst open above our heads. Instinctively I grabbed it by the edge, whereat it began to lift me out of my seat. It would have been nice to let go and be rid of it, but it might go through the tailplane. Blaicher did his best to fly slowly and get down quickly at the same time; it was a question whether my grip or my straps would fail first, but the only painful outcome was when the touchdown bump slammed the hatch on my fingers, producing what the M.O. memorably described as crepitation in a terminal phalanx; I may since have been half an inch taller.

An unnerving spectacle, on the same day, was a Whitley towing three Hotspurs by the 'flycast' method, that is, with a main cable to the rearmost glider, and the others, well above, attached by separate cables to points along the main one. This arrangement was tidier in the diagram than in real life, with the glider pilots pulling each other about in their efforts to keep apart. It might prove useful if one had small gliders but only large tugs. Sproule, at Thame, had already attacked the converse problem of having large gliders but only small tugs. A tug that could tow an oversize glider well enough when once airborne, might not be able to get it off the ground unaided. He put two Tigers to tow one sailplane. The layout was ingenious. One rope joined the tugs tail-to-tail and was laid out behind them in a V. At the apex of the V, this rope ran freely through a pulley-block, and the pulley-block was roped to the glider, the whole forming a Y. Once aloft and cruising, one tug would slowly fall astern, and just before its tail reached the pulley the cable automatically released it. The other tug would then continue the tow alone. It worked except for the first trial: like the glider pilots in the converse arrangement, the tug pilots meant to keep well apart, and they overdid it. The wide angle of the V caused an inward pull that turned the tugs further outwards, until by the time they reached the boundary they were going in almost opposite directions. Declining a tug-of-war they released, leaving the glider to cross the railway cutting as best it could.

Robin Fender, now O.C. Experimental Flight, had been towing a Horsa with the Wellington, but there was some alarm as to whether its famous criss-cross geodetic construction was not, with this unscheduled load on the tail, allowing the fuselage to extend like lazy-tongs; they had not measured it precisely beforehand, but they suspected it might already be some inches longer than Barnes Wallis had designed it. Robin had also tested the ditching qualities of the Hotspur, landing with Stiffy Harvey on the Tatton Park lake: it ditched beautifully on its boat-like belly, a fact worth noting with an eye to the possibility, one day, of a little amphibious operation with gliders.

To Disforth, to see the prototype 15-seater Hengist, a pretty aircraft, high-winged, slab-sided, obviously from the Slingsby stable. It was soon to be written off, when a rigger omitted a wing-root pin, and it shed a wing, putting our old gliding friend John Nielan in hospital awhile. Slingsby had been having a little trouble with the Ministry of Aircraft Production. Parting from one pompous official who had spent an hour finding a difficulty for every solution, the thwarted Slingsby remarked —Anyway, I expect *you'll* end up with the O.B.E.! and received the calm reply —I already have it, Mr. Slingsby.

Then with Nigel to Feltham, to see the strangest glider of all. To embark on building the huge Hamilcar tank-carrier, weighing some 14 tons with its load, without time for cautious trials, was a formidable gamble. So General Aircraft had built what might be called a Hemi-Hamilcar, a replica to exactly half full size. Not a mere mock-up: it flew. Its oddest feature was its construction. Varying the old rule, 'simplicate and add lightness', they had simplicated by not removing heaviness. Spars that in a normal wooden glider would have been built up hollow, with a minimum of material, were solid timbers like those of an Elizabethan ship. There seemed to be more wood than air inside the fuselage. Why spend money keeping the thing light, and then make it heavy again by adding ballast to represent the tank? Built thus, its weight came out as wanted, for it was the full-load performance that most mattered. The Hemi-Hamilcar, too, was to be written off, at a test ground belonging to another firm, whose managing director demanded to do a circuit. He came in too low, and raised the flaps to stretch the glide . . . he walked away from the bits, but with a red face. We tried to envisage the full-size Hamilcar, its cockpit 25 feet from the ground, but imagination failed.

At Netheravon, Wilkie was flogging his Flight through a gruelling night-flying programme, landing troops in Hotspurs on a dim flare-path that was successively reduced each night, lamp by lamp, from difficult to impossible. Weary pilots were breaking gliders, and Buster had insubordinately offered to knock his tireless Flight Commander's block off, before a halt was called—by the Brigadier, never by Wilkie.

Dougie Davie, of the Cambridge Gliding Club and a familiar figure at Dunstable, after a brief spell with us at Ringway, had gone to Farnborough to run a glider-testing Flight at the R.A.E. Among other devices, he tried out an automatic pilot fitted in a Hotspur, to be used on tow. It had worked well, and was being demonstrated to a load of senior officers, when the tug throttled back in cloud, and the glider overtook it. The slack rope lassoed the glider's nose, then tightened and peeled the fuselage like a banana. The Hotspur was the older type with a removable lid, and this too the rope removed, leaving the passengers as in an open boat. That at least made their exit easier, and all but Dougie baled out. He then decided that the glider was just controllable, and landed back at Farnborough, to await the return and the comments of his passengers. Other projects worked on by this Flight were rocket-assisted take-off, multiple towing, target gliders, and jettisonable 'trailer wings' to carry extra fuel. Dougie Davie later transferred to jet testing, and on this duty lost his life.

Other glider trials were going on at Cranfield; there seemed to be a rather untidy overlap, and some duplication of the work going on at A.F.E.E. The laugh was on a Polish pilot at Cranfield over the affair of the Rogue Horsa. This particular glider, in which no visible difference had been detected, was behaving curiously at certain speeds, adopting an erratic sort of roll. The Pole, after exhaustive air tests and some abstruse calculations, diagnosed a lack of torsional stability inherent in the design, liable to recur in any Horsa. Advised of this alarming situation, Airspeed sent over their chief test pilot George Errington, to whom the technicalities were patiently explained. They then walked over to fly the glider, but long before they reached it, George was able to give the answer. Some faults can be too glaring to impinge. With the rudder central, its servo tab was fully displaced, because its connecting rod was broken.

George was trying out (as C.L.E. had done with sailplanes) the effect of towropes of varying lengths. When he took off from Heath Row in a Horsa with the longest rope ever, it sagged on to the telegraph wires along the Great West Road —so like a violin bow in its action, he claimed, that a loud middle-C was heard as far away as Windsor. It was fun to fly with George in Horsas, not just to watch his impeccable handling, but to hear his absurdly comic patter, synchronised to the most bizarre manoeuvres. Brigadier Hopkinson had doubted whether a Horsa, even lightly loaded, could land in its own length as claimed; George took him up and landed in less. His parking act at Netheravon was a star turn. A certain gulley on the perimeter is still known as Dead Man's Gulch. It was so named by the Airspeed party who parked their Horsas there. George would land one up the side of the Gulch, let it roll back into a gap in the rank, and leave it precisely in line with the rest.* And having to land one day with half his under-carriage missing, he landed along the Gulch so that the slope supported one wing-tip—with no damage whatever. In months of experimental towing, or being towed, George never broke a towrope.

He made it look so easy that I sought to have a bash at a Horsa myself, and keep one glider ahead of my pupils. The chance came when the second seat was vacant on a ferry trip from Netheravon to Hurn. I was getting aboard when a message arrived—another would soon be taking off on a much longer tow and returning to base, which in both ways would suit me better. So I watched the first one go. There was a stiff cross-wind, and as it unstuck it rolled, dug a wingtip into the ground, and cartwheeled, killing the pilot. Though it was most unlikely that he would have let me do the take-off, I reflected, everybody would have assumed that I had. The second Horsa carried troops and a medical officer, and the sole object was to time and record the onset of airsickness. It was a bright, unstable day, with plenty of active cumulus, and the tug pilot was making no effort to avoid their turbulence as he stooged around at cloudbase. On tow, moreover, the Horsa adopted a slow, queasy corkscrew motion around its long axis. Nevertheless, after half an hour or so, I went aft to find the troops still rosy and bright, the medical watching them impatiently. I don't know whether they had been told the object of the exercise. Allowed to take over, I found the 'servo' lull between control movement and response most disconcerting. The control column acted like a ship's telegraph obeyed by a lethargic engineer below. By the time I had got the feel of this cumbrous contrivance and had begun to relax, the medical was in the doorway, very pleased: all the men had been sick, he said; he had his data, so we could head for home. He was looking a bit pale himself, I thought. But in mitigation, I must plead that after my next attempt, a trip to Hurn, I overheard my tug pilot say after landing that it had been a lovely day for towing, and that you wouldn't have known there was a Horsa behind.

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* I was reminded of this when, at an S.B.A.C. show after the war, he did the same thing, on the level, with a four-engined aircraft fitted with reversible-pitch propellers.

A few days after reading the MS. of this book, Errington—on the point of retirement—was killed when a Trident crashed.

In April 1942 the Prime Minister and a world-famous company from the British, Dominion and American services and embassies watched an Airborne exercise at Everleigh, near Netheravon. The field was well chosen, a shallow bowl that promised a spectacular fast touch-down but an uphill stop, by eight Hotspurs carrying troops. Paratroops were to drop first. The leading Whitley came over dead on time, but for no apparent reason nothing emerged, and the whole formation went round again in a wide circuit. By the time they returned and dropped they were some minutes late, and the Hotspurs, diving from 8,000 feet, were already in sight. The glider pilots, faced with a field still dotted with hurrying paratroops, were put off their chosen landing-lanes. Some were flying too fast, perhaps recalling that a Hotspur full of troops had stalled and spun in a few days before; and a calm had given place to a light tail-wind. A paratrooper was hit and killed as he reached the boundary, and the glider, making a last-minute swerve, cartwheeled in the hedge and split open like a pod of peas. Another sped towards the group of observers, but swung just in time into a grass bank edging a wood. It was soothingly explained to Churchill that such crash-landings seldom hurt anybody; his attention was drawn to the compact group-landing of six of the gliders, and the quick deployment of their troops. His expression, grim since his arrival, was now thunderous. He interrupted.

—I think I should like to know what *really* happened.

And an officer was sent to bring back the tally of deaths and injuries. At the scene of the crash a gawky soldier-boy, one of the survivors, was standing, shaking, staring at a pair of army boots protruding in an absurd V from one of the blanketed shapes on the ground; clearly about to do something unsoldierly. At such a moment, with his great day in ruins, Nigel could find time to go over to him, and kindly but firmly say just the right things to stave off the breakdown.

The primary cause that led to disaster proved to be a little metal flap about an inch across. In the parachuting Whitleys, a red signal-light warned the troops to stand by, and a green signalled the drop. At night, watchers below could see the exit hole as a red, then a green disc, giving away the place and time of dropping; therefore this little flap was fitted to dim the light. For a daylight drop it had to be raised, but in the leading aircraft this tiny item had been overlooked. Not seeing the dimmed signal, the troops did not drop, and the whole formation followed suit. Hence the fatal delay.

For want of a battle, a kingdom was lost,
And all for the sake of a horseshoe nail.

But all was not lost this day. Nigel and Browning had no doubt taken the opportunity to impress on Churchill that his Airborne baby was sadly under-nourished. Soon afterwards, an Airborne Forces Committee was set up to speed development and production. In June 1942, the War Office formed a new Air Directorate of which the second branch, under Brigadier Gale from 1st Parachute Brigade, was wholly devoted to Airborne matters. A second Airborne Division was being raised. A second battalion of glider pilots began to form in August. The latest plan envisaged training 1,000 of these by October 1943, nearly enough to fly a whole Air Landing Brigade. In the ensuing expansion the total of Glider Training Schools rose to five. John Saffery had left Thame in December 1941 to start up the second at Weston-on-the-Green; a third started up in July 1942 at Stoke Orchard, and a fourth and fifth were formed from the two glider O.T.U.'s, at Kidlington and Shobdon.

In the re-shuffle, Donald Greig had taken over from John Saffery as C.F.I. at Thame. Stolid, tenacious of purpose and of idea, impervious to criticism, Greig did not welcome comment from his subordinates, still less from above. Nor did he always express himself to either in a way likely to endear him. Senior officers from 23 Group called in a friendly way to discuss our inevitable move to some larger airfield, and invited his suggestions.

—I don't think I care where we go, sir, except for one thing: (pause) I have only one suggestion: (pause) that it should be as far as possible from 23 Group!
After which one could not be surprised that when No. 1 G.T.S. moved to Croughton in Northamptonshire, within forty miles of 23 Group at South Cerney, Greig found himself posted away from glider training to instruct in Scotland.

Tim Hervey stayed on awhile at Thame to run a glider instructors' school, and did a spell of test-flying on Horsas; but then, doubtless glad to complete nearly two years of thankless foundation-digging, went back to his beloved game of getting prisoners out of German camps. In August, the last G.T.S. Hotspur took off from Thame for Croughton. It contained Pop, me, my typewriter and my bike. We were the only two founder-members left in the unit.

'Course No. 1' at Croughton was in fact our nineteenth. The new airfield was ample for full-load flying, and the take-off line could be put half way across, so that a competent pilot might land back where he had started, cutting out the delay of retrieving. A drawback was that it stood on a plateau above the surrounding country; thus I might see from my back window a glider a quarter of a mile away, head-on, flying well above the ground but already a foot below airfield level; I would then get out my camera, to carry out once more my sideline duty of recording all the crashery. Let it be taken as proving the increasing tempo of the training, rather than any inadequacy, that the year ending in August 1942 had given us material for a salutary little booklet called *One Hundred Glider Accidents*. Five glider units had contributed to this total, of which only about six were fatal.

After Thame, and the Chiltern landscape, this was a dreary place. The hardboard sleeping-huts were dispersed through and beyond the straggling village; one's bed was half a mile from one's bath and nearly a mile from the airfield; within these limits, in the first seven days, I pedalled seventy miles by cyclometer. The contractors had left the roads half an inch deep in liquid clay. Before going down with flu, it was as well to lay in Bovril and Camp coffee, for a plate of mutton stew had even less appeal after being carried from the mess by an aggrieved orderly, over five fields and six stiles. It would of course be monstrous to complain of such petty discomforts at a time when men were living and dying in fox-holes in the desert. But the desert at least is not squalid in the way that a ramshackle dispersed camp can be in a wet winter. The one-room Nissen-type mess had a library shelf: Hall Caine, Sapper, E. Phillips Oppenheim, the *Windsor Magazine* from 1905 to 1910. Tiring at times of beer and pontoon, two or three would repair to my hut, to pool our fuel, and play records. We were startled when our music-loving cow first put its great drooling face in through the window; thereafter we came to expect it, but it was wise to tend the wire fence that stopped its further intrusion; for the huts had been built with such economy of material, that another of the herd, leaning against a wall, had distorted one officer's bedroom to an irreparable rhomboid.

At Thame, after the first few weeks of improvisation, the day's work had gradually conformed to a certain degree of discipline, but this had always lain lightly on the pilots and technicians who formed the majority. Few jobs in the Air Force are carried out by squads to a sequence of orders; your aircraftman is an air craftsman, and spends most of his time at some specialised technical task, more or less on his own initiative. The discipline that can move a hundred Guardsmen as one, whether towards the cookhouse or towards death and glory, cannot be usefully applied in the maintenance hangar, the instrument repair shop, or the pupil-pilots' lecture room. But at Croughton, discipline ruled all. The tightening-up originated partly at Tilshead, where Major Chatterton, while Rock was learning to fly, was raising the Glider Pilot Regiment, and had set out to mould the 'Total Soldier'; the pupils now marched to and from their meals, their lectures, and even their gliders; but discipline stiffened on the Air side too. Group had evidently given the new Station Commanders a strong briefing on the subject. Officers might still ride bikes, but n.c.o.'s and airmen might not. No smoking was allowed even at the remotest corners of the airfield, nor on the public highway between the dispersed sites. A cigarette might be consumed during the tea-break, but it must be taken *behind* the tea-waggon. One glider pilot officer was reproved because his squad, returning from the rifle range, had passed a Wing Commander without presenting arms.

—But you *can't* present arms on the march, sir. It isn't done.

—It will be done here, he was told.

Discipline ruled even the parties to which the officers were bidden. Approved dancing-partners, nurses from a nearby hospital, attended under the eye of their Matron. There was to be no alcohol, and no popping out to get it.

—I expect you will *all* be coming to the party. You enjoyed the last one. DIDN'T you?

Perhaps we should have tried harder to please; perhaps we were getting stale; most of our pilots were longing to fly on ops, bored and frustrated after a year or more of instructing and towing. The daily round somehow became a series of blacks, and like chidden children we went from bad to worse. Thus when a pep-talk ended with an invitation to the officers present to affirm their understanding, it fell to Flying Officer Pike to speak for all:

—Yes, sir, quite clear, sir; you mean you want a bullshit show all round?

A black there; and another when a truck-load of our airmen gave the customary yoohoo to what they thought were two village damsels, but proved to be senior officers' wives; solemn enquiries followed to identify the culprits. Then there was the affair of the German uniforms, sent to us so that all might memorise them, to ensure the shooting of Germans while preserving Polish or Air Transport Auxiliary officers. Two men of about the right size and shape were to be dressed up, one as a Luftwaffe officer, one as a Feldwebel, and put on view. Going one better than this, they were sent out on a daylight tour of the station, with the C.O. following fifty yards behind. Another black, for not only did they escape challenge, they got more salutes than the C.O. did. A black for me arose from a huge unwanted ops-room table that filled the lecture room. It was agreed that Works and Bricks would appoint a local contractor to remove it. Tired of waiting for him, I set an Army class to dismantle it, which they did quickly and efficiently. I was ordered to have it completely rebuilt so that the job could be carried out correctly according to contract.

Sergeants' messes always gave the best parties; they somehow seemed to find the beer. One such, amid the gloom of Croughton, was especially lively; the officer guests could for once let themselves go a bit, and insobriety was verging on indiscipline when the climax came: the fire alarm sounded, and a pleasure-seeking mob surged out into the night. Half of the sky was red, and sparks rose above the trees on the perimeter; a rick was blazing just across the road, in a yard scattered with straw bales and surrounded by more such fuel in open barns; a beacon unwelcome near an aerodrome when the least chink in the blackout was supposed to invite a shower of bombs. Our fire-crew ran out hoses, impeded by hilarious helpers, directed by an incoherent n.c.o. from the summit of a pile of bales, until his shouts were suddenly muffled as he staggered into a deep gap, and there seemed to lose interest. A row of natives leaning sullenly against a wall declined to help, on the rather illogical grounds that they didn't like the owner of the stack and thought his fire intentional. No water came, and small subsidiary fires were starting; bales with legs under them were hurrying out through the gate and colliding; one small but vociferous group was taking the part of the fire, cheering it on. Hand extinguishers appeared, and foam floated in all directions among the best-blue uniforms. Little was left to burn when merciful darkness veiled the scene and the last extinguisher from the stores trickled into the embers. Next day, with headaches enough, it became known that the entire stock of foam and carbon tetrachloride, several months' normal issue, had been expended in this glorious hour, and flying could not start until more could be brought. An urgent and unprecedented demand had then to be made and explained to Group. A whole row of blacks, this time.

Winter weather could bring a series of non-flying days, which meant that some thirty energetic men had somehow to be kept occupied in the ground instruction block without repeating a lecture or a film. We sent them out on initiative tests, dumping them from a closed van at unknown spots, to make cross-country treks in which the first arrivals at each rendezvous, always a pub, found free beer awaiting them. We ran quiz competitions, with a grain of instruction in them, levying a penny a head and awarding the kitty to the winner. To prevent cheating, each man marked another's paper. Soon a general reluctance to pay the penny led to the unmasking of a ring, who had contrived to mark each other's papers, and pooled their gains. They were, of course, the same men who had done best in the initiative tests. We fixed up a sort of juke-box that would buzz or flash Morse code on demand; interest was held because it signalled obscene passages from *Ulysses*. Volunteers painted an instructive mural map all round the lecture room. Kronfeld's blind-towing instrument, the 'angle-of-dangle', was ready and working, but we could not have it until it had been passed by the Ministry of Aircraft Production; Kronfeld agreed to turn his back while I stole one, and we fitted it to our Link Trainer; going one better, we added a realistic landscape and a mobile model tug for the pupil to follow, to aid the transition from visual to blind towing. Before long the tell-tale trace of the 'crab' revealed that the flying of some pupils, as 'cloud' enveloped them, would be erratic for a while, then suddenly become impeccable; we found that the hood was not a tight fit, and that a smart type could peep through the gap and still watch the tug when supposed to be blind. The Command Link Trainer Officer came to try the device, and within a minute of his going blind in rough air, his flying likewise became suddenly too good to be true. We applied the test we had already used on suspect pupils: a slow pull on a certain string would imperceptibly raise the model tug. This had no effect on an honest pupil, but a cheat would steadily pull the stick back and—as we now had the satisfaction of seeing our expert visitor do—stall and go into an ignominious spin.

With such gadgetry and games, then, we tried to enliven the teaching, but it demanded no further constructive effort. I had now given all my lectures so often, that I would sometimes find myself listening to one, judging the phrasing dull, in so detached a frame of mind that when the voice stopped in mid-sentence, I would wonder why the chap had dried up. When teacher gets bored, what of the poor pupils? Could I have given my usual clear exposition of the reading of a weather map, when the final invitation to questions brought a Corporal to his feet to ask

—These isobars, sir: what is the actual practical effect on the glider when you fly through one?

and was I not shirking my task when I answered

—Much the same as when you climb a hill and trip over a contour line.

It had been fun helping to build the instruction machine, but now I looked like turning its handle for the rest of the war. Nobody here was interested in Airborne matters outside the glider training programme. Pop Furlong was posted to Kidlington, so there was no other founder-member left, nor one sailplane pilot. Not that soaring experience was any longer a useful qualification; it had been merely an incentive to starting this thing up. One saw now that a troop-carrier was not, in our sense, a glider at all; it was a towed air-barge, no more akin to a sailplane than a barge is to a sailing dinghy. For anyone dedicated to the proposition that an army can attack from the air, the real work lay elsewhere. There had been more than a hint of a job open to me at 38 Wing, but now we were not even in the same Command. I had not been quick enough to grab a seat when the game of Musical Chairs was on; I had been on the wrong side when the ice-floe split; it seemed I had missed the bus to Netheravon.

I found myself one day at Thame in want of transport to Croughton, when an Oxford flew in. Out of it climbed an aircraftman, an officer and an elegant woman in slacks, the sort of aircrew that could only have come from R.A.E., Farnborough. They had come to do take-off tests with the Hector towing the Hotspur; could I tell them who to see? I assured them that although I was now a stranger in these parts, I knew there were no Hectors left here; we all used Masters now. I thought we might have one Hector rusting at Croughton, but if so, it was the very last. Hadn't they better go back and tell R.A.E. that they were eighteen months late? But even in those casual circles, it seemed, orders were orders. If there was a Hector at Croughton, there they would go. Where was Croughton? I was delighted to come with them and show them. In the afternoon the last serviceable Hector, a cannibal if ever there was one, went through its paces before the take-off camera. Although their anemometer packed up, and they had to guess the wind, I didn't feel that it mattered. What would a couple of knots mean six months hence, when their findings came through? By then the dear old Hector would have joined the S.E.5 and the Bristol Bulldog in the halls of memory.

One night in October, the Glider Pilot Regiment had a tragic setback. Each of its squadrons took turn to fly Hotspurs at Shrewton, and Robson's squadron was trying out a new reduced flarepath: one gooseneck flare that could be seen from some distance, and an L of resin lights to windward of it. They made an old mistake, in trying out two new things at the same time, for this was also their first night-flying with full ballast. Rock, watching the trial, said at the last moment —I'll come with you, Robby—and took the second pilot's seat. Whilst they made the circuit on tow, a swathe of fog drifted across the field, and the tug pilot had trouble in finding the flarepath. When he did see it, from only about 200 feet, he turned rather sharply towards it; the glider lost position, the rope slackened, then tightened and broke. Left so low and vertically over the landing strip, Robson rightly made no attempt to get on to it with a full load, but turned away to land on the open plain, where he should pick up the ground at the last moment with his nose-mounted navigation lamp. But he struck the top of one of the only line of telephone poles crossing the area, and the glider crashed upside-down. Robson was thrown out through the nose, but lived to fly again. Rock was trapped when the sandbag ballast shifted forward, and suffered fatal injuries.

The gloom of Croughton was suddenly lightened for me, by a call from Nigel's Admin Officer, Charles Hurst. A Squadron Leader, he explained, had been starting up the 38 Wing Ops Room, but wanted to get back to flying. The vacancy must be filled quickly. I could have it, but I would have to get out before Christmas. Nor could I expect any pull from their end; I would have to push at mine.

Which I did, first thinking—who was the likeliest to shoot me down in the act of escaping? trip me up at the first fence? Obviously my present C.O. Not that I thought myself beloved or indispensable, but he had nothing to gain by swopping horses while the stream of pupils flowed so fast. He would probably say (if for the first time) that I was doing a good job, that Group would not agree, and that there was nobody to replace me. I took these fences in reverse order. Admittedly Chief Ground Instructors for this specialised subject must be rare in the R.A.F., and it had not been easy to raise five for the schools now running. But why R.A.F.? Struck by a new idea, I called on the O.C. Glider Pilot Regiment, now Colonel Chatterton. There was a feeling, I explained, that mine was really a job for a qualified Army officer glider pilot. Such a one would command more respect, and maintain better discipline. (I have remarked that Chatterton was very strong on discipline.) Did he approve the idea? He did, and for that matter I too began to see that it had merit. If the R.A.F. agreed to try it out at Croughton, would he be willing to detach an officer to serve with me jointly awhile, and then take over if it worked? He would, but he doubted if a suitable officer, who ought to be a Captain, were available. I suggested one who had just the right combination of airmanship, literacy and rank. Chatterton wondered whether that officer would take to the idea, though it would not bar him from flying on ops later. I said I rather thought he would, as I happened to have mentioned it to him. Might I let it be known that the Colonel approved? Yes, he thought I might, and we parted in accord, though I thought he looked a bit suspicious of the all-too-direct course the discussion had taken. Fence one cleared.

A few days later a duty at Group found me in their mess at teatime. A Flight Lieutenant from a subordinate unit does not call on Senior Air Staff Officers unless he is sent for, and his rank is a shade low for sitting uninvited at the High Table at dinner. But a certain mingling occurs at tea, and that is the time for informal if respectful chat. The Air Commodore, and the 'P' Staff Officer who was luckily alongside, were interested to hear of Colonel Chatterton's proposal. Indeed they rather welcomed it, and were glad to know that I had another job open, if it displaced me. Fence two cleared.

After which, what could my C.O. do but slide gracefully down the greased skids thus put under him? My happy successor, who would otherwise have gone back to mark time at Tilshead, overlapped with me for a week before taking over, confident and competent. Ten days ahead of Hurst's Christmas deadline, I reported at 38 Wing, Netheravon, and was doing a constructive job again, among old friends.

# 6 WING OPS

Charles Hurst put me in the picture. Throughout the summer of 1942 the fortunes of 38 Wing and of 1st Airborne, growing alongside, had been in the ascendent. The Wing had been functioning since February, with a paper strength of four operational squadrons. The Exercise Unit had provided the first trained crews. By July, two squadrons were up to strength: 296, at Andover, consisted mainly of experienced Whitley bomber crews under Wing Commander Pickard, who had brilliantly carried out Norman's plan for a parachute raid, in February, on a radar station on the French coast at Bruneval. They had specialised in parachutes, and 297 (at Thruxton) in gliders, but henceforward both squadrons were to be expert in either role. Both were now good enough to be detailed twice for Airborne operations, though they were twice disappointed: their intended part in the Dieppe raid was cancelled when it was postponed to August, and an assault on the island of Ushant with an Airborne spearhead was abandoned. They were giving training drops to the Parachute Brigade, and getting a mild taste of ops by dropping leaflets over the Continent. In August, the Exercise Unit that had gone to form them was revived. Some of the parachute exercises could then include a few Air Landing Brigade troops in Hotspurs, but the glider situation was not good. Only half of the Whitleys had been fitted for towing, and the Wing still had no Horsas. Hundreds of trained Horsa pilots were piling up at Shrewton, but they could not be kept in practice, nor had any of them flown fully-loaded Horsas by night. All should soon be well, if the strength continued to rise to fill the Wing establishment. A third squadron, 295, had reached half-strength, and a fourth, 298, was to include a Flight of four-engined Halifax that could tow the loaded Horsa with ease, and the Hamilcar when it came. All bombers coming off the production line now had the basic modifications (though not the hooks) for glider towing. Blister hangars for Horsa storage were going up on bomber stations, where glider pilots might get in some practice on the side.

But now, after a year of worldwide disasters: Pearl Harbour, Singapore, Rommel in sight of Egypt, and the crisis of the U-boat war, priorities were recast, Airborne moved down the list, and a standstill was ordered. 298 Squadron was disbanded, and 38 Wing got no more aircraft, being left with a total of 60 obsolete Whitleys. These were useless as operational tugs, or even for glider exercises with full military loads, and it was now clear that Bomber Command, who had mounted their first thousand-bomber raid in May and believed that bombing could win the war, had no intention of putting tow-hooks on any of their aircraft. 38 Wing had accepted that the conversion of bomber crews for Airborne tasks was not feasible; these would have needed weeks of special training, and once briefed for an Airborne operation, would have had to be screened from bombing until it took place, to preserve security.

No aeroplane in fact existed that was fit for all the needs of 38 Wing. A makeshift was offered in June: the Albemarle. This was a twin-engined wooden bomber, which no Command wanted because, built without adequate air tests, its speed had proved rather low, its range rather short, its bomb-load rather inadequate, and its gun defence incomplete. A number had been offered to the Russians, who had accepted after somehow managing to pack 30 troops into one; the limit with British troops seemed to be nearer 15. Three Albemarles were lent to 38 Wing in August, and their performance was mildly encouraging. An Albemarle could carry more paratroops than a Whitley, and carry them further. Towing a glider, its tricycle undercarriage made take-off much easier. But the Experimental Establishment (now at Sherburn in Yorkshire), having tested it more scientifically, refused it clearance as a tug; with a fully-loaded Horsa, they said, it could not climb above 700 feet. At Netheravon they were getting a different answer: Peter Davis took the same combination, with full tanks, to 5,000 feet. After he had gone up to

Sherburn and demonstrated that the same thing could be done in Yorkshire air, and with their tug too, clearance was granted, subject to a reduced fuel load. But modifications and clearance for parachuting were still awaited. Horsas were plentiful by the Autumn, pilots to fly them, and troops to fill them, but still there were no good tugs. The bright prospects faded.

Meanwhile, 38 Wing and C.R.E. 1st Airborne were planning the first glider operation, a small but urgent affair. Norman was away in North Africa, and Group Captain Tom Cooper, D.F.C., his Senior Air Staff Officer, was in command. Four glider pilots, not volunteers but chosen as the best, were told that their task would involve a night tow of about 500 miles, mostly over the sea, a landing by moonlight in a restricted space within enemy-held territory, a part in a military operation, and finally a walk of about 200 miles to make their escape. No tows of such length had ever been made, even in daylight; none at all had been made with the Halifax, the tug which the long range demanded; but training must be brief, to be completed before the next moon period. The glider pilots were Staff-Sergeant Strathdee (our first soloist at Thame) with Sergeant Doig; and two R.A.A.F. pilots, Pilot Officer Davies with Sergeant Fraser. All four seemed to greet this formidable task with enthusiasm. Three Halifaxes arrived for Wilkie's Flight at Netheravon, and began long-range tows, up to 400 miles, taking off in daylight but landing at night without moon. The Horsa undercarriages were to be jettisoned to increase the range; tests were made of a parachute to drop them gently, giving Peter Davis one unhappy ride on tow, when the parachute began to flutter out uninvited while out of range of home. Almost everything possible went wrong during this hurried training with new equipment. The towrope telephones, the radio inter-com, the lights on the tugs, and the jettison gear, all failed at various times, and the tugs had cooling trouble. When the operation order was opened, it revealed that the target was a hydro-electric power station at Vemork, perched in a high valley among the mountains of central Norway, a hundred miles inland. Here something mysterious and vastly important called 'lurgan' was made and stored, and must at all costs be destroyed together with the plant. The base airfield would be Skitten, a satellite of Wick in northernmost Scotland. Two Horsas, each carrying fifteen sapper volunteers, would take off just before dark, for a flight of about three-and-a-half hours. Norwegian agents, parachuted a month earlier and now in touch by radio, would set up a radio beacon and flares, and act as guides after the landings. There might be three feet of snow on the landing zone, which was only three miles from the objective but five or six hours' journey in such terrain. After the demolitions, the party would break up into twos and threes and escape into Sweden.

On the day of the operation, November 19, thick cloud was forecast over most of the route, but clear sky and moon were promised over Norway. There was rain and unbroken low cloud at the Skitten base. Rain on a Horsa windscreen limited the view to two small openings, and entry into cloud must sooner or later mean a broken rope, followed by ditching or a crash-landing. Before take-off one tug wingtip light, and both towrope telephones, had again failed; and as the use of radio was frowned upon, only a simple code of light-signals could be improvised. With the delay caused by these incurable faults, darkness had fallen, and night take-off had not been attempted before with full load. The glider pilots were given the option to postpone till next day, but they chose to go. Strathdee's glider, towed by Wilkie with Cooper as navigator, stayed on tow for five-and-a-half hours. Height had been gained to 13,000 feet by skilful use of cloud gaps, but though Cooper was a brilliant navigator, the maps were poor and the ground snow-covered, the radio beacon at the objective failed to respond, and the landing zone could not be found. The fuel level was already marginal for the long tow home when they turned back. Going through some unavoidable cloud-tops the glider kept station, but the aircraft and even the towrope iced up, and they sank into unbroken cloud. Surprisingly, Strathdee managed to stay on tow while another 3,000 feet were gradually lost, but inevitably the towrope broke, and the glider went down, still over land. The other tug, flown by Flight Lieutenant Parkinson, R.C.A.F., had been flying below the cloud, and the only further news was an enemy report that this tug, and both gliders, had crashed. Only Wilkie's Halifax returned.*

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* Strathdee's glider, descending through falling snow, crashed on a mountainside. Of 17 aboard, 8 were killed and 4 injured. These 4 were poisoned in hospital by order of the Gestapo, who shot the remaining 5 as saboteurs in accordance with a standing

The Allied landings in North Africa in November 1942 and the early stages of the campaign, involving great distances but light opposition, offered obvious opportunities for Airborne forces. But 38 Wing could take no part, in its rightful role, when the 1st Parachute Brigade went to war there. American Dakota crews had been learning to drop our troops, but there were three 'fatals' in their first exercise, training was held up, and not all of the 3rd Parachute Battalion had yet jumped from a Dakota when the Americans flew them to Algiers, and next day at dawn set out to drop them on the key airfield at Bone. Aircraft failures had reduced the force, and the troops and arms containers were scattered over about three miles, a disturbing situation when a German parachute battalion from Tunis was expected to drop in at any moment. Fortunately the airfield was captured without opposition, and it was held against constant air attacks until relief came a week later. The rest of the Brigade reached Algiers by sea; the 1st Battalion was dropped at Souk-el-Arba, and the 2nd at Oudna airfield, in advance of the 1st Army. In the next five months, this valuable specialised force fought more battles than any other formation in 1st Army, earning from the enemy the name of 'The Red Devils', but dissipated in 'penny packets' in an ordinary infantry role.

—A sexless, beerless waste! moaned some of the airmen posted to Salisbury Plain; but it is noble terrain, wide and clean despite its military scars. The chalk structure shows through the thin turf; the pale rounded downs are capped with formal clumps of dark beech; the dwindling towns are hidden in narrow river valleys. It is very old country. Over wide areas, the man-made features dominant in air photographs are not the modern military works, nor even the Roman roads, but the pre-Roman camps,

order from Hitler. In Davies' glider, 3 were killed in the crash, and the survivors shot. The most bitter of the facts learned after the war was that the Norwegians on the landing zone, with their useless beacon, heard Wilkie's glider being towed overhead. The operation was later carried out by parachutists, with complete success. It delayed and virtually ended the Germans' researches towards the atom bomb. The reason for not using parachutes in the first instance was said to be that the demolition equipment was essential and might be scattered and lost in such terrain if dropped by parachute.

ditch fortifications, lynchets, field patterns, tumuli and barrows. Netheravon (need it be said?) lies on the Avon, and the grass airfield is perched on the down a hundred feet above. It is hardly recognisable as an airfield to a modern pilot, being little more than an absence of fences between Pearce's Barn and Gallows Burrow; a mere part of the Plain, which is not a plain but a very rolling upland. If you went rabbiting round the sketchy boundary, it was wise to avoid the hollows, for aircraft would come at you from nowhere. When you took off in a glider, your tug could disappear down a dip, so that all you saw was a rope going over the ridge ahead. Netheravon, like neighbouring Upavon, is a name as revered in the service as that of Bethlehem in the church, its history going back to No. 3 Squadron of the Department of Military Aeronautics, whose Bristol Box Kites flew here in 1913. Was not a Gnome rotary, pioneer of all air-cooled engines, literally dug up at about the time of my arrival, and given a place of honour in the hall of the officers' mess? This mess and the Wing Headquarters buildings, like those of Croughton, were but temporary wooden structures, but after thirty years they were still superior in the architectural essentials of Commodity, Firmness and Delight. Or so they seemed to a happy escapee from glider training. True, the mess kitchen was overrun at night by cockroaches, but were these not direct descendants of those that had shared rations with Brooke-Popham and Salmon? No need to pub-crawl here in search of cheerful company. A bunch of founder-members from Ringway days was together again: Wilkie, Peter Davis, Buster Briggs, John Lander, Harry Ward and Bill Hire; and friends nearby in the Glider Pilot Regiment.

Nigel was still in North Africa with Browning, selling Airborne, we hoped. Tom Cooper was in charge. One soon saw that Cooper knew more about flying than most, more about navigation than the navigators, more about airframes and engines than the engineers; he knew the finer points of signals, armament and photography. Not that he paraded knowledge, but when a technical point came up against him in conference he could always confound the specialist. He would remind the Met Officer of yesterday's tephigram chart, and to a Squadron Commander who warned of overheated engines he would quote pyrometer readings. Unfortunately, his arguments lost some force because (like poor H. G. Wells, so unimpressive on the platform, so compelling on paper) he was handicapped by a high, small, plaintive voice.

Next in the hierarchy was my immediate boss the Wing Commander Flying, Wally Barton, D.F.C., a plump Canadian of whose good nature, I fear, we took advantage. Studying some men's faces, it is difficult to imagine how they can have looked as schoolboys; one could not for instance see Nigel in a school cap, but on Wally's chubby features it would still have fitted naturally. When Wally remembered his authority and tried to be firm; when from the moral entrenchment of a seat behind a desk he put on the stern-voice-of-duty act with his immediate subordinates, it inspired more laughter than awe. Even if we kept straight faces, he would soon and rightly suspect that his leg was somehow being pulled, and spoil his final burst of anger by laughing at himself. I don't know whether Canadians in general tend to dislike Americans, but Wally did, especially American aircrews. He had been with Nigel lately in North Africa, and had met some. They had not deferred to his experience or to his D.F.C., and they already wore more and brighter ribbons. He particularly complained of American crews fresh from training who bore slogans such as FLAK HAPPY on their backs. It was to be hoped that this incompatibility would not cloud relations with allies who seemed likely to join us soon in Airborne operations.

As yet the embryo Ops Room was sparsely staffed. An overworked Flight Lieutenant (a grounded observer) with the aid of one or two clerks and an Army Liaison Officer, was running it with no visible basis but one blackboard, a private diary, and a pile of papers that nobody else might consult. All questions had to go to him, and though he was ready with the answers, the system promised to become inadequate. I could understand his reluctance to yield up his hard-won know-how, while remaining subordinate, to an ignorant newcomer; at G.T.S. we had been pushed around often enough by cuckoos in the nest. Time and tact were needed to rearrange things so that every item of information that could be wanted in a hurry, could be read by an officer with a telephone in each hand, from any part of the room.

The squadrons still controlled their own flying, but once properly staffed we would keep a 24-hour watch, and take over day-to-day control. We would arrange the programme of exercises and operations, call the co-ordinating conferences with the Army, write the orders, observe and report on the results, and call the 'post-mortem' conferences where we tried to learn from our mistakes. We would collate the Squadron reports, and submit the Wing reports to Group; reports on operations would go also to Command and to Air Ministry War Room. We would keep records of aircraft, glider and parachute serviceability and pass them daily to Group; take bookings for the bombing ranges and for the parachute-training balloon at Bulford. We would arrange glider loading trials and ferrying; agree or refuse requests for air transport by the Communications Flight (which as well as an Anson, a Hart, and some Tigers, included a Vega Gull and a Leopard Moth which—perhaps by contrivance rather than coincidence—had both been Nigel Norman's personal property); lay on photographic sorties and issue prints and blow-ups for station and army briefings; film exercises and trials, and screen and analyse the results. We would keep in the safe and record the issue of secret documents and code-books; take in millions of propaganda leaflets from the Foreign Office and parcel them out to the squadrons (a task complicated by the ruling that although these 'nickels' were to be showered over enemy-occupied territory, to possess or read or expose one was a breach of security). We would maintain a weather-map and a chart of the phases of the moon, and run the Map Store.

—I want ze map of South England, said a Polish officer.

—A half-million? asked our Waaf.

—No, no! Only one, please!

We would lay on trials of such devices as radio-beacons, cat's-eye flare-paths invisible from the ground, and from the air until the aircraft's landing-lights were switched on; marker-flares, smoke-candles, ground-strips. (The Duty Pilot thought I was pulling his leg when I notified him one day that a lifeboat would land on the airfield.) We would organise an inter-squadron parachute-dropping competition. We would have always one foreign officer attached, to learn our methods. (One conscientious Czech, who had little recognisable English but liked to do things thoroughly, having solemnly copied into his notebook every ephemeral detail on every one of our blackboards, went on to transcribe verbatim the A.L.O.'s personal diary.) We would act as a general Enquiry Bureau. 295 Squadron being on the spot, we would share with Intelligence the tasks of briefing and de-briefing them. Finally, lest time hang heavy on our hands, we would instruct the unqualified among our own Waaf clerks in the mysteries of Ops, then set and mark their exam papers. The marks were sometimes to be low, thus:

—An aircraft is reported overdue. What is your first action?

The examinee hesitates, blushes, then answers —I inform the next-of-kin.

I was supposed to be going on attachment awhile to a Bomber Ops Room to learn the form myself, but somehow I never had time.

We lived, like womankind, by Moon Periods. —The Moone, says Thomas Dekker, hath greatest domination (above any other Planet) over the bodies of Frantick persons. New moon meant an end to the larger daylight exercises with the Division, and intensified night work; 'nickelling' in full swing, giving operational experience to the crews and inoculating them against undue fear of flak; all-night sessions in the Ops Room followed by eggs and bacon in the deserted airmen's mess at dawn. We charted moonrise and moonset, her phases, elevation, azimuth, all her complex ways. Every hour through two Moon Periods, our Met Officer Crichton-Miller measured her brightness, from her full fiftieth of a foot-candle to her feeblest red glimmer, bright only by comparison with the one-twenty-thousandth of a foot-candle that he found in pure starlight. We peered through the gloom at Crichton's little white test-cards laid out on the Mess lawn before moonrise, once swearing we saw them when, to check our reliability, he had kept them in his pocket. We learned that at First Quarter she shows not a quarter but half of her disc; that a half-moon does not give half, but about one-tenth of full moonlight. We guessed, and Crichton measured, her light as she raced through low cloud, or shone through watery haze and iridescent cirrus. We should have grown pale with staring at her those many nights, as a negro may wake under the moon, they say, with one side of his face terribly blanched. We noted that as well as riding too low for good light, she might ride too high for good shadow. We flew up-moon and down-moon and cross-moon, peering and comparing. Up-moon we saw silver streams, but little else; though if we flew in from the sea, up-moon was best. Down-moon the rivers disappeared among their dark trees, but the woods mapped out the country clearly, until the moon went low and they disappeared among the shadows of the hills. When there was broken cloud the Plain became a wide shining sea with islands and shoals of shadow. Sometimes there would be night-firing on the artillery ranges, with golden star-shells and floating white flares, that blinded us for minutes. We nursed our sight with dark glasses, then took them off and found we had cats' eyes, flying as if in a bright blue sunlight; from four hundred feet you could see the hares lolloping round Dumbell Copse. Crichton insisted that moonlight is the same colour as sunlight, and talked of rods and cones.

One glance at a map under the orange glow of a cockpit lamp would make all black below; so we devised maps of our own, black maps with white lines. There are no names written on the landscape or grids drawn across it, so we left these out, and working from air photographs, we showed only the true pattern of the ground as it is seen. On the first trial, I read our way easily round Wiltshire from the nose of a Whitley, with no lamp at all, by the light of a Last Quarter. Wilkie then added an ingenious adjunct of his own making, a tiny pea-lamp buried in the index finger-tip of a flying glove; with this, he could fly, and trace the white lines on the map, and see the landscape, all at once. We tried the maps on 295 Squadron and invited comments. The few who did not like them were, said Wilkie, the very ones he had already listed as poor navigators who would get lost anyway. So we made the night maps a standard issue.

With Wilkie I dabbled in the mystery of Celestial Navigation. On cold clear nights we crunched over the frosty slopes, piecing the constellations together as taught by his Flight Sergeant: Altair, Andromeda, Antares; Alpha Centauri the nearest star, a mere four light-years away; Aldebaran red, like Mars and Antares, and of terrible dimensions, thirty million times the size of the sun. —Doesn't look it, remarked Flight. Vega blue, Sirius green. Charles' Wain, The Keeper of the Bear, Jack by the Middle Horse, names not given in Air Publication 1234. Orion a tremendous question-mark. Betelgeuse, pronounced by all as Beetle-juice. When we had drilled ourselves in our modest repertoire of useful and obvious stars, and acquired some control over the wilful bubble in the sextant, we settled on the doorstep of the dormy-hut to the business of proving by astro-nav that we were indeed at Netheravon, Wiltshire, England, Europe, The World. I took the sights, Wilkie made the calculations. It all needed time, and it was as well we were not in a fast aircraft. The first result might have been worse: our lines on the chart intersected precisely, on the summit of a desolate tor on Dartmoor. Whence my brief lyric:

By astro-nav textbook, by sextant and star,
  We're ninety miles East of the place where we are.
Now what can the source of discrepancy be?
  The book, or the stars, or the sextant? Or me?

Wilkie had lately bought two paperbacks. One was on the identification, not of enemy aircraft, but of wild flowers. The other was J. W. Dunne's *Experiment With Time*. We argued about Dunne's famous dream experiment: if you record all your dreams as soon as you wake, and re-read them every few days, you find that their apparent nonsense is based on a mixture, in about equal parts, of past and near-future experiences. For me this was long since proved, but he was sceptical. We carried out the rather tedious trial for about a fortnight, and got some moderate results, then several that only cheating could have explained away. An instance, of which the events themselves are trivial: a glider exercise took place at Dumbell Copse. Colonel Chatterton landed there in a Tiger, and taxied it into a narrow ride through the wood to be out of the way. Afterwards he offered to fly me back to Netheravon. I had never flown with him before. We got in, and some troops then picked up the tail and wheeled us out of the wood. It felt slightly silly to be sitting there going backwards between the trees. At Netheravon, while he taxied to dispersal, I walked towards the buildings, and by chance saw Chatterton's car and driver waiting. I got in and directed the driver to dispersal, where I opened the door for Chatterton. Nothing very interesting in any of that, but next day I found an entry in my book which I had quite forgotten writing, thus

> —In a Tiger with George Chatterton, flying slowly backwards between trees. Then I am offering him a lift, but in his own car.

That, having been written three days before the event, convinced Wilkie.

Another old friend it was pleasant to see again, and work with almost daily, was John Lander, the Mad Major. Nearly two years before, at Thame, he had confided to me the germ of an idea that was now becoming a reality: if Airborne troops were to land on enemy ground, it would be reassuring to know that there were no obstructions on the landing zone, or enemy weapons ranged on it. At night, it would be a help to be led in by lights or radio-beacon. Glider pilots and paratroops would have a tough enough job; less so if somebody still tougher were to go down first to verify the place, deal with any local defences, choose and mark the ground, and generally tidy up beforehand. A job to be done quietly, making parachutes the obvious means. Hence the Independent Parachute Company; and John Lander, a parachutist and a glider pilot, the obvious man to command it. Asked to define the functions of his unit, he summarised thus:

—When the Division lands, they come to me and ask where the enemy is, and I say —By Jove, we've shot 'em all!

He had a splendid new tool in 'Rebecca-Eureka'. Eureka was a little radio-beacon that could be dropped with a stick of Independents. Having verified and cleared the zone, they would set it up. It had the merit of never speaking until spoken to; that is, it gave the enemy nothing to overhear until one of our aircraft sent an interrogatory signal from its Rebecca. To this, Eureka responded by producing a 'blip' of green light on Rebecca's screen that showed the precise bearing and distance of the target. If several targets were in use, each Eureka could identify itself by a Morse-code letter. The system was so simple that even I could navigate an Anson over the beacon at the first attempt, watching the quivering, expanding blip exploding and collapsing at the moment of truth. 295 soon trusted this aid so completely, that a Whitley flew one night across its home airfield at 300 feet, in full moon, while the flare-path and obstruction-lights were lit, and its navigator, trusting Rebecca above eyesight, dropped eight unhappy paratroops on the roofs surrounding the

Signals Section, where a Eureka under repair had been left switched on.

Dropping Lander in the dark, we would give him twenty minutes to set up Eureka; then we would send 295 to drop one dummy from each aircraft; Lander would note their positions. Daily after breakfast we met to study the results. I had drawn concentric circles on a cyclostyled diagram on which we plotted each night's work. The accuracy was fantastic; within a few days the 1,000-yard circle had to be re-scaled as a 100-yard circle, and every dummy was usually well inside it. From the nose window of one of the Whitleys, I once had a glimpse of Lander running to evade a dummy that nearly smashed the Eureka by which he had stood.

He still showed that terrifying energy: having flown in the front turret on a nickelling sortie, he returned before midnight and thus in time to go on to a dance. At nine next morning I had occasion to consult him, and phoned to leave a message against his awakening. —The Major isn't here, a clerk informed me. I was not surprised. —He's gone on a route march, he added.

Although the parachutists' supply-containers were dropped in the middle of the stick, it was not always easy to find them in the dark or on rough ground. Lander therefore produced a kit-bag, to be strapped to his leg when he jumped. When the chute opened, he lowered the kit-bag on a 20-foot rope, so that he landed without its weight, and could find it in the dark by following the rope. The kit-bag, big enough to take Eureka, became standard equipment. The Independents would also, we expected, set up some sort of light-signals to guide the main force in. The Division started the ball rolling at a conference on re-supply by air, where I promised that we would find suitable lights if they existed, invent them if they didn't, and try them out. They had to be visible from afar, distinguishable from each other by some sort of code, simple, reliable, and small enough to go in the pocket. Nothing quite right being found, we set out to invent a flare. I was for a compact spiral like a catherine-wheel, with magnesium flashes at variable intervals. But Wally Barton ordered me off what he now took as his own private game, and with schoolboy zest and a cheerful disregard for the regulations concerning explosives, began experimenting in his office. Lengths of fuse festooned his desk, and cans of black powder leaked into his Pending tray; fortunately he was a non-smoker. On the football field outside Wing H.Q.

> There seemed a strangeness in the air,
> Vermilion light on the land's lean face;

as Nigel, Wally and Lander, red and then green devils, circled round the Barton Flare, in its final form a blinding, smoky candle. I laid on a test: we would drop Lander to set one off at a spot unknown, save that it would be somewhere on Salisbury Plain; Wally would try to fly the Anson on to it from 50 miles away. I thought I had chosen an interesting spot, and gave Lander the map-reference, but coming to mark it, he cried —Oh, no! You can't! Not slap in the middle of Stonehenge!

—Why not? You don't have to *drop* among the stones. Think of the sight, the biggest lantern that ever shone! Imagine those great shadows like wheel spokes, for miles across the Plain!

—Imagine the Anson flying in one of the shadows, he rightly objected. So we changed the spot, and on the night we saw the flare from about 30 miles and went straight to it; it died before we arrived, but we found the tiny flarepath, and got a 'V' from Lander's Aldis lamp. The Barton Flare went into immediate production—by the Navy, for some reason. Thereafter we would introduce Wally as—Barton of the Flare, you know, like Bailey of the Bridge, and Blacker of the Bombard!

On leaflet operations the Whitleys seldom carried a front gunner, and this seat was much in demand by seekers of excitement, though as often as not they came back bored and cold. Two of these, army officers, made themselves unpopular. One pilot was startled by a long burst of tracer that seemed to be coming from astern, and continued despite violent evasion. The joyrider in the nose, trying to disentangle his inter-com from his excessive clothing, had managed to wedge a packet of sandwiches against the trigger. The other, squirming about as a Whitley climbed away over Bulford, bound for Norway, kicked the bomb-jettison switch and dropped a snowstorm of half a million leaflets on the sleeping camp below. I was present when the aircrew concerned were carpeted by Wally Barton, and I thought the sentence a stiff one —Go and pick them all up! Months afterwards, leaflets still fluttered in the hedgerows, proclaiming

STOLL PA OSS! VI SVIKTER IKKE!

The blackout at Bulford was not very good, and one long double row of huts, each leaking light at the same point, looked so much like the Netheravon flarepath that a night-flying Horsa landed there. Barrack damages were appreciable, but the Horsa crew fared no worse than their colleagues who made a similar mistake with a flarepath at Poole, which was real, but intended only for seaplanes. The inmates of Bulford camp may well have become sensitive to overhead dangers. A passing fighter-pilot thought it fun to beat up the parade ground, and every man dropped flat, except the Sergeant Major, who was killed. The Larkhill artillery range bordering Netheravon offered the Army some chance to get its own back; it was uncomfortable to fly over, and we would sometimes request a cease-fire during an exercise; but no aircraft was ever hit, and pilots became casual about nipping smartly across. There used to be arguments as to whether you could really see a shell in the air. You could.

The Gas School at Porton was another area where the uninitiated felt unhappy. It had a field useful for glider landings, but beforehand one had to stroll round it with their experts, sniffing uneasily while they pointed out the currently contaminated areas where it might be unwise to deplane, though if any glider did pick up a bit of gas they would be happy to decontam it. (They showed us their latest horror, in a dark little shed, a hideous black udder lovingly called The Cow, which as it fell could spray a wider belt of gas than anything yet devised. In distaste for the milk of human unkindness, I changed the subject slightly by asking about the prospects of bacteriological warfare. They were taken aback and I think genuinely shocked, and hoped to God nothing so horrible would be considered by anybody. Presumably the Cow was permissible, provided the enemy used gas first.)

The Ops staff was building up, and a Waaf with long experience of Bomber Ops Rooms reported for duty. Sergeant Postlethwaite was a formidable young woman, full of North-country common sense, and it was clear that she would stand no nonsense. Unfortunately her idea of nonsense seemed to include our mere three-squadron set-up and its amateurish operations. She carried out her duties impeccably, but with a thinly veiled scorn for our Tiny Tots' Ops Room. I thought a mass glider landing with armed troops might impress her, and on the next such occasion I sent her to the landing zone near Bulford, ostensibly to observe and report. We had lined up twelve Horsas, already roped to Whitley tugs, two spare Whitleys and one Albemarle, which looked a somewhat ragged armada listing to port or starboard on the rolling slopes of Netheravon. Thruxton and Hurn would send parachute aircraft. The occasion was important for the presence of about fifty Members of Parliament, invited not merely to watch the show, but to fly in two of the Horsas. The cloud was ten-tenths and very low. Tom Cooper made a test circuit, returning to complain typically —The Met's wrong again! They said cloudbase would be 250 feet, but we got nearly 300! He came to the decision that the two loads of M.P.s might fly, but not the ten loads of valuable troops. I drove to the landing zone. Approaching at cloudbase, the gliders were so low that the only possible tactics must be to release at the exact moment and go straight in. The first pilot, perhaps distracted by the bunch of top officers breathing down his neck, misjudged the moment; landing in an uphill swerve, he wiped off first his nose-wheel, then the skid, then most of the floor of the glider, leaving a curved trail of firewood, bowler hats and brief-cases. Somebody said afterwards that the Horsa looked like a centipede with running legs visible beneath, but eyewitnesses of accidents are notoriously unreliable. The second glider pilot, perhaps deterred by his colleague's effort, went past still on tow. In such a situation, the easiest thing to do is to defer the irrevocable pull on the quick-release for just another second. As these seconds mounted up, Buster Briggs in the tug neared Beacon Hill, rising ahead into cloud, and had to order the unhappy glider pilot off. The Horsa ended on the slope of Bulford Down, lacking both wheels and half a tailplane. The shaken politicians emerged to find themselves ankle-deep in

STOL PA OSS! VI SVIKTER IKKE!

left over from the previous mishap, and that too had to be explained. It is to be hoped that none of them could read the Norwegian, which means

RELY ON US! WE WON'T LET YOU DOWN!

Why was it always on these important occasions that things went wrong? Why were the V.I.P's never around to see the long eventless slogging, the sudden heartening success? As garden-lovers say —You should have been here when the roses were out!

Ellen Wilkinson, M.P., broke an ankle, but wrote a nice answer to her glider pilot's letter of apology; General Browning wore a sling awhile; there were no other casualties. We heard later that, far from being resentful, our passengers were inordinately proud of their share in the hazards of war, and dined out for weeks on the story.

One spectator was not amused. I had forgotten all about Sergeant Postlethwaite, and when I got back to the car, she was waiting. Nothing was said,

—But oh, the den of wild things in
  The darkness of her eyes!

295 was now flying two Halifaxes, one of them Wilkie's. The most amusing place to ride in it was the mid-upper turret. The perspex globe was turned or tilted by a little joystick, and its response was very like that of an aircraft, except that it yawed instead of banking. If you used full power, permissible for only a few seconds, you fairly whizzed around. On the ground it was all quite simple, but in the air it became crazy, because the pilot's stick might be doing the opposite to yours. Sometimes the Halifax would seem to be twirling round a stationary turret, and if Wilkie was showing off a bit, it made a dizzy fairground ride. His most spectacular effort with the new toy was on the ground. Taxied too fast towards the hangar, and braked too sharply on the muddy apron, it swung right round and was going into the hangar tail first; he opened the throttles just in time to pull it out again. His tail-gunner was rather shaken.

Command had agreed that when the three squadrons were up to form they should be given some bombing tasks, on small targets suitable for low-level attack, to simulate a parachute operation; preferably three separate but similar targets on the same night, to introduce an element of competition. The answer was found on the electrified main railway between Le Mans and Paris. Every few miles along any such system are transformer sub-stations that regulate and supply the power. If you knocked out one, it could be bypassed after a brief stoppage, but if you knocked out two or three in a row, a whole section of line would be out of action for a long time. The code name for the Wing's first such operation was 'Sparks' (a bad choice, incidentally, from the security angle, with its hint of the nature of the target).* In the February moon, twelve aircraft from each squadron would bomb one of three such adjacent sub-stations. There was much discussion as to what bombs to use. The transformers, oil-filled, stood in rows, each one protected by thick blast-walls, but open at the top. Experts had said that you didn't need a bomb; that one fragment or even one bullet among the wire windings would do the trick, and that it took months to rewind a transformer. I was for mounting a ring of Browning guns, pointing down, in each parachute hole, to fire a hail of mixed armour-piercing, tracer and incendiary; but even for 38 Wing this was thought too unorthodox. The final compromise was that some should drop 500-lb. bombs to knock down the blast-walls, followed by others dropping 9-lb. anti-tank bombs and incendiaries from between 350 and 500 feet.

—DON'T PRANG THE FRENCH VILLAGE!

said a big notice put up by our Intelligence Officer Ted Armstrong at the first briefing to Squadron Commanders, in lettering worthy of a former Jarvis Student at the British School at Rome. The run-in to one of the targets pointed at the heart of the little place.

For me the night of 'Sparks' began with frustration. Nigel was still away, but Tom Cooper had agreed that it would improve relations with the squadrons if some of the chairborne types went on a trip now and then. I booked a seat in Wilkie's unoccupied turret, briefing was over, and I was almost aboard, when Nigel appeared, for the first time for weeks, and ordered me off to my proper job. Feeling a fool, I appeared back in the Ops Room where the night's work had already been organised to make me unnecessary, and with mixed feelings heard 295 taking off overhead.

Six hours later, we had chalked up a depressing story on the blackboard. Tom Cooper had been adding his own symbols down the right-hand margin, awarding halos to successful crews, chamber-pots to others. There were more chamber-pots than halos. One in six had failed to take off or had returned early, and only half claimed to have bombed their targets. Intelligence had predicted only light machine-gun defences, but there were Bofors guns. (We learned by chance later that our own Command had authorised somebody to shoot up and alert these very targets a few days before.) In the full moon, three aircraft were shot down, including the 295 Squadron Commander's Whitley, and one of the Halifaxes with a crew of seven, including Crichton-Miller, nominally a Met Officer but carrying out his night vision research work in the guise of a Flight Engineer. Peter Davis was two-and-a-half hours overdue, and had us worried. Several aircraft were damaged; Wilkie came home on three engines. The P.R.U. photographs and damage assessment did not bear out all the claims made at de-briefing, and the trains would soon run again. Finally came a report that a lone pilot from another command, homing across France at dawn, had turned aside to identify a smoking ruin: despite Ted's warning notice, it was 'the French village'. We had not done well.

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*Compare Operation 'Roger', an assault on Phuket.

It was planned to try again, on similar targets, in the April moon. The new idea was to ignore the blast-walls, and drop nothing but showers of 9-lb. anti-tank bombs. A Whitley or an Albemarle could carry about two hundred of these, of which any one could wreck a transformer. For accuracy they should be dropped from as low as possible, but how low was that? What would be the effect on the aircraft of 1,800 lb. of bombs going off, say, 300 feet below? A Whitley was bombed up accordingly, a cross marked on open ground near the airfield, and a movie camera fitted in the dropping-hole. My job was to lie on my stomach, start the camera at a signal, and watch through the hole. The bombs, cheap-looking little square tin cans, came out like a tight swarm of bees, but as they hit the slipstream some were colliding and scattering, flying off at all angles. Wally Barton exaggerated when he said that the floorboards then rose waist-high in his cockpit, but I learned how a fly feels if it rests on the big drum just before it is beaten. Measured on the ground the pattern, thanks to the scattering, was spread over about fifty yards, about right. Some dented bombs had become incendiaries, throwing flaming fragments. No transformer within the fifty yards would have done much more transforming. I helped an R.E. bomb-disposer to collect the unburned lumps of fragrant jelly; as we left he remarked —Funny thing, but if you handle this stuff, you get a frightful headache! I was to wish he had told me that sooner.

For this second operation, 'Sparklet', there were four sub-stations in a row, the odd one being a joint target for a few aircraft from each squadron. This time, halos decisively outnumbered chamber-pots. Though only three of the six crews on the 295 target said they had found it, they told consistent stories of orange fires, blue and green flashes, and one huge explosion; indeed, it seemed strange for three bomb-loads to have wrought such havoc. 296 had a curiously identical story. One aircraft was missing. All other crews but one reported success on all targets.

When the photographs came in, the holocaust on the 295 target was explained: 296 had also bombed it, leaving their own largely undamaged. Perhaps some of those looking for the joint target, where damage was slight, had likewise poached on 295. But 297's claims were well confirmed, so two sub-stations were out of action. True, they did not adjoin, so the stoppage might not last for months, but it would certainly last for weeks, and the show on the whole was rated good. Probably as good, we thought, as the average performance of the real experts in Bomber Command.*

After an all-night session in the Ops Room one slept, in theory, during the day. In practice one was lucky to get two or three hours, from about 5.30 a.m. when the last reports had been phoned out, leaving time for a bath and a meal before Command rang up to ask silly questions. But immediately facing my bedroom door was a loud-speaker, and at 6.30, just when sleep was sweetest, a larger-than-life female voice would bid the camp rise and shine, and for the next half-hour they were kept rising and shining by brassy marches. Certain that my neighbours would rather miss an air-raid warning than suffer this hell at dawn, I cut the wiring, and re-connected it so that, as I thought, it merely bypassed our speaker. It seems that I ignored some vital difference between 'series' and 'series-parallel'. As a result of my work, half of the airfield was silenced, the other half deafened until the power was reduced. I furtively repaired the break, whereat sound was restored to all, but in a stuttering whisper. I gather I should have used solder. A search-party traced the fault to my doorstep, and suspicion fell on my neighbour, a Group Captain who, unlike me, was just the sort of frivolous chap who would do such a thing. Honour required that the true culprit, feeling like Harry Wharton going to the Head Master's study, should confess to the Station Commander. It is difficult to find good opening words on such an occasion. He gave me some stern remarks about conduct expected only from younger officers, and a bill for £2 15s. The siren voice resumed.

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* We were to learn after the war that it was in fact far better.

The tempo increased through the Spring. Less than a third of the Wing's flying hours could be given to towing and dropping, yet every other day saw an exercise big enough to deserve a code-name: from Able, Aeronaut and Avon to Stiffkey, Screwgun and Snoop. We confirmed again that weather could wreck an Airborne operation. At a show for the press, they were driven in Jeeps (these still a novelty) to a gully in No Man's Land where, with slow red tracer and grey ropes of mortar fire arching over their heads, they saw the wire defences blasted by Bangalore torpedoes, and the enemy (who had not fired a shot) finally cremated in a golden cauliflower from the flame-throwers; all this made splendid copy, subject to some omissions: because of low cloud, most of the 'airborne' troops who fought the action had arrived by road, and the more venturesome pressmen who had been gliderborne were scattered around the county, with a story they could not print.

The Exercise Unit had shown that a handful of picked glider pilots, with intensive training, could bring off astonishingly accurate landings, even in Hotspurs, even at night, in restricted spaces; but larger exercises showed that the general run of Horsa pilots, who were now lucky to average more than half-an-hour's refresher flying a month, needed big margins, and might have to release and land to a set drill. The Glider Pilot Regiment was reorganised into Flights, each crewed up with an R.A.F. tug Flight, but they could only fly thus for one month in three.

We could land enough Horsas now to foresee the limiting factor: the congestion would not be in the air, but on the landing zone. Everything there depended on the skill of the first comers, in leaving room for the rest. If you could put ten Horsas safely into a ten-acre field, it didn't follow that you could put a hundred into a hundred-acre field. As soon as a few had stopped half-way up, your biggest clear area was fifty acres, and others soon reduced that. It was often said that in operations a bit of crashery wouldn't matter. But it was already a slow business to get a gun or a Jeep out of a Horsa: you might see troops and glider pilots still struggling half-an-hour after landing. If the glider was bent, or wedged against another, or in a thickset hedge, how long would it take then? We thought that if the load was wanted in one piece, the glider had better be in one piece too. Mass-landings and crash-landings didn't mix.

Back from some conference where he had argued that his Wing was under-equipped and over-committed, Nigel would think up fresh tasks for it. Thus we went into the removal business. 296 had led the way when they moved from Andover to Hurn, and took forty of their men and seven tons of equipment in Horsas. They also removed by air the squadron that made way for them. This modest beginning led to the thought of doing removals for other units. Instead of stooging around the sky with no purpose but pilot training, gliders could do useful work, and the Wing staff gain experience in re-supply technique. We advertised the service in an alluring cyclostyled brochure, and orders rolled in. For one customer, 297 moved 83 men and 8 tons of kit a distance of 113 miles, completing the job just over three hours after first hearing about it. One night a Stirling based at Newmarket landed at Jurby in the Isle of Man with a dud engine. Delivery of a replacement would take eleven days. Eight hours after we got the order a glider had collected the engine at Newmarket and delivered it at Jurby; it flew a total of 680 miles. For a Lancaster squadron, in May, 600 men and 190 tons were moved by 13 gliders in two days. A bomber squadron could now operate on two successive nights from its old and from its new base. The further implications of all this were interesting.

At first some of our customers lacked confidence in us. Their

Group staff had laid the thing on, but one could see that they thought road transport safer and more certain. Probably few of them had seen a Horsa, and to some gliding meant Lilienthal. When Austen and I cheerfully included all manner of unwieldy and weighty objects in our bills of lading, rejecting only a few inspection stands not worth dismantling, they did not believe us, and quite unnecessarily sent a selection of essentials by road, to arrive late. What was to us becoming a routine job was to them a rather dicey experiment. Asked what accommodation and messing our crews would need, even on a two-day job we would answer —None, thank you; we are air-contained. Our squadrons vied with each other to contrive airborne comforts, cookers, latrines; one Squadron Commander produced a folding airborne bar. I had already submitted to Nigel a sketch for an airborne Ops Room, to fit in a Horsa, but having glanced at it he remarked

—It is a principle in this Wing, Wright, that any idea that is good, must have already occurred to me!

and he produced an identical document from his filing cabinet.

When we moved 15 (Stirling) Squadron from Bourn to Mildenhall, we delivered the Horsas the night before. I flew in the first, and we rolled to a stop on the allotted grass triangle alongside the perimeter track, ready for loading. The station turned out to a man to see the fun, and noted as a happy chance that the first of these uncontrollable contraptions had pulled up at exactly the right spot. They prodded the structure, surprised that it was not bamboo and canvas. A few minutes later twelve more Horsas came into view and released at close intervals. The first of these made a steep full-flap dive that shook the onlookers, bowled merrily in, and stopped exactly alongside ours. No tractor was required until at length two or three landed a little short. We hid our own slight surprise and apologised for these less skilful pilots. When the tractors had tidied the line of thirteen Horsas they made a pretty sight.

The Squadron Commander was a famous fearless character who had done great things in Stirlings. Some days before I had suggested that he might like to travel in the first Horsa to leave in the morning. He had seemed genuinely surprised that I should for a moment have imagined that he would consider such a thing. A trip to Berlin, one gathered, was safety itself in comparison.

We worked on him tactfully, arguing not that the danger was small, but that he should be ready to give a lead to his men in any desperate enterprise to which he had ordered them. So that first evening, he called for volunteers among his crews to make up a load. A few, stung by his taunts about Moral Fibre Cases, gloomily climbed aboard. We took off in an unusual attitude, and it was evident that the Stirling commander was flying the glider. The bomber boys laughed, with a slightly forced note, as we plunged and snatched at the rope, and after release the growing silence as Peter May urged the pilot nearer and nearer to the stall, duly demonstrated, was clearly distasteful to them. His approach and landing were impeccable, though we did notice his instinctive reaching for the throttles that were not there. Safely down, he was delighted. Modesty itself about his bombing feats, he was for telling the world about this. Could he put it in his log book? Did it count? We assured him that he could, and it did, and showed him how to rule a new column headed 'Motorless Aircraft' for it. We had sold gliding here, at any rate. Next day, he was bundling the air staff from his Group, who had come to watch the move, into a Horsa, and flying them to Mildenhall with obvious joy.

We had a good system for this job. The loaded gliders were towed by Albemarles, which would cast them off at the delivery end and come back without landing there. The empty gliders were returned by Whitleys, and these would likewise go back non-stop. A walkie-talkie at the take-off point would summon gliders at need from the loading area, keeping up a steady flow. We shifted everything by evening, and could have taken on twice as much had it been offered. We put the surplus ropes and the last of our ground crew into the last Horsa, hauled up the ladder, and took off without flag-signals, leaving the airfield empty.

Two little incidents had done us good with the customers. A Horsa full of passengers lost a wheel, and landed on the other without trouble. And at tea-time, when all was nearly over, the owner of an Austin Seven was heard negotiating for a tow by road to Mildenhall, as he had no petrol. There were no offers, but we still had two or three Horsas on the field. —Put it in a glider, I suggested. —Will it go in? —Of course it will! (It was one of the few cars that would.) All our ramps had gone, but we pushed it up a pair of planks, and off it flew. They were particularly tickled to see this familiar vehicle emerge at Mildenhall. It got us more publicity than the whole of the rest of the job. It seemed to persuade people that you could carry absolutely anything by glider. In four months, the Wing had lifted 1,500 men and 230 tons, flying 23,000 ton-miles. But duties more warlike were pending.

Early in April, the King inspected the Division, and then the Wing. There was to be no flying, but an impressive assortment of aircraft was lined up, their propellers dressed (which means, not that they are decked with flags, but that they are all in the same position). Two novelties, to most, were the American Dakota, which could carry twenty paratroops in comparative comfort, dropping them from a generous doorway; and the American Waco glider, re-named the Hadrian, a 15- to 18-seater. The Dakota could tow this, but it could not tow a Horsa. We put Buster Briggs' little Kirby Kite under a huge Horsa wing, for the sake of old times. The King was in a light-hearted mood, especially when the door of the Hadrian refused to open to admit him; enjoying the embarrassment of his unhappy subjects, from A.O.C.-in-C. to Group Captain, who struggled in turn with the door-handle. They were not helped by his repeated comment —Bet it's locked! A key was sent for, and there was an awful pause, until a brave airman stepped forward. —It doesn't turn, sir. It slides, so. And he opened the door, to royal laughter and some forced smiles. Leaving the Hadrian, the party proceeded down the line. The grass had been cut, swept and rolled, but somebody must since have unpacked a crate, for a tangled ball of metal strip defiled the sward. The King led the party aside and towards it, stopped, looked down at it in silence, then picked up the ridiculous jangling object and handed it to Air Marshal Barratt. He, turning a dusky red, handed it to the A.O.C. 70 Group. Thence it changed hands, borne on a rosy wave of shame, until the unhappy Station Commander passed it to the nearest airman. This last recipient did not blush; with a shrug of incomprehension and to the final delight of his King, he dropped it back on the grass.

At the Parachute Section, the Air Marshal asked Bill Hire, for the King's hearing —How many drops have you done to date? —About six hundred, sir, answered Bill. —No, no, said the Air Marshal testily —I mean, how many have *you* done, personally? —About six hundred, sir, repeated Bill. —Six hundred jumps, said the King —and nothing to show for it! But he forgot to send Bill a medal.

The tour was conducted by Hoppy, now a General and in command of 1st Airborne. Browning had for a long time been pressing for the formation of a separate Airborne Headquarters, especially since the misuse of 1st Parachute Brigade in Tunisia, and in view of the forming of the second (so-called 6th) Airborne Division. In April 1943 this was agreed; Browning became Major-General Airborne Forces and should now carry more weight with the high-level planning staffs. Forbidden till now by Browning to do any more parachuting, Hoppy's first act on promotion was to have us arrange some drops for him (into the sea, a kinder surface for the over-thirties) and having completed the required five drops, he put up his parachute badge.

The royal visit was assumed to be a sort of farewell party, implying a move overseas. In mid-March, when the Division was given two months' notice to mobilise, we had been warned that 38 Wing might have to send aircraft to North Africa. It could now be only a matter of weeks before the last German and Italian units fighting there, in the tip of Tunisia, were mopped up, and the whole North African coast in Allied hands, a springboard for the invasion of southern Europe, 'the soft underbelly of the Axis'. In this, Airborne would obviously play a part. Since command went to the Ally with the greater number of troops involved, North Africa was now primarily an American theatre. Any main Airborne effort based there would be by their North African Troop Carrier Command. Our detachment would come under American orders. This British air contribution would be relatively small, only about one-tenth of the total, but nearly all the glider pilots would be British. The few American glider pilots had no combat training, and would be useless, if not a liability, after an operational landing. The two Allied Airborne divisions were about equal, but only one-third of the American aircraft would go to the British division, which even with the 38 Wing contribution, would therefore be unable to put more than one brigade at a time into action. It was understood that the exercises flown in Africa with British troops, though chiefly by American aircraft, would be controlled by 38 Wing. After a training period in Algeria, the whole Allied force would move eastward to an operational base area.

The main operations would probably be parachute drops at night, but the glider role was uncertain. Hadrian gliders were being built in large numbers, but the Hadrian was the snag in the Airborne plan. Its capacity was only half that of the Horsa. Gliders were the only way to bring guns to paratroops, and each parachute brigade might need six guns, with Jeeps to tow them. The Hadrian could carry a gun or a Jeep, but not both, so that unless the two gliders landed together, the gun could not be brought into action. Horsas, if only a few, were essential. But no shipping space could be spared for such bulky loads. Nor was air ferrying to Africa, involving a 1,300-mile tow, thought practicable. Experts put the safe range of the Horsa-Halifax combination at about 1,000 air miles.

Tom Cooper and Wilkie had been making their own endurance trials, with extra fuel tanks, but they met troubles such as overheating and heavy oil consumption, and they could not prove the experts entirely wrong, until one day in April when Wilkie came in after a long tow, to say he thought the job just possible, if the shortest sea route were taken, with the risk of being shot down on the first leg near the enemy coast. If he produced the new calculations, could we get the decision reconsidered?

—If you think it can be done, I said —why not prove it by going out and doing it? Remember Peter and the Albemarle.

—What, and go into the bloody sea if we're a few gallons wrong?

—Don't be silly; I don't mean go to Gibraltar, or wherever it is to be. Stooge around here all day with a Horsa, and keep near home when the juice gets low, and see how far you get.

Wilkie was not one to waste time. The Glider Pilot Regiment produced three picked pilots, and after an early breakfast next morning, he towed off a Horsa, which dropped its undercarriage. For the rest of the day they toured England, reporting by radio at intervals. We had laid the thing on so quickly that they were airborne before I could tell the A.O.C. what was afoot. Just after tea, hearing that they were still flying, I had the satisfaction of reporting to Nigel that they were now, in theory, passing Gibraltar. When Wilkie landed back with a small reserve of fuel, after dropping the glider at Shrewton, they had flown 1,500 air miles. If the experts would accept this fact, Horsa ferrying to North Africa was on, and 1st Airborne would get their guns.

The experts did accept.* Towards the end of April, 295 were formally warned that with 10 Halifaxes working in relay, they were to deliver 36 Horsas to Salé in Morocco, thence 400 miles to the training area, and another 600 miles to the base in time for operations early in July. Even the indefatigable Wilkie might have been daunted by this task. He had eleven weeks for it. He still had only three Halifaxes, none fully modified for towing. He was the only fully trained Halifax pilot; Buster Briggs had done about ten hours' solo, of the fifty thought necessary; the only other pilot had done much less. Fourteen crews were needed. He had either to convert Halifax crews for Airborne work, or convert 38 Wing crews to the Halifax. He chose the latter, making up the number with a few of the former. Over a week was wasted at the start, waiting for more aircraft. Four or five weeks were given to training. Wilkie did all the instruction, without a dual-control machine, during which nothing was broken. The squadron then had to move, to their first really suitable airfield, Holmsley South, and though they made the move by air, this cost another four days' flying and a week's maintenance work. The new Halifaxes had then to be grounded, in turn, six or more at a time, for modification. Two of them failed to make the agreed test-tow of 1,350 miles, and had to be rejected. Three others, with two crews, were lost in crashes during practice flying. Meanwhile the old Whitleys were doing good work, giving practice in long tows to the glider pilots, some of the tug pilots making three three-hour tows in one day; and ferrying Horsas to the departure base at Portreath in Cornwall. None of these had yet started for Africa when the Wing advance party left in mid-May, only seven weeks before the first operation.

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* I may have been unfair to A.F.E.E. and others, about the discrepancies between their estimates, and 38 Wing's actual performances with Albemarle and Halifax tugs. Such estimates depend on what may reasonably be demanded of aircraft and of average aircrews. If A.F.E.E. had agreed at the outset the feasibility of all that 295 Squadron did in the Horsa ferrying, they would certainly have been accused afterwards of demanding far too much.

# 7 UNCLE SAM'S ORDERS

Dick Jesse first came to my notice as a name on the Ops board, when for the second time running, Whitley 'B' flown by Flying Officer Jesse of 297 was diverted to Christchurch after an operation, instead of homing to Thruxton with the rest. —Why? I asked. Did he make his own weather? The Flight Lieutenant in charge of such matters explained that in a way, he did; this was a standing arrangement. Dick had a girl-friend in the Waaf at Bournemouth; that was why he always took his bike with him in the Whitley on operations. Loth to interfere with established practice, I merely warned Dick that if he landed in enemy territory, the bike might brand him as a spy and have him shot. He thought it worth the risk, which one had to agree on meeting Rosemary. Dick's next two trips were unpleasant, one of them ending with Whitley 'B' forced-landed across a railway, though happily a British one and with no train due. Feeling that he was getting a bit frayed, and perhaps unreliable, he wisely asked for a rest from flying. Nigel agreed, and Dick came to work in Ops, where an operational pilot known in the squadrons was a great asset. He had, if not a rest, a brief change; then he was detailed to fly the Wing's new Lockheed Hudson. While he was getting used to it, this made a useful taxi-cab around the stations, and I sometimes flew around with him; he seemed to find it rather a handful. We knew now that he was to fly our detached Headquarters in it to North Africa. The loads for this flight were chopped and changed; Tom Cooper kept re-calculating fuel consumption and take-off weight, and at last the passenger and crew list was agreed: Nigel, Charles Hurst, Ted Armstrong, myself, Dick and his navigator. We were to leave about May

19th; on the 13th came news of the final German surrender in Tunisia.

Then Nigel added a last straw to the load: his batman. Tom Cooper did his sums again, and something or somebody had to be jettisoned. The choice fell on me. As Wodehouse puts it, if not disgruntled, I was far from being gruntled. I had never weighed more than 130 pounds, so why me? Now, instead of a carefree door-to-door ride in only two hops, I must get away in a rush three days earlier, drive to Lyneham, take the regular mail-plane to Oran via Gibraltar, and thence hitch-hike inland to Mascara, where I would join the Hudson party in the headquarters to be set up alongside 1st Airborne and the Americans. My Ops Sergeant would go with me. We must travel light, but my camp kit and oddments could stay in the Hudson.

Wally Barton, who was to follow in June with 296, handed me my papers, such as they were: an air ticket, and a carbon copy of a brief instruction to go to Mascara and set up an Ops Room there. He could not see that any further authority, even a movement order, was needed: I had an identity card, he supposed? My old friends Air Ministry (Movements) seemed to think of the 650-mile coast of Algeria as all one place, for I found too late that they had booked me to Algiers, 250 miles beyond my requested stop at Oran.

—From there, said Wally, you'll have to hitch-hike. There won't be any transport or beds, and nobody will help. Pack some food and some flea-powder. It will take you at least a week.

He had lately returned from those parts, and should know.

The bells were ringing for victory, and village children were trotting to church hand-in-hand with tall Americans, as we drove to Lyneham. The captain of the night-mail Albemarle didn't seem to like passengers. We were the only two, and he had ordered his moderate load of freight to be concentrated in an impassable wall amidships, forming a cell for us in the tail. Oxygen? We wouldn't need it, we would be asleep. Inter-com? He grudgingly provided one set, which remained deaf and dumb throughout the trip; there promised to be some lack of liaison if emergency arose. The mail planes went well out West over the Atlantic, and they flew high, but we were not cold; a cosy mound of fleece-lined flying suits had been thrown in at the last moment to make up the load. The possibility of scoring over the

Hudson party, over whom we still had 48 hours' start, by beating them to Mascara, had crossed my mind, but we wasted a morning at Gibraltar. Nor would our surly captain agree to drop us at Oran. As our destination crawled past to starboard, I eyed his elevator and rudder cables, moving gently a few inches from my hand. A bit of induced tail-flutter would do the trick, I reflected, he'd be down at Oran like a shot; but I desisted; the mail must go through.

So, propped on beds of amaranth and moly, we sipped our lemonade and enjoyed the Mediterranean sun in our perspex conservatory. Two Wiltshire flies were with us all the way; I estimated their ground-speed as 142 m.p.h. when they flew forward, 138 when they flew aft. What happened when such emigrants emerged in Africa? Were the native flies friendly?

At Maison Blanche, the airfield for Algiers, senior officers of all the services were milling around the Movements section arguing their claims to seats, waving orders and priority chits. Without such paper, one was not even in the running. Authority from Mediterranean Air Command, I was told, might entitle us to wait about and vie for seats with a Brigadier or two. The town was choked with uniforms. The transit camp and the hotels were full. Where to seek shelter in this friendless confusion? The friend appeared: we met an airman who had once worked in Ted Armstrong's office, and was now clerk to the Mess Secretary at Coastal Command. Such was the authority on which that officer produced food, drink, franc exchange and mattresses on the bar floor. By mid-morning next day I knew who issued air tickets, who issued the priorities entitling tickets to be issued, and what sort of document might produce a priority. This would have to be an unusually powerful *laissez-passer.* A helpful Intelligence officer lent me a typewriter, a sheet of crested quarto and a rubber stamp:

> —TO WHOM IT MAY CONCERN. SECRET
> 60355 S/L L. Wright has urgent duties of so secret a nature that he may not give particulars or show his full authority to any person but an officer of the highest rank. He is to be given full and immediate facilities in air and other transport, messing and accommodation.
> (*signed*) SQUIGGLE
> for Air Officer commanding
> 38 Wing, Royal Air Force

This worked like a charm. Movements 4 nodded understandingly, tapped his sealed lips, and murmured

—Wouldn't ask questions, old man. We don't want to know. He attached the first of a series of coloured slips and papers, and passed me on for more. I began to worry about the silly wording of my initial document. What was 'an officer of the *highest* rank?' I would have put 'an officer of Air rank', but I had seen several around the place. What if they sent me to their A.O.C.-in-C.? Could I then insist on Tedder? If Tedder, why not the King? My dossier was a respectable wad by now, so I removed and pocketed the catalyst; Squiggle had served his purpose. Why did staff officers, such as were coming from Cairo in such numbers as to impede us, speak so disparagingly of the 'Wogs'? Had they not invented paper? The pen is mightier than the sword. That afternoon we left Maison Blanche in a Dakota, an angry colonel trying in vain to unseat my Sergeant. At a time which, being in an American theatre of war, could no longer be called teatime, we deplaned at La Senia, Oran, with only sixty road miles to go. It was unlikely that the Hudson had even taken off yet.

At La Senia the American field telephone system foxed me awhile. You could hardly ask for British Airborne at Mascara, over an open line. You were expected to know not only their code name, but the code names of the exchanges along the route —Say, would that be on Indianapolis through Milwaukee? I could not help there, and every time I was told —The line is busy! I took this as casual comment, tending to answer —Yes, I suppose it must be, instead of hanging up until the junction was disengaged. It was a long time before I heard the voice of Colonel Bill Campbell, who had served so well in liaison at Netheravon that to us he was, if not the Division itself, its mouthpiece and earhole. Could he send transport? —Are you through? interrupted the operator. —Yes, thank you, I answered, whereat he cut us off, and I started again from Indianapolis. I would have to learn American.

It was dusk when a Jeep bearing the welcome device of Pegasus picked us up. We wound uphill in the dark through an inverted land where the valleys were bare and the mountains peopled and cultivated, into a high hill-town, its lights enchanting after three-and-a-half years of blackout. There I reported to General

Hoppy, just sixty hours out from Netheravon. How I would rub that into the Hudson party when they came!

The Division's mess was a tall hotel, barely furnished, with internal galleries round a covered court. I was welcome there until we should move to our airstrip. Dinner was over, but they had dressed for it, up to a point, I noticed; no bush shirts or shorts in Hoppy's mess, even at lunch. From my high tiled room on the top floor, I looked down on lit windows, open shutters, rooftops under a full moon, bright foreground to a dark plain where the airstrips lay. A few miles further were the southern slopes of the Little Atlas Mountains. Along some invisible runway a tiny light was moving. The whole picture was vaguely familiar; it stirred some memory that escaped me awhile, and then came up: the Dong with the Luminous Nose:

When awful darkness and silence reign
  Over the great Gromboolian plain . . .
When storm-clouds brood on the towering heights
  Of the hills of the Chankly Bore:—
Then, through the vast and gloomy dark,
  There moves what seems a fiery spark,
A lonely spark with silvery rays
  Piercing the coal-black night . . .

but at this moment there were swishes and thumps outside, hysterical cries —Get out, you brute! To hell with you, you filthy beast! In the corridor, a distraught Major was kicking in all directions at invisible enemies. The dread *cafard* already? It was, but in the other sense: cockroaches, twice the Netheravon size. I kicked a few out of my own room, and sprinkled flea-powder across the doorway and all around the skirting as a barrier to entry. I slept well, but woke once to a faint continuous rustle and some loud crackles. Day rose on a horrid scene. The last survivors of a countless foreign legion, shut in instead of out, ankle-deep in a desert sand of flea-powder, were stumbling round their hundredth circuit. The dead had been dismembered and eaten, and their carapaces scattered. Squeamish on such occasions, I improvised a shovel, scooped up the dying, dead, powder and all, and unthinkingly dropped the lot out of the window. The cries that rose from below were loud, the broad meaning clear, but the detail mercifully veiled in Arabic. I was yet to learn, as many of our night drivers were, that in warm weather the natives habitually slept in the roadway.

Mascara stood on a double hill, split by a gorge with an Arabic name meaning Lips of the Wind. Other little hills around were topped with gardens and windmills. Below the two-mile circuit of the walls, vine and olive fell away to a wide plain, dusty-dry fields, scrub, and olive-clumps; a southern Spanish landscape, by no means desert, though bare foothills closed it to the south. Good glider country, with no walls or hedges. Down there 1st Airborne and the American squadrons were assembling in their widespread camps, and there some arid strip had been reserved for us. There were more troops than civilians about the streets. Mascara had seen this sort of thing before: its name means not Eyelash Black but Mother of Soldiers. Up here, a century ago, Abd-el-Kader had proclaimed the holy war that held up French conquest for fifteen years; in the end they had razed his town, leaving few Moorish buildings save two mosques, and had rebuilt it in French colonial style. There were leafy little boulevards (but few *boulevardiers*, and fewer *boulevardières*), *grands magasins* (but no goods in the windows), open-fronted restaurants with outside tables (but no food), a railway station (but no trains), a cinema (but no films), and a bar or two open, with plenty of strong local wine, and a long list of short drinks (but all tasting alike, of bananas and industrial alcohol). The cinema served well, with its high ceiling, to hang parachutes in, a strange sight. In the next six weeks, about 12,000 of these were to be issued and re-packed there for the dropping of troops, arms containers, and one (unsuccessful) donkey. The principal building, a bank in *style moderne* of the 1920s, was the 1st Airborne Headquarters. I thought they might know something about our incoming stores. The Q officer I sought was engaged by telephone in a monumental misunderstanding with his opposite number in the American A-4 branch. His object was to arrange trans-shipment of Divisional stores from railway trucks to lorries. But to A-4 his lorries were trucks, his trucks were cars, and when

Q didn't think there could be any cars on the trucks, A-4 gave up. Again I saw that we would have to learn each other's tongues.

Our new masters, the 51st U.S. Troop Carrier Wing, were housed in the *École de Filles*; rather *petites filles* they must have been, for you would see great husky lootenants tenanting loos designed for toddlers, stooping to wash at knee-high basins, and hanging their towels on hooks marked *Bettina, Carmelina, Ninetta.* I reported to the Commanding Brigadier General Dunn, white-haired, kindly, mild of manner. In comparison his Assistant Chief of Staff A-3(Ops), Colonel Sam J. Davis, seemed rather brusque. If 38 Wing were to control the exercises with British Airborne, as Nigel assumed, they would have to do it from here, at the hub of the signals web. I wondered how Wally Barton would get along with the Allies. A-3 had a large staff; even with our two Army officers, 38 Wing Ops would be quite outnumbered. So would Ted Armstrong's Intelligence section, by its counterpart A-2, though its Colonel Tudor Gardiner, a big New Englander with a friendly eye, promised to be an easier colleague. When Nigel arrived, being now an Air Commodore, he would not be outranked here, but he would have to be tactful in putting two years' experience in Airborne at the disposal of a unit that had been activated only two months before. The New Englanders, and perhaps the Southerners, might dearly love a baronet, but I was doubtful of our immediate contact Uncle Sam. For the time being, an Anglo-American liaison section of three was established: myself, one British and one American Captain. But to Uncle Sam the '38th British' seemed to be just another and not a particularly welcome subordinate unit, and he remarked that Barton out on our airstrip would get his orders in due course.

I chose a desk in a long, high empty classroom next door to A-3, and to put myself in the new picture, drew a spreading family tree to show who did what, where, and to whose orders. You had to go a long way upwards from us to find an R.A.F. superior. Everybody was American until you got to Air Chief Marshal Tedder, Supreme Air Commander under Eisenhower, at Algiers. It was to be hoped that he knew we existed.

There were two of these U.S. Troop Carrier Wings (equivalent to R.A.F. Groups) but the 52nd, now in Morocco, would lift only U.S. Airborne troops and would not concern us. General Dunn's 51st here controlled three Groups (equivalent to

R.A.F. Wings). In the training phase, two of these Groups of four Squadrons each, and 38 Wing, would fly from four airstrips, dispersed within a 20-mile radius around Mascara. The glider pilots would be split up among the airstrips for training on the Hadrian.

For the moment I seemed to be the only R.A.F. body in the area. The Division, on request and without formality, gave me a motor-bike, and I went to look at our strip at Froha. The signpost said —Froha 5 km., Sidi-bel-Abbès 75 km., Timbuctou 2250 km., a nice choice for an afternoon off. As an airfield Froha did not impress. A negro construction crew was about to pack up; they had finished; the rest was up to us. An earth strip about 2000 yards long had been scraped through corn that to an English eye looked like poor grass in seed. Old engine oil had been spread on the surface to compact it, but even in the May sun it was cracking and reverting to dust. There were no roadways, no communications as yet. There were a few Nissen huts, and a reported well which I had some trouble in finding. Perhaps I had subconsciously expected a ring of bricks and a roofed winding-gear with a bucket. It proved to be a pipe sticking out of the ground.

—Has this well given any water yet? I asked the huge shining black foreman. He removed his cigar.

—What well, boss? Is that a well? We didn't figure that was any well. We figured it was a latrine.

It looked as if Charles Hurst would have to do a lot of Org and Admin in the next three weeks, for by then our Albemarles must be operating from this makeshift base. I slithered and pushed my way back to the road on my lightweight bike, ankle-deep in dust, rode to the Divisional M.T. depot on the Mascara wall circuit, changed it for a brand new 500 c.c. Matchless with a bit more traction, and visited the American strips to get ideas; they had some weeks' experience of life in these parts. They were friendly and informative. In a squadron exercise their take-off rate was impressive, but the dust they raised promised to be unpleasant for the glider pilots. Thanks to their roomy Dakotas, they had been able to make an air-contained move, carrying all sorts of home comforts. I could not imagine a piano, for instance, going into an Albemarle; nor that we would have portable generators to light our camp. Back at the U.S. Wing, I watched one of these being installed in a little shed in the school grounds below my window. Just before dark it started up, and the lights rose from red, through orange, to yellow. I was reflecting on American efficiency, and on the probability that our own lighting equipment would be something left over from the Boer War, when the little hut exploded violently under my eyes, and the lights went out. I opened my Portable Ops Room, extracted candles, and worked on serenely while the allies made a confused search for electric torches. I sent a candle to the Commanding General with the compliments of the Royal Air Force.

Next day Bill Campbell came in and handed me a signal. The Hudson, taking off from Portreath the day before, had crashed, and burned up. Nigel was dead. The survivors were in hospital, and none of them could be expected here.

Personal thoughts would come later. What mattered now was that we had no Commander, no Administration, no Intelligence, virtually no Headquarters staff. Nigel alone knew the high-level plans. He alone had the rank and authority to back them if they were good, or change them if they were not. All his papers were lost. The residual staff at Netheravon was fully occupied with the Horsa ferrying and the training of the new 6th Division. There were no adequate substitutes who could be sent out. The first major Airborne operation was six weeks ahead. Not a good start for it.

Fortunately for 38 Wing I was not quite its sole relict here. 'Musty' Musgrave had arrived, to be Wally Barton's second-in-command and Squadron Leader Flying. He led the way energetically into the frightful gap. Charles Hurst's plans for our initial Org and Admin were ashes in the grass at Portreath. We were some 1700 miles from our base, and communications were such that it was quicker to fly there to discuss things. This Musty did five days later; meanwhile our two-man H.Q. was busy. Whose baby were we now? Obviously an orphan to be adopted by the Americans. Our advance party was due at Froha in a fortnight, 296 Squadron would fly in soon after, and then the Halifaxes ferrying Horsas from Morocco. What would the advance party, coming by sea, rail and road, bring with them, and what would they expect to find ready? Tents? Transport? Fuel? Rations? The Americans, and 1st Airborne despite problems enough of their own, rallied round splendidly with such basic things. Field telephone lines unrolled towards us. We agreed with our farmer hosts the dates by which they would cut and carry their sorry crops. Our so-called petrol-dump was formed by driving a truck round the perimeter fields, dropping 50-gallon drums at intervals; these were too heavy to steal, but the wily Arab would broach one in the dark, and having filled his can, set light to the residue for fun; this two-mile circuit had to be guarded—by whom? Pup-tents appeared, all too quickly, on the down-wind side of the entrance track, where every passing vehicle powdered them with pink dust; we had them moved up-wind. When and where would the aircraft spares arrive? What sort of serviceability reports did the Americans want from us? How did we get weather reports? How decode them? We would have no medical officer; would the Division put us on their panel? Who could replace the maps and moon-charts and briefing materials and the typewriter (a potent weapon at such a time as this) that had all burned up in the Hudson? replace the Hudson itself by some communications aircraft? As Musty flew out to report the situation, Clem Markham flew in, expecting only to double with Dick Jesse as a Flight Lieutenant Ops, to find more than enough duties awaiting him. Tom Cooper came out to do what he could in Nigel's place, and after one brief appearance at Froha, went off to Algiers to learn (too late) what had been planned for Airborne.

A Major from the supply division at the U.S. Command, who had already been helpful from there, sought me out at the Divisional mess. I stood him a drink while he explained what more he could do for us, but it was time for lunch. In Hoppy's mess you did not drift in to meals just when it suited you; if you entered a minute late, you apologised to him before sitting down. The American had come 150 miles from Oujda; though only a guest here myself, what could I do but offer him lunch? These Allies would have to mix sooner or later; it might be a thing to encourage.

My guest was not a success. The Divisional staff were splendid soldiers, and good company, but their best friends, outside Sandhurst and Aldershot, could not deny that taken together, they did embody the accepted idea of the peppery British colonel;

a fictitious stage character perhaps, but nature imitates art; my Major was a stage American. He did not hide his amusement at their accents; they winced at his.

—Boy, do I see pie? Me for some pie! Colonel, you British are quite the chow-hounds! What do you have on that plate there, sir?
and being stiffly answered —Tomatoes, he answered

—Tomahtoes! To-*mah*toes! Do you know, that talk about to*mah*toes and po*tah*toes is what we call sassiety slang!

I got him away as soon as I could. If only I had brought somebody like Colonel Tudor Gardiner! That evening the P.M.C. called a mess meeting, at which he pointed out that visiting Americans might be stood a drink at the bar, but when meal-time came, one would say to them —I'm sorry, I have to go. Nobody looked at me. I hoped I would live it down in time.

I began to make notes for a leaflet that was to prove useful to both Allies. The British (as we had to submit to being called, though to me it suggested woad) must know that Americans did not drop from aircraft on to a D.Z. but jumped from ships on to a Dee Zee. Their assignments sent tow-ships to fly combat missions in three-ship elements; their gliders cut off, to make blitz-landings on El Zees. Their Crew Chief was by no means chief of the crew. Our Secret document was their Confidential, our Most Secret their Secret; our Confidential had no American, and their Top Secret (then) no British equivalent.

A blowout is a puncture is a flat is an apartment,
Braces are suspenders are garters,
A subway is a tube is a valve for wireless is radio,
An eraser is a rubber is a contraceptive,
And the first floor is the second floor.

They had to accept that the British speak English with an English accent, not in affectation but because they have been taught that way and cannot help it; we had to accept that not all Americans are Yankees, and that to generalise about them is like generalising about Europeans.

Military habits too were different. Our Airborne troops off duty, walking round the main square in Mascara, carried themselves even more smartly than at home. Americans leaned against the walls in the shade or squatted on the pavements at crap games. A few French officers passed at times, unwilling to see either. The tables and chairs in the central space were usually deserted but for two or three watchful Airborne staff officers; having been beckoned to join such a group, it was a little embarrassing when they rapped out reprimands for slovenly dress or bearing to troops better turned out than oneself. The Provost Marshal, I noticed, was equally stern when he caught the eye of the fifteen-stone Madame in the tight black dress and overfull shoes who crossed the square at times, and carried in her huge handbag, if I had read my Maupassant aright, the takings of the local *maison de tolérance.* Hoppy, I gathered, was not tolerant; some of his staff were, but had to tread delicately.

The Motor Boy of Mascara was a strange sight, until you came to accept him for what he thought he was. A tall, ragged youth with a look of blissful idiocy, he would stand at the kerbside, making a low throbbing sound when his engine was ticking over. Then, miming the gear-shifts and the steering, he would move off, walking in first gear, trotting in second, running in top. He tooted a convincing horn; his brakes needed re-lining; the sound-effects were perfectly timed. His artistry made it seem quite reasonable that he should be both car and driver. He could be heard all day, even through the siesta. He never stepped out of his part in public; I doubt if he could when he got home to his garage. He was delighted when an American admirer gave him a real steering-wheel, though purists thought such realism mistaken. A more imaginative trio of Americans whistled him up, taxi-wise, one busy day in the square. He pulled in to the kerb, and they climbed into the imaginary back seat. In sitting postures, a remarkable gymnastic feat, they trotted solemnly behind him, looking out of the side windows to acknowledge their friends. The circuit completed, they emerged and paid him off. The door did not close properly, and he had to slam it shut before he drove away.

Two hurried training programmes went into action on the Mascara airstrips. When they left England, 1st Airborne had done only one divisional exercise, and in that they were well under strength. The parachute troops who had not yet been in action with the 1st Brigade had to get used to jumping from the side door of the Dakota (which they much preferred to the horrid hole in the Whitley or the Albemarle), while the American crews had to be introduced to the dropping technique. Our glider pilots had to learn, from American instructors, to fly the Hadrian; the Allied tug pilots to tow it; and the Air Landing Brigade to load it.

The local French General and his staff were invited to watch one of the first daylight drops, a modest affair with eight Dakotas each dropping sixteen men. Any British officer present that day naive enough to suppose our French allies grateful and friendly to the liberators of Vichy-ruled Algeria, must have been disillusioned. A small convoy of Jeeps pulled up at the French Headquarters. Hoppy was in battledress as seemed appropriate to the occasion. The Frenchman was in full regalia, and when he emerged there was a frightful scene.

—*Moi? Moi? Sortir en Jeep? Jamais de la vie!*

And there was a long silent delay while the only acceptable vehicle that could be found, a moth-eaten limousine with anti-macassars and silver flower-vases, was serviced and fuelled for its first run for months. The chill continued throughout the exercise, partly because neither the General would nor any of his staff dared admit to knowing a word of English. Every remark had to be interpreted, including his awkward question as to why only seven of the promised eight aircraft had appeared. A re-shuffle on the return drive put a French officer into our Jeep, and after some desultory talk in French, he suddenly asked

—Look, chaps, d'you mind if we talk English for a bit? I'm getting out of practice, with this sort of nonsense going on.

The first big parachute drop, a night exercise, was all-American because 296 had not yet assembled. It took us into the *Beau Geste* area. Picture, then, the crenellated and bastioned walls of Sidi-bel-Abbès, Headquarters of the 1st Regiment of the Foreign Legion, at the foot of the Saharan Atlas Mountains, just after moonrise. In through the Mascara Gate come a pair in alien dress, armed with revolvers. Unobtrusively they move under the shadow of the plane-trees, and slip through a tiny doorway, whence an eerie, monotonous humming sound is heard. This changes to a dying fall; the lights in the houses die too. Who are these, and on what grim errand bent? Only Airborne Intelligence and 38 Wing Ops, standing by in the electricity sub-station to see that the juice is off, and the power-lines harmless, during the parachuting.

About eighty Dakotas dropped on this big occasion. It was understood that there would be lights at the rendezvous points, but nothing to mark the dropping zones. The terrain was featureless and the low quarter-moon gave a poor light. By our standards the task was very difficult, but the results seemed remarkably good. Although some aircraft overflew their D.Z. and dropped wild, some of them miles away, about half of the troops landed on or near their objectives, and another quarter near enough to join up and take part. The Division was very impressed. So were we, until we discovered that aids had in fact been put out on the D.Z.s; so that although our troops got some useful practice, and the local women some coloured silk underwear, the results proved little as to what these crews could achieve on an operation.

Wally Barton arrived at Froha early in June. Within a day or two he had fallen foul, as I had feared, of Uncle Sam. Moreover, Wally was clearly in the wrong. The argument began as to whether a navigator could be certain of recognising a coastline as such, when he crossed it by night.

—Look, Wing Commander, I've flown transport ships for ten thousand hours, and I've crossed many a coastline without seeing it.

—Well, I was never a *commercial* pilot, Colonel, but I've flown on operations since 1940, and flown the North Sea dozens of times, and I always knew when I crossed the coast.

—And I've flown the North Atlantic and the South Pacific summer and winter in all weather, and never got to seeing through cloud yet . . .
and so went on what Wally afterwards described as —that line-shooting competition that I so completely lost.

Outline plans for the coming operations were now revealed to a few of us by the Americans. Wally had already learned the general idea at Mediterranean Air Command, where Tom Cooper was now attached; he had said little but was looking worried. We already knew that by the end of June we were to move 600 miles eastward to an operational base in Tunisia, from which Sicily and Sardinia were equally within range. The plan had just been radically changed, but Sicily had always been the objective. On the night before the seaborne invasion, the 8–9 July, one Brigade of 1st Airborne would land near Syracuse, seal off the port, seize a strategic bridge and hold it until relieved by the seaborne force. On the next night, a second Brigade would land near the port of Augusta, 20 miles further north. On some subsequent night, according to progress, a third Brigade would land near Catania, below Mount Etna, 40 miles beyond Syracuse. So far so good, except that only two Parachute Brigades would take part, and this meant a Brigade-scale night operation for the whole glider force, apart from a few Horsas to support the parachutists. The Air Landing Brigade in gliders was, we learned, to undertake the initial assault.

That gliders could be used in this way was contrary to all we had learned to date, and to the lesson of Crete, especially with glider pilots trained to the present low standard. About 500 of them had completed the Horsa course, but some with so few hours' flying, that Chatterton had to divide them into first and second pilots, none of the latter being fully experienced even by day. About 50 such crews were resuming their training in Algeria, and about 60 more were to follow, but in the past six months at home they had averaged only about 8 hours in Horsas. None had done night landings, none had flown Hadrians, but within six weeks they must fly these some 300 miles, mostly over water, by night, and land by moonlight on a defended coast. The air plan based on this army requirement, when revealed later, seemed unsound in every detail. There was no obvious rendezvous point at which to fix position before the run-in to release, such as we had long thought essential. This run-in would be down-moon, the worst direction for map-reading. Because the unarmed and unarmoured Dakotas must not fly over the defences, the release point must be out to sea, and could be judged only by its apparent distance from a dark unfamiliar shore. There were to be no radio aids or lights on the landing zones; the Independents would not precede the force, for fear of alerting the defences.

We studied the photographs. They had been taken from a great height, with short midday shadows, and there were no really good stereo pairs of the L.Z.s. On comparing the terrain at Syracuse allotted to gliders, with that at Augusta and Catania allotted to paratroops, I thought at first that the photographs might have been transposed by mistake. Catania was quite good glider country; Augusta very doubtful; but the chosen (and best available) area near Syracuse was appalling: a neck of land bordered by sea-cliffs, rocky slopes and dense orchards; the fields were very small, and separated by stone walls.

As soon as we were alone I tackled Wally —Had he really agreed to this? Had Cooper? Chatterton?

He checked me wearily —Look, you don't have to tell *me*. Don't you suppose Cooper and I have been arguing at Algiers, and here? It's no good. Hoppy doesn't listen. Nobody listens. Even if they did, there are fourteen divisions and a thousand ships in this show, and they aren't going to change all their plans now because *we* don't like them. We just have to do this thing as well as we can, and don't you talk to anybody else like I'm talking to you.

Chatterton implied much the same. I found him upstairs in the bank, working out release heights, afraid to allow much excess in case the gliders overshot right across the peninsula, inclined to rely on American assurances that their tug pilots could order off the gliders at the right spot for a straight glide in, landing to a set drill. He confided that Hoppy, having shown him the plan and sensed his immediate doubts, had given him half an hour in which to choose between accepting it as it stood, or resigning his command.

Only Hoppy was full of confidence. —If Italy spoils the show by packing in before the date, he said —we'll do the operation as an exercise! We could only guess reasons for his determination to risk the main glider force on this dubious plan. It might be that the remarkable night landings achieved by a picked and intensively trained band of Hotspur pilots at Netheravon, had led him to expect a comparable standard from any man wearing glider pilot wings. Or perhaps, as their former commander, he meant the Air Landing Brigade at all costs to win the honour of being the first to set foot on enemy ground, in the first assault on Europe. Perhaps the idea was to keep a parachute brigade in reserve, as being a more flexible and quickly-launched formation for later tasks of opportunity. If Nigel had been here, would he have been in time, and have had the authority, to change the plan? Had Browning approved it?* His promotion as Airborne adviser should have given him weight in the high-level planning conferences, but it had muzzled him in the detailed planning, because although he could tell a Divisional Commander what to do, he ought not to tell him how to do it. Speculation was useless; as Wally said, we had to do this thing as well as we could. From that time onwards I did not hear a word of criticism, even at our most intimate gatherings. Nor was there any further argument about it with the American Wing.

But discord arose from the next big night drop, in which 296 took part, ready to prove their skill. The dropping zone was strangely chosen, being on the very perimeter of one of the Mascara airstrips, in terrain where the Americans had been flying day and night for weeks past, but quite unfamiliar to the Albemarle crews. The Dakotas used a follow-my-leader technique rather than the individual navigation that we favoured, and their leaders had radio-compasses, but the Albemarles had no such aids, nor Rebecca-Eureka. Even so, we expected them to make a fair showing, but a final handicap defeated them. To make success almost certain, there were lights marking the D.Z.s throughout the American drops. As soon as the last Dakota passed over, and before the Albemarles, flying last, came within range, these lights were switched off. Naturally the Dakotas dropped far more accurately. This unrealistic exercise proved no more than the previous one. The Division, unaware of what had happened, seemed to believe that the British crews had been proved inferior. Uncle Sam even gave a stiff warning to Wally Barton, that if his crews did not improve quickly they would not take part in the 'combat missions'. This did not sweeten Allied relations. Neither Wally, nor Peter May commanding 296, ever believed that the switching off of those lights was accidental. Thereafter they would offer no advice to the Americans unless asked for it, which they never were. Thus many of our old mistakes were made again. We had, for instance, evolved a procedure for planning Airborne tasks, and it worked. We had found that the co-ordinating conference with the Army, from which everything starts, is best worked backwards. The first question to be put to the Army concerns the point where the Air Force finishes —Who and what are we to drop, on what spots, and at what times? In an exercise, the flight is often extended outside the direct route, to accustom the troops to the strain of a long journey to battle; thus the next question is —How long are the troops to fly? Each squadron can then be allotted its air rendezvous; and so, still working backwards, the take-off times at each airfield can be fixed. A conference confined to essential persons can reach the basic decisions in half an hour. Immediately afterwards, the two Ops and Army Liaison Officers can fill in the details, and within another hour can draft their respective orders. The planning sequence ends where the exercise will begin: with the departure of troops towards airfields. But at the first Anglo-American conference, attended by at least fifty officers, Uncle Sam opened the proceedings by asking, after an uncertain pause —Well, now, what time would you like to take off? from which impracticable starting-point the unwieldy gathering went into prolonged discussion of minor details, and broke up with major decisions still in doubt. Fortunately Musty was there; for once he denied himself his taste for pulling American legs, and taking aside the very few from each force who were needed, tactfully straightened things out in a quiet corner. After the second big exercise, there were no more co-ordinating conferences, either for exercises or for operations. The plans were made by chairborne American transport and British army staffs. None of those who had to do the flying, British or American, not even the Squadron Commanders or the Glider Pilot Regiment, had any voice at all.

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* George Chatterton has since answered this in *The Wings of Pegasus* (Macdonald, 1962; p.40). Writing of April 1943 he says:

'No one could tell me what arrangements had been made and there had been no sign of General Hopkinson, the Divisional Commander, for weeks!

General Browning had also lost him. I found out afterwards that Browning had waited in North Africa for as long as he was allowed, in order to discuss the impending operation with General Hopkinson, but the latter had kept out of General Browning's way.'

Nigel's idea that his Wing would take, or at least share control of exercises with British troops, was clearly out. Even our liaison trio at the U.S. Wing soon drifted apart for want of employment. The one small contribution accepted from '38th British' was our night target-map, photo-printed on the spot, which they tried and liked, and made a standard issue for exercises and operations. Only one small relief model of Sicily had been provided for briefing 14 squadrons at eight fields. The only maps so far to be had were old Italian ones, obscured by grey hachures like hairy caterpillars; later there were overprints for Army and Navy use, but when we checked these against recent air cover, a major river for instance proved to have shifted its mouth a quarter of a mile, seemingly carrying with it the machine-gun emplacements on the banks. Hundreds of copies of three different target maps had to be ready for the general briefing at the end of June; this took me back to Algiers where efficient U.S. litho printers made a fine job.

There, with an Albemarle crew, I booked in at a hotel, small and scruffy, but it had baths—all together in a dark basement, but real baths, with hot water. Refreshed, we went in search of food, but there we failed. Even a cuppachar required a chit from the Town Major, so we called on him. He wore the kilt, we noted. He objected that we were not in his transit camp. (This dreary canvas slum was far outside the town, in the industrial sprawl, on a dirty beach; Froha was little worse.) —No, we have found a hotel, thank you; we just want to eat. —In that case you can make your own arrangements about food too. —But they won't serve us without a chit from you. —I can't help that. He was adamant, so we bid him good day and said we hoped he would enjoy his dinner. Nearby was a U.S. Army mess in a little restaurant, full of G.I's. There we explained that despite our uniforms we were under American command. —Can you wait ten minutes? asked the corporal anxiously —I can't offer you much. How about some soup, and chicken with french fried and sweet corn, and ice cream, and coffee? Allied relations sweetened again that evening. America seemed to be on our side, if Scotland wasn't.

In the Ops tent at Froha, with two officers and a sergeant who knew the work, and only one squadron flying, the daily round was lighter than at Netheravon, though with constant night-flying, bed-time and meal-times ceased to have meaning. We slept in the Ops tent, when we could, regardless of the clock, and brewed up there when we were hungry. The telephone switchboard beside our beds invaded our dreams. Camp kit had been sent ahead for a Halifax crew who had been lost, and from this I had to replace mine, burned in the Hudson, and lay thereafter on a dead man's bed. We lived in pyjamas and flying boots, supplemented from midnight to morning by battle-dress blouses. The sun beat down all day and every day, but it was never intolerable. This was a comparatively pleasant part of the North African coast, in Roman times rich in corn and wine. Most of the awful warnings given in the Directive on Hygiene were proving unnecessary. —Men not to work shirtless or hatless in the sun? Within a week, and for months thereafter further east in temperatures up to 120°F, most of them were going round hatless in shorts and sandshoes. The thick clothing, spine-pads, cholera belts and pith helmets that our grandfathers wore in such parts were forgotten, except for a few wags who wore grandfather's topee. The French officers did wear lightweight *képis* with white linen neck-shades behind—*Ce casque-là va vous tuer!* warned one of them when he saw my peaked cap, but it never did. I recall only one case of heatstroke. The medicals must have done a good preventive job. No lice. No rabies. No typhus, though native towns had plenty of it. —It should be regarded as axiomatic that all Arab women have V.D., said the Directive, rather sweepingly; but Arab women seemed to be one to the square mile, and the question did not arise in 38 Wing. Gyppy tummy and dysentery, yes. However careful about unwashed fruit, unchlorinated water and flyblown food, everybody was caught sooner or later, but we learned to live with it and grew immune. At the hotel entrance to the Divisional mess was a smart little bar counter open to the outside. Any newcomer taken there for a quick one could be disappointed. There was only one drink, though it was liberal and free: chalk and water with a trace of opium. The barman was a medical orderly. When in Mascara one always stopped there for a glass and a chat.

—All bathing in streams or shallow water is forbidden, said the Directive. But for months we never saw fresh water in any natural state. The army doctor, whose patients we became, going in search of mosquito-breeding pools, came to Ops for a local map, and I went with him; in a drive of miles we found only one muddy hollow in a cracking wadi, where a cluster of terrapins of all sizes were enjoying their last contact with moisture until the Autumn. We took some tiny ones back to camp, where they revelled in real water, and ran races, for a crowd of punters, that were exciting in inverse ratio to speed. My fastest terrapin once escaped, and was missing for days. I then met him marching back into camp, a good three hundred yards from my tent but heading straight to it. When tested by turning him in the wrong direction, he quickly got back on course, towards the only water he knew within miles. It took him hours, though I refreshed him on the way, and carried him over the last lap once his intention was unmistakeable. We re-named him Rebecca.

Dust was the worst natural enemy. The oil on the runways proved useless, and an aircraft taking off raised a fifty-foot-high wall that sometimes drifted through the camp. Around midday, dust-devils would waltz across the plain, some of frightening size, forming durable red clouds thousands of feet up. Next to Ops was another tent with a stencilled sign ALOI FROHANOI, Greek to some, but it marked the home of Alec Ramsay, Army Liaison Officer to Froha No. 1 airfield. He was out on the runway with me when an outsize dust-devil approached the camp. We watched with amusement, glad to have missed it, wondering who was for it; then saw the apex of Alec's tent emit a high white jet like volcanic steam: his papers had been neatly extracted and distributed to the squadron. The M.O. had a large marquee in which he had unpacked all his crates, and either to take an inventory or from sheer pride, had set out his hundreds of bottles in a display like a Cash Chemist's. A dust-devil removed the entire marquee, so vertically that the display was left intact but for one broken bottle.

It was at Froha that I fired my first and last shots at a foreigner. From the tent I heard Peter May shouting the usual *Imshi!* at a group of Arabs approaching across the runway while aircraft were expected in. A pause, more shouting, then he came angrily inside —Have you got a gun? I produced a .38. —Take a pot at that silly bastard before he comes any further! A small figure was trotting towards us; I fired well over his head. To my surprise he came on, and I fired again. Then I began to realise that this was a very small figure indeed, and went out to meet a boy of about ten, sobbing as he came, his elders cursing him from a safe distance if he stopped. He pointed miserably to the tents, among which the family donkey had strayed. I did not feel very proud of myself.

The Ops telephone to A-3 being the main contact with our Allies, I found myself inevitably at the point of any friction, and applied what oil I could. But even a routine call would bring the chief anglophobe to the telephone, to know what the Britishers were moaning about now. At dusk, shortly before take-off for a parachute exercise, the first cloud for weeks came up behind Mascara, a great dark wall that may have been a convected dust-storm. If this led to a cancellation after take-off, our Albemarles would be in trouble, since they could not land with their full load, and once airborne the troops would have to drop anyway. We had to know soon. I enquired politely of A-3 whether they meant to cancel.

—Why should we cancel? snapped Uncle Sam.

—The weather, I suggested.

Looking from his east-facing window at clear blue sky, he must have suspected a leg-pull, and was very cross.

—If we aim to cancel, you'll get your orders!

I left it at that, but I had already warned 296 of a probable cancellation when it came ten minutes later; perhaps the U.S. Met Officer had looked out of a different window. I recalled this occasion uneasily when I telephoned A-3 shortly before another night drop. The Americans had issued a moon chart, in colours, that showed every rise, set and phase of that wayward satellite, and a full moon carrying the U.S. guarantee had duly risen in a clear sky. As before I enquired politely whether they intended to cancel. The wrath aroused by my question was nothing to that aroused by my explanation.

—We don't like the shape of the moon. It looks sort of upside-down, and shrinking.

I had some difficulty in persuading Uncle Sam to look at it. The moon chart was handsome, but a total eclipse had been overlooked. They cancelled (too hastily, for when we timed the passage of the umbra, it was evident that a brief postponement would have sufficed) and Uncle Sam probably suspected that Musty and I had arranged the whole thing.

Before we left Mascara, the squadron commanders were given a preview of the landing areas in Sicily, from American bombers that were diverted to fly along the enemy coast at the appropriate height. One American commander made this the occasion for a bad security gaffe. The arrangements for the trip took him to the bomber Ops Room, where nobody had the slightest right to know anything of the invasion plan. He had only to agree the route with his pilot. But with the aid of their wall map, he told all present everything he knew about the coming Airborne assault. A panic flap resulted. Every one of his hearers had to be isolated like a typhoid carrier and 'screened', a process that included enquiries in their home towns about German uncles or Italian grandmothers. In comparison, the discovery that all the nurses in the local hospital knew that we were bound for Kairouan was insignificant.

The first American gliders to arrive in the theatre were four that had been ferried 3,600 miles by air in stages from Accra in the Gold Coast Colony, no mean feat. By May there were about a hundred American glider pilots at Oran, where more gliders were arriving crated, by sea, to be assembled by American mechanics. Two companies of British glider pilots who came out with 1st Airborne found themselves detailed to the same task. It was as well that they had long since been instructed in it. Installed in an old prisoner-of-war camp, they were surrounded by barbed wire, an uninspiring setting for an uninspiring first task for soldier-pilots sent overseas for action. Having no decent quarters, they moved into the crates as these were emptied. (One of these surely must have been called 'Hadrian's Villa'?) The parts for one glider came in five different crates, being landed at six different ports, and assembled at three different depots. At first one depot would have all noses, another all tails. The first few gliders had been in their crates, unventilated, for months, and soaked in sea-water; these took about a month to repair and assemble. Even with tractors and cranes it took about thirty men a day to assemble one undamaged glider. Hundreds were wanted immediately for training, and about four hundred for the operations early in July. The American engineers were splendid, and organised an assembly line procedure; the fastest depot could turn out twelve gliders a day. By the end of May, these were accumulating at the Mascara airstrips, and pilot training began.

The Hadrian proved a disappointment, and much inferior to the Horsa. It was easy to fly, in fact all too like a sailplane. But its flat glide and its want of airbrakes made it float on and on before landing, and though it had wheelbrakes the run was far too long. Its so-called 'airbrakes' were in fact only lift-spoilers above the wing, much less effective than big flaps or true airbrakes, especially at high speeds. Side-slipping was the routine remedy for an over-high approach, but hardly to be recommended with a full load near the ground. The trimmer was awkwardly placed and was sometimes used in the wrong sense. There were no blind-flying instruments. The tailplane attachment was weak, for which reason a towing speed limit of 150 m.p.h. was imposed; no problem with the Dakota, but it was not easy to fly the Albemarle below that speed, and the narrow margin was a constant worry to both pilots. One Hadrian with a full load did in fact shed its tail and crash, and though there was no proof, it is likely that this limit had been exceeded. There was no inter-com between glider and tug, until our Signals Officer rigged up some sets with American field telephones, the wire loosely looped and bound to the towrope; the wire got worn on the runway, and there were many failures.

In this climate, and at 1300 feet above sea level, engine performance was below par. Around midday the air turbulence was so violent that glider towing had to stop for three or four hours. On a dust strip like Froha the take-off was unpleasant in the glider. As soon as the tug revved up, it and the ground and even the side view disappeared in a brown blankness; you felt the surge forward and the bumps, tried to leave the controls alone, felt the glider lift, and were twenty feet up before the air cleared to reveal the tug—ahead, if you were lucky. One glider taking off in tail-heavy trim, perhaps made worse by the second pilot winding the trimmer the wrong way, shot out of the dust-cloud in a vertical climb, and when the rope was released or broke, went over on its back, completed a loop and stalled on to the runway almost undamaged.

In mid-June came two mass-landings by daylight, by up to eighty gliders, but as no crashery could be risked, the objective chosen was Froha airstrip. Useful practice was gained in marshalling and quick take-off, at which the Americans were particularly good, but the landing in this big flat open area proved little, save perhaps that most of the pilots and many instructors were landing too fast. Nor were any Jeeps, or guns, or corresponding ballast carried, so that a serious snag was not discovered until too late: the floor of the Hadrian was weak, and in a hard landing a heavy load tended to break through it. The whole of the nose, including the pilots' cockpit, was hinged at the top to admit or remove a vehicle or a gun. A few landings with such loads in restricted fields might have revealed another snag: that if the glider ended up, as it well might at Syracuse, with its nose against a wall or among trees or even bushes, the nose exit might be jammed. Moreover, given a broken floor or a jammed nose, the steel tube structure could not be sawn away, as wood might be, to extricate the load.

The training programme had to be sketchy: by day, one dual circuit, one solo, and two remote releases; by night, one dual, one solo, and one remote release with a moonlight landing on a reduced flarepath (sometimes, indeed, further reduced by Arabs to whom even a tin can was worth stealing). I went round by night behind Chatterton, who showed just how this glider should be flown. With the second pilot calling out the height and speed, he came down just comfortably above the stall, using incidence as his airbrake and stopping in the length of what might have been a very modest field. Encouraged, I went round again with one of the pupils and his American instructor, with the idea of taking the second seat when the instructor vacated it. The pupil was an Irishman whom I remembered well from his time at Thame as excitable to the point of seeming sometimes a bit crazy. His dual circuit and landing were not too bad, but his nervy mood so confirmed my recollection that I lost the taste for flying with him, and left him to go literally solo. Soon afterwards we were puzzled by a strange sound from down-wind, like a great mouth-organ crescendo; the Irishman must have been doing nearly a hundred as he reached the first flare, and he disappeared diminuendo into the dark, to write off the glider at the last of several bounces. (In this he did us one good turn, for the long plywood box-benches of the Hadrian, suitably pierced, made luxurious multi-hole seats to replace the crude plank that bridged our latrine pit, and the steel tube longerons and fabric made a decent screen, welcome during the early morning session while the reaping peasants sang their mournful song nearby.)

The biggest night glider trial used only twelve Hadrians. The idea was to simulate a landing just inside a coastline, represented by a row of lights. Eight pilots were successful, two or three landed close but with damage; one was more than a mile out. The terrain was open, and the moon full, and no heavy loads were carried. Another inconclusive experiment.

# 8 OPERATION 'BEGGAR'

Towards the end of June the entire camp at Froha turned out to see a heartening sight, a Halifax towing a Horsa, the first of the twenty we must have, of the thirty we hoped for, coming in from Morocco. It released, it circuited, it dived with full flap; but to our helpless dismay it was lined up, not with the runway but with the furrowed track between the runway and the tents, dotted with obstructions, on the wrong side of a demarcating line of oil drums. Under the eyes of all it swung, slithered and crashed. (The lost souls in Hell were told that once in a thousand years a great pitcher of cold water was brought from a million miles away to allay their thirst, and they waited, and it came at last; and the bringer paused at the threshold, very tired; and they heard the ice tinkling in the water; and as he stepped inside he tripped and fell, and the pitcher broke, and in a second the water had evaporated.)

The events of Operation 'Husky' in the next month were to obscure the achievements of 295 and the glider pilots in Operation 'Beggar', the ferrying of the Horsas from England, but these were at least as noteworthy. Most of those who took part, moreover, flew on the operation with no intermediate rest. As the Horsas came in at Froha and went on to the forward area, and as the Halifaxes came through in both directions, we began to hear scraps of the story.

With extra tanks in the bomb bays, the Halifaxes were flying at a load beyond the power of three engines, and as no petrol could be jettisoned, a belly-landing meant a high risk of fire, such as had destroyed three of the Halifaxes before the ferrying began. Towing at such loads demanded constant attention from both pilots. Any prolonged flying in cloud meant certain trouble. The whole trip had to be done in daylight, because use of the blind-towing instrument would have required the glider to fly in the low position, too risky with so small a speed margin. The route ran within a hundred miles of enemy airfields in France, and any attack was bound to end with the glider in the sea. The Ministry of Aircraft Production had advised that a Horsa could not be ditched safely, because the nose would break in and it would fill and sink immediately. Fighter cover could be given only for the first three hours, during which the height must not exceed 500 feet, so that the Beaufighters might not be detected by radar and intercepted on the way back.

Four Horsas, each with three pilots, were towed out from Portreath on the first day of good forecast weather. Two reached Salé in Morocco, one met bad weather and returned, and one broke its rope in cloud. Major Alastair Cooper in this one came out of cloud a hundred feet above the sea. On ditching, the nose broke in as predicted, and the fuselage filled, but the pilots got away in the dinghy. Twelve hours later, when a frigate picked them up, the Horsa was still floating though waterlogged. The frigate commander tried to sink it by gunfire, then with depth-charges, finally by ramming. It still floated after he had extricated his bow. Ten days later, Cooper made a second trip, towed by F/Lt. Buster Briggs. Taking off, the Horsa dropped its undercarriage too soon, so that one wheel bounced up and embedded itself in a wing, making control difficult, and the flaps useless for landing; but both captains agreed that it would be a pity to turn back. During the ten-hour journey one of the glider pilots entertained both crews with trumpet solos, relayed over the inter-com. On landing at Salé, the undercarriage parachute worked loose and opened, slewing the Horsa round, and the loose wheel hit the tailplane. Most of the resulting repair work was done by the glider pilots themselves. So sketchy was the organisation at Salé that Buster had to stay on there to improvise maintenance and direct the further overland ferrying, until just before the operations, in which he took part.

F/O Muirhead was 300 miles out from Portreath, 400 feet above the sea, when one engine failed. Jettisoning everything that could be spared, he got his glider back on three engines, at a load only just under the limit for a Halifax alone. He and his crew were lost in the Bay of Biscay on the way home after the operations.

F/O Horne left Holmsley South at first light, flew to Portreath, towed a Horsa to Salé, and landed back at base after a round trip of 37 hours. Six days later he had completed another. On a fourth trip his tug and its glider were missing, believed shot down.

F/O Norman delivered four gliders to Salé in a fortnight. On one trip he was attacked by twelve Ju88s. After a hopeless attempt at evasion while towing, he had to ask the glider pilot to release. Norman's tail-gunner then shot down one Ju88, and damaged two others; they arrived at Salé with 36 cannon-shell hits on the Halifax, which had to be written off. The ditched glider crew included Sergeant Antonopoulos, who had already ditched once with Cooper. They passed eleven days and nights in their dinghy before being picked up, 120 miles from the point of ditching.

Two Halifaxes and crews, four Horsas and two Horsa crews were lost at sea. Of 31 Horsas that left Portreath, 27 arrived at Salé. There, the tug crews had to do most of the work on their aircraft, and thereby often lost a night's sleep before returning next day. There were no spare crews to replace any who might break down. None did.

For the overland tow of 400 miles from Salé to Froha, low cloud often delayed take-off until the heat of the day had made air conditions rough. Two Horsas were dropped in the desert, but one was salvaged in time for the operations. A total of 22 reached Froha.

There, when the training period ended and the move forward began on June 24, the American engineers had achieved a total of 375 Hadrians serviceable for ferrying to the operational bases. The Hadrian pilots had totalled over 1,800 flights, about 500 of these by night, thanks largely to the clockwork efficiency of the American crews who did most of the towing. But the average per head was only 4½ hours, including just over one hour's night flying.

Ferrying of the Hadrians, which served also to move most of 296 Squadron to the operational base near Kairouan in Tunisia, began on June 24, within a fortnight of the first operation. Of about 350 gliders used, many had not been test-flown. All that could be conceded was that before setting course, each tug would make one circuit, giving the glider pilot a few minutes in which to judge the airworthiness of his craft. Of seven that left Froha on the first day, two released and landed back. Next day General Hoppy was watching. When one of ten glider pilots came back and complained of aileron trouble, Hoppy jumped into the glider, made a circuit, reported it fit to fly, and sent the pilot home. There were no further complaints at Froha; there were some on arrival at Kairouan, but only about ten gliders failed to arrive serviceable. None of the glider pilots had previously flown continuously for more than an hour. Five tugs ran out of fuel. Those who had ferried Horsas from England, whether towing or towed, agreed that this overland trip of 600 miles was a worse ordeal. They had to cross mountains up to 7,000 feet high, flying at about 9,000 feet; a towed Horsa took about an hour-and-a-half to reach this height. After early morning, the air was so rough that a thousand feet or more could be lost in one bump; one pilot reported losing 3,000 feet in 10 minutes. Some flew as low as 6,500 feet, through the high valleys, but this was impossible without an early start, which meant flying for hours straight into the sun. Wilkie had to give his Halifax crews an impossible programme: seven hours' flying a day for five or six consecutive days. Nor could the aircraft stand up to this. For hours on end they were flying with engine temperatures far above, and oil pressures far below, the safe limits. One pilot had six engine failures in flight in three weeks of ferrying.

Even in an Albemarle with nothing tied to its tail, and starting so early that the arc-lamps round the prison camp near Froha were still bright below, the ride was rough at times, and the terrain was uninviting: not picture-book golden desert, but dark grey hills like cinder-tips, eroded by winter streams that were now bone-dry; an occasional muddy river that lost heart and petered out before it reached the coast. On arrival, seeking out the glider that had carried my motor-bike, I got some idea of what the pilots had been through. After it had been lashed into place at Froha, I had asked the Engineer Officer to make a final check. He had added further ropes and wedges that looked sufficient for a battleship in dry dock. But after that switchback ride, it was lying on one side among shreds of rope, and the fabric roof was still dripping the remains of a basket of tomatoes that I had given to the crew. It was on this trip that one Hadrian already mentioned shed its tail and killed its occupants.

This was less kindly country than Algeria, drier, hotter, greyer. From the bombarded and largely evacuated little port of Sousse, a road (ten power-line poles to one kilometre stone, and little else) ran 40 miles inland to the holy city of Kairouan, once meant to be the capital of all Islam for all time: seven pilgrimages to Kairouan equal one to Mecca. Once, like Algeria, this was a rich and populous Roman granary; at the little village of El Djem there is an amphitheatre to seat 60,000; but inland now the cultivation is sparse. From the air, huge white *shotts* dominate the waste, not strictly lakes but slight depressions below sea-level, fed by hot salt springs. For most of the year they are dry white salt. The biggest of these is twenty miles long, and on its bleak fringe a strip had been cleared and a couple of Nissen huts set up for the Halifax Flight. This lugubrious, briny place was called Goubrine One. A few miles away, beside the main road, was Goubrine Two, allotted to 38 Wing and 296. This rather more cheerful spot was enlivened by a cluster of Arab hovels, a little cultivation amid the thistles and prickly pear, small olive clumps, and a few tall aloes like frayed lavatory brushes. Water had to be brought twenty miles by road; we were to have a faint taste of what real thirst must be in such a climate, when for 24 hours the supply broke down. Officers and aircrews were six to a tent, the men in pup-tents. The one Nissen hut was given to Ops; as yet it had only its inner iron lining, and temperatures were in the nineties and rising daily. It had a boarded floor in sections, a luxury that had to go to the walls, to provide something better than corrugated iron on which to pin briefing material. A curtain formed an inner sanctum for these secrets, and for my guardian bed. Of this I did not get much use awhile, for my colleague Clem Markham had elected to travel in a Horsa that was down in the desert; there were tales of a sheik's beautiful daughters, but transport had been sent to collect him. We dug slit trenches at our doors; I was pleased to find one day that mine had been fortified by an outer wall of stout wooden boxes—until I saw that these contained Barton Flares. Not that enemy aircraft ever came. The only alarm, soon after our arrival, was a telephone warning from the Americans, to expect enemy paratroops to be dropped on our airfield that night. Peter May, the senior for the moment, roused to be told of this, remarked only that unless their standard of navigation was a lot better than ours, they weren't likely to appear. Musty was preparing a welcome for the C.O., due back from a trip home; with a roll of hessian intended to screen latrines, and a can of whitewash, he contrived that when Wally arrived in the circuit he found Goubrine Two identified in 5-foot letters as BARTON FIELD.

I had asked Wally to bring back a few luxuries such as sauces and pickles, to flavour the dreary menu of bully-beef and Spam. He overdid this; he brought a crate of stuff that had cost him several pounds. Most of it was left on his hands, so he arranged a tempting grocery counter in his tent; it seemed rather undignified that the C.O. should press Pan Yan and H.P. sauce on his subordinates, but few were allowed to get away from an interview without buying something.

One night a frightful wailing in concert arose from the wretched Arab dwellings at the roadside end of the runway; it went on till dawn, and I was sought out to discuss the trouble, in French, with a spokesman from the local equivalent of the parish council. Old Abdullah, it seemed, sleeping in the roadway as usual, had been killed by an American truck that had not stopped. Would I please arrange cash compensation? This should go to the Councillor himself, who would pass it on to the family; doubtless deducting a fat commission, for some of the bereaved were trying to draw me aside and, as I guessed, bypass him. The Americans agreed payment without demur, at the standard rate, and the blessings of Allah were showered upon me. The next deputation came without the interpreter, but by dumb-show and with profuse apologies, led me to a field telephone line that their donkey had broken. They were a scruffy lot, looking like students dressed as Arabs for a Rag Day procession, and as I strolled back with them towards the camp, in my usual pyjamas, some airmen of 296 who bawled *Imshi!* at the seemingly all-native intruders were startled to be answered —*Imshi* your bloody selves! and there were unkind remarks about Lawrence of Tunisia. In reward for this small service, I made Wally perform a ceremonial presentation of gifts, an outlet for some of his surplus groceries. But it proved difficult to hand out one item apiece to a dozen Arabs, for however many you gave, and you saw nothing go up a sleeve, every hand was still empty and outstretched.

The third and largest deputation came to bewail the news that their homes were to be pulled down forthwith because they obstructed flying. I checked with Wally, who confirmed this. They were indeed in line with the runway, but in the light prevailing winds we always took off away from them, and there was plenty of landing run; was this high-handed action really necessary? —Not really, I suppose, he agreed —but we can't take orders from these people. Looking a true Empire Builder in his topee, he added —We just mustn't let a bunch of Wogs *get away with it.*

I pointed to a nearby Albemarle. —See that number on that aircraft? Who invented those numerals, when your ancestors were totting up on their fingers? Wogs! See that astro-nav dome? Who invented your astro-nav? Wogs! Who made your star map? Wogs! Who named the stars ... but Wally stopped me, and agreed to stay his hand unless the wind changed, when those tottering mud walls could be pushed down in half-an-hour. The reprieved families combined to prepare a fit reward for their protector. A procession came bearing a huge ornamental brass bowl, heaped high with *cous-cous*, decoratively studded with chicken legs, tomatoes, olives, probably a week's food for them all. We were now in a dilemma. The dish looked and smelt most appetising, a mouth-watering change from canned rations, but the hygienic standards of kitchen and cook did not bear thinking of. The thumbing and arranging and tasting ... to indulge meant probable dysentery, possible typhus, which was rife in Kairouan. We argued, then compromised; extracting the chicken fragments, we boiled them in chlorinated and then in fresh water, ate them, and buried the rest. Returning the bowl as requested, I was of course careful to convey by gesture that we had savoured every mouthful.

The centre of the great *shott* was still a pool of saturated brine, from which the tattered tail of a Wellington pointed skyward. This made a useful target for air-to-ground firing, and the 295 crews at Goubrine One were entertained one day to see a dinghy-load of fitters from a Wellington squadron who had been salvaging spares from it, frantically paddling ashore and racing across the salt to escape a series of attacks. On reaching safety the scared and angry airmen were assured by the spectators from 295 that they should have stayed at the target, as 296 was doing the shooting.

The sun burned in a chromium-plated sky, wind was hard to detect, and shade temperatures rose in early July to 120° F. Cockpit canopies had to be covered if they were not to split, and not uncovered until just before take-off if the pilots were not to pass out. Some little pools of colour on the floor of the Ops hut solved the puzzle of the empty wooden tubes that had been wax pencils. Daily I patiently decoded the weather forecast which the enemy must not know, and daily it came out as CAVU (cloud absent, visibility unlimited). After six weeks of such weather, Wally's batman was heard to remark brightly as he brought morning tea —Turned out nice again, sir! Snatching the last chance of a bathe for some time to come, a few of us drove down to Sousse in an open truck, under a stuffy shade contrived from blankets. As we passed the Airborne ammunition dump, I noticed a file of four or five Arabs on mules, riding past it, towards the road; they crossed over and disappeared among the scrub. One of them was a pure blond, a rarity among Arabs but not unknown. They may have had no connection with the resounding multiple crumps that we heard a few minutes later. —There goes the Div ammo dump, remarked Wally placidly, as high thin columns of smoke went skyward. Perhaps we should have turned back to help, but we had our swim. On the way home we learned that a sudden inexplicable grass fire had swept through the dump, and though nobody had been hurt, a lot of fresh banging material had to be rushed from Algiers.

We could muster the eight Horsas needed for Syracuse, the six for Augusta the following night, and at least five of the six to support the parachute operation at Catania. We might have eight Halifaxes serviceable to tow them, but we would not have eight Halifax crews, even for the first night. A rather desperate remedy offered: to tow one or two of the Horsas with Albemarles. Even if the Albemarle could cope with the full load, the range left little or no margin for return, though it might be possible to refuel at Malta on the way back. A test was made, six days before the operation, in a shade temperature of 117° F. After a slow climb, the Albemarle found its ceiling at 800 feet; it was overheating, and the test was abandoned. Next day an attempt was made over the sea, without trying to climb, and the thing was judged just feasible if done in the cool of the evening . . . with luck.

During the exercises, the U.S. Wing could not be persuaded to issue orders in time to allow what we thought adequate briefing. An Airborne mission involving three partners (tug crew, glider crew and gliderborne troops) needs more than the casual chat that suffices to send transport Dakotas from airfield to airfield. The first general briefing for Sicily was given a week in advance, but the exact aircraft requirements, time table, detailed flight plan, and allocation of gliders to landing zones, were first made known to us within 24 hours of the first take-off. Not until then could we draw up our own orders, and prepare for final briefing. With operations on two successive nights, we must brief for the second at the same time as interrogating and reporting on the first. The Halifax pilots knew nothing at all of their tasks until they arrived so belatedly at Goubrine. Their Flight Commander, Wilkie, did not turn up until two days before the first operation 'Ladbroke'. Three times he had set out from Froha towing a Horsa, and three times had engine trouble. On this third trip, after delivering his Horsa on three engines, he had to land on two, one of these faulty, and his Halifax was now grounded awaiting three engine changes. Spares for the Halifaxes, promised for June, did not begin to arrive until the operations were over. Their ground crews, less than half the normal number, were so exhausted that some of the aircrews had to service and refuel their own aircraft, man-handling 50-gallon drums in what proved to be the hottest week of the year. They had to put up their own tents, dig slit trenches and guard their aircraft. The last straw was, that for briefings they had to drive over to us at Goubrine Two. To avoid this, Wilkie asked me to release Markham to run a duplicate Ops and Flying Control at Goubrine One. This left me with only my Sergeant, but I had to agree.

As soon as we could, we had crewed up the tug and glider pilots who were to go into action together, and on the eve of 'Ladbroke' we threw a joint party, centred on a tun of Algerian wine that we had brought from Mascara on a Queen Mary. We had failed to sell it, even at fourpence a pint, to the airmen, who preferred to pay up to 10s. a bottle for flat, warm beer. It was crude but potent stuff, and all was concord between the services.

The Air Landing Brigade had carried out three full-scale practice loadings of the gliders. Some were fitted with extra seats and carried eighteen. A few American glider pilots were to fill vacancies at the American airstrips. At our strip an American engineer officer, a bearded stalwart who had done great work in readying the fleet, asked to be allowed to fly on the operation if an extra Hadrian should appear. His superiors, seeing no such possibility, lightly agreed. He turned to his stock of crashery and spares, from which he created a glider that never had official existence or a number, and he flew it to Sicily.

On the morning of 'Ladbroke', all the aircraft were serviceable. But around noon, there were voices outside Ops that conveyed a sense of something amiss, and the ambulance whined past. A mile away, beyond the end of the empty runway, a great black gnarled tree of smoke had grown half-way up the sky. An Albemarle, overshooting and opening up to go round again, had stalled, hit another on the ground, and burned up. We had lost a crew and two aircraft, though we could still just make up the numbers needed that night. For an hour the horrid portent leaned over the camp, until it rose as a black cumulus to drift away. The funeral was arranged with unavoidable but I hope not indecent haste; we had much else to do. Seizing three unfinished wooden crosses from a protesting chippy-rigger, and borrowing his tools, I completed them while bouncing in the back of a Jeep, in which we caught up with the cortège and firing party outside Kairouan. Within the hour we were at work again.

# 9 OPERATIONS 'LADBROKE' AND 'FUSTIAN'

Twenty-six Hadrians were marshalled on the earth runway in two lines, nose to tail, the first two tugs in front ready to start up and take up the slack; the others on either side, ready to come in alternately. All the towropes were attached and had been tested. (Some American units which had wider runways put four tugs abreast, each with its glider close behind and the rope attached; behind these, another four such pairs, and so on up to a maximum of 32. Numbers 1 and 3 took off together, then 2 and 4, and so on. The total take-off period was about the same, but twice as much time was given for the dust to settle between take-offs.)

A moderate but increasing wind was raising a slight haze of dust; unexpectedly stronger wind (30–35 m.p.h.) was now forecast for Sicily, and Chatterton advised the U.S. Wing that the release heights must be increased. The gliders were still to cast off 3,000 yards from the coast, but the Hadrians at heights varying from 1,400 to 1,800 feet according to their landing zones, the Horsas at 3,500 feet.* I hastily reconstructed the little peep-show rigged in the Ops hut, through which the pilots could see the objective (represented by the night map) as it would look during the run-in and on release.

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* The gliding performance demanded by these heights and distances varied between the three L.Z.s: a glide ratio of 1 in 11·6 (Hadrians on L.Z.1), 1 in 8·4 (Hadrians on L.Z.2), and 1 in 6·3 (Horsas on L.Z.3). The glide ratios required to reach the *coast* were between 1 in 5 and 1 in 6·3 for the Hadrians, 1 in 2·5 for the Horsas.

The figure of 1 in 11·6 seems optimistic for the forecast headwind. The other figures seem quite practicable, *provided* the release was made at the right point, or nearer, and the glide was direct. Even in wind appreciably stronger than forecast, any glider correctly released and flown must have crossed the coast, though it might not reach the L.Z. Much would depend on knowing the best speed to fly in a given headwind, but there were no accurate figures for this; no range tables such as we had prepared for the Hotspur as soon as we had its performance curve.

There had been some discussion as to whether the Horsa undercarriages should be jettisoned on take-off. Obviously this would improve the performance on tow, increase the range for return, and make things easier for the tug pilots. But the glider pilots preferred to land on the wheels, which had differential brakes and gave them some choice of direction after touchdown. Feeling that the glider pilots had the tougher job, Wilkie decided against jettisoning; in fact the undercarriages were wired up so that they could not be dropped by mistake, though this meant sacrificing a partial remedy for any engine failure during the tow. The Albemarle-towed Horsa was a necessary exception.

Final briefing over, I had time for a quick tour of the gliders while the troops stood by to emplane; many of the pilots were friends from Thame, Croughton or Netheravon. Most of them looked very young. I overheard one of them almost shouting to his tug pilot —I want one thing clearly understood! and fearing some dissension, I stopped to hear the rest; but he added only —I want to be sure that if *you* get into any trouble you'll cast us off right away, and we'll look after ourselves!

I waited impatiently in the Ops hut for my Sergeant, on whom I would have to lean heavily in the absence of Markham. He had always been a quiet, reliable type to whom most of the routine work could be entrusted; he had been running a little Ops set-up at Froha single-handed while the tail end of 295 came through. He arrived at last, dishevelled, red-eyed, and whispered miserably —I can't go on, sir! Pressed for an explanation, he collapsed in tears —I can't go on! It was not a case for a hearty slap on the back and a —Pull yourself together! with the chance of another breakdown at a crucial moment. I sent him to the M.O. (who shortly sent him home) and sorted out the additions to the night's work. The Ops staff had dwindled from four to one. But that only meant about the same degree of overwork as the air and ground crews were suffering already, and we had a splendid A.L.O. to help out.

When take-off time came in the evening the windblown dust was denser, and it was not easy to see, before sending off a glider, that the previous one was airborne and out of the way.

It took 35 minutes to launch 26. (The Americans did better, averaging less than a minute each.) I had hardly passed the times to the U.S. Wing when four unhappy Albemarle crews in turn were reporting back at Ops, followed by their glider pilots, who had released almost immediately, two with broken undercarriages, two with aileron trouble. They and their frustrated passengers were roaring to be off again to fight with their fellows, and we had spare gliders ready, but General Dunn refused permission. Within the hour, two more crews had returned without having crossed the African coast; one had an engine fire, and the glider towed by the other had released—with good reason, for its Jeep had broken loose in a bump, was leaning on one side of the flimsy fuselage, and threatened to break through it; full aileron was needed to keep level, and there would be more bumps to come. The 296 force was already reduced to twenty. But Markham telephoned to report that the eight Horsas were all on their way, one towed by Peter May's Albemarle 'PM'. These carried two companies of the South Staffs allotted to the vital bridge.

The Halifaxes, being faster, were due back first, soon after midnight. All but one came home on time, and all but one pilot reported release at the right place. Cleaver had an engine failure when 40 minutes from the target, and lost 2,000 feet, but he brought his glider within range of the landing zone and gave it a course to fly, before returning on three engines, nearly an hour late; everything possible had been jettisoned. Grant (who had never before flown his Halifax at night) had engine trouble soon after take-off, could not maintain height, and turned back, but the fault cured itself and he set course again. His compass and his automatic pilot failed. Judging the ordered height for release inadequate, he brought his glider nearer to the target, and gave it an extra 1,000 feet; he was confident that it was rightly placed. Wilkie had to report failure: his Horsa had parted from tow about five miles from Sicily; the broken rope which he brought back seemed to have been hit by a chance bullet. Peter May, whose Albemarle had started early and was first at the target, had seen no flak or searchlights. His tanks were nearly empty.

During the next hour, 19 of the 20 other Albemarle crews were home, and all claimed success but one, whose glider parted from tow over the sea. The one overdue crew was reported down at another field. Musty had to keep some of our returning aircraft circling for up to 45 minutes, and by the time all were in, the moon was down and most of the flares had burned or blown out.

Half of the makeshift inter-coms had failed. (No sabotage was proved at our airstrip, but at another, an Italian-born American confessed to making partial cuts in the cables and concealing these with tape. I do not know what they did to him.) The tow over the sea at 350 feet was reported rough; some of the Dakotas, which flew at 200 feet, had sea-spray on their windscreens. So bad was the visibility that one glider pilot, behind a tug whose station-keeping lights had failed, chopped out the front panel of his perspex canopy and flew thereafter in a freezing wind. The turning point at Malta, lit by six vertical searchlights, had been unmistakable, but on nearing Sicily, the quarter moonlight had proved inadequate for map-reading. The wind at the release point was even stronger than forecast, but many pilots, like Grant, had realised this and given their gliders extra height. There had been some crowding, and some had to make two or three passes before release. All were agreed that the flak had been negligible and falling short. —Only two guns, said one. —Only some silly sod pooping off with a machine-gun, said another.

So far, so good; but we had learned not to cheer at this stage. Passing on the reports, I enquired tactfully how our allies had fared. It would be idle to pretend that there was not an element of competition. They said that only three of their 109 gliders had cast off early; all three tugs had taken off again, one with the same glider, two with reserves. We wondered why we had been refused permission to do likewise. Whatever the motive, the effect was to chalk up American successes and British failures. By dawn, interrogations and reports were done, and it was time to turn to the orders and briefing material for Operation 'Glutton' due the following night. This task complete, I emerged for a breath of morning air, and was puzzled by an odd sense that the whole landscape had been reversed from left to right; until I recalled that when I had last stepped outside, the sun had been shining from the opposite direction.

By noon the weary ground crews again had every aircraft serviceable, so the Hadrians were increased to six. In the evening, when marshalling was complete, briefing done, and the troops ready to emplane, the operation was postponed for 24 hours. The following day, after the whole procedure had been repeated, the operation was cancelled: 13 Corps had already over-run the area. We prepared for Operation 'Fustian' (what uninspiring names these were!) two days ahead. The disappointed 2nd Parachute Brigade stood down, and the veteran 1st stood by for this drop near Catania, to be supported by 8 Hadrians and 11 Horsas. Again when all was ready there was a stay of 24 hours, again the evaporation of ardour among the troops and aircrews. It may have assuaged the sense of anticlimax, but may have increased frustration and envy, to watch two Albemarles going off at sunset on the first of a series of minor operations, to drop small S.A.S. parties behind the enemy lines, beyond Mount Etna, to contact guerrillas and play hell with communications. Peter May's 'PM' was one of these; it did not return; 296 lost its commander. George Chatterton incidentally lost a nice pair of flying boots. These were Jermyn Street jobs of soft brown leather, just right for a flying colonel. Peter May, whose tent adjoined Chatterton's, had coveted them. —If you don't come back from the operation, may I have those boots? Chatterton, though perhaps a little surprised, had agreed, and when he did get back from Sicily (where he had swerved his glider away from a cliff, to land General Hoppy and his staff in the sea) the boots were gone. May had prematurely assumed ownership, and if he did not exactly die in his boots, he died in Chatterton's.

The next afternoon, while marshalling was once again in progress, briefing imminent, and every officer and man at full stretch, an inexplicable order from the U.S. Wing required Wally, Wilkie, Bartram (who had taken over Peter May's command) and myself to drop everything, and report at the American H.Q., in an olive grove twenty road miles away. Only some very urgent matter seemed to justify our absence at such a time. With Bill Campbell from Airborne Division, we drove over, entered a marquee full of American aircrews, sat at the back and waited. After half-an-hour in this stifling oven, Wilkie was asleep, full length on a narrow bench. For weeks he had been driving his Flight and himself through the nearly impossible task of getting the Horsas here. As once before, to Norway, he had towed a glider on an operation in which it had crashed and its crew had died. He had little time left to ready his little unit for tonight's effort, and would get no other rest before take-off. Up to the last moment he was burdened with petty administrative details: by chance I still have his scribbled programme for that day, and in addition to launching an operation, he was concerned with such things as 'washing up . . . waste bin . . . cooks sleeping in cookhouse . . . Arabs eating near water.' He woke when a spruce American staff officer appeared, followed by an even sprucer young woman in uniform, who nursed a toppling pile of little coloured boxes. A message from General Eisenhower was read out; he spoke of great fortitude and superior organisation, and of his own great gratification at the outcome of the Syracuse mission. To this the Commanding Brigadier had added his congratulations on a magnificent achievement. —The enemy, he said, cannot stand long against such accomplishments. Immediate Promotions in the Field were then announced, and medals awarded to every American. For the little R.A.F. contingent at the back, the ceremony was slightly marred by some knowledge of the first reports coming in from returned glider pilots, which made unpleasant reading. At least we were spared the embarrassment of hearing a word said of any British contribution to the affair. Wondering why we had been invited, we escaped to hurry back to our neglected tasks. Bill Campbell, who had sat expressionless throughout, ran me back to Goubrine Two, dropping Wilkie first at Goubrine One. For the first time, I saw Wilkie subdued. As he stumbled away along the dusty track towards the salt-lake, he looked small and bent and old. He hardly acknowledged Bill Campbell's call of —Good luck, Wilkie! The line of black Horsas squatted there like crows on a snowscape.

The objects of Operation 'Fustian' were to seize the 400-foot-long river bridge, Ponte Primosole, the sole exit from the southern hills into the Catania plain, and to hold the ground to the south as a springboard for the 8th Army's advance up the east coast of Sicily. About 1,800 paratroops and 12 guns were to be carried, demanding another maximum air effort. John Lander, who had been hanging about in gloomy idleness while the Air Landing Brigade went into action without his Independents, was the happy warrior again: a lesson had been learned at Syracuse, and the Independents were to drop from Dakotas, before the main force, and set up aids on the dropping zones. We lined up 11 Albemarles to drop the Brigade H.Q. and its 'odds and sods', 8 to tow Hadrians, 3 to do another S.A.S. drop in the hinterland. At Goubrine One, Wilkie had 11 Horsas, to be towed by 7 Halifaxes and 4 Albemarles. Three welcome, if rather belated Intelligence officers had arrived from home to help in our one-man Ops Rooms.

Take-off began after nightfall, and a stranded tug or glider obstructing the runway would not be seen in the dust and darkness; so taking a walkie-talkie, I went to the far end, ready to warn Musgrave at the take-off end of any such happening. The aircraft were visible for only a few moments as they passed the last flickering flares. The second tug to pass seemed to be in trouble; it was hardly airborne when it disappeared. Before I could be sure of the outcome, its sound was drowned by the next, and the dust thinned to reveal a stationary light not far beyond the runway; the second tug had crashed; its glider was down somewhere ahead. Holding up take-off, by the time we had located them both and warned the rest how to avoid them, we had lost time, and it took nearly half-an-hour to get 7 Hadrians off. A propeller fault, an uncontrollable glider, and a Horsa damaged by a broken rope, brought the initial failures to four. (The Americans had none.)

Between 2 and 5 a.m., the crews who came back were telling a very different story from that of Syracuse. American aircraft had been shot at by Allied ships on that first occasion, apologies had been made, and assurances given for the future. But again the Airborne formations had been fired on, by almost every ship they sighted, nor did firing always cease when recognition signals were given. Naval balloons were reported as flying at 1,500 feet in areas where pilots had been briefed to fly at 500 feet. Along the coast of Sicily, the flak was reported 'moderate but accurate' (which is worse than 'intense but inaccurate') and small-arms fire came from all directions. Searchlights and flak were directed low over the D.Z.s, as if the drops were expected there; a full-scale battle was in progress, the ground was obscured by smoke, and among the flames the Independents' signal lights could not be distinguished. Two Albemarles brought their paratroops back to base, but the remaining 9 crews reported success. (Subsequent Army reports confirmed that 5 of these had dropped within 800 yards of the D.Z., 4 less accurately.) All the returning tug crews reported releases more or less over the L.Z. (as confirmed by the

Army). Our last aircraft landed back at about 5 a.m., and at 6 I took 'overdue action'—which did not mean much in these parts—on eight aircraft. Their captains included Wilkie, Peter Davis and Bartram. Three were Albemarles towing Horsas, which had probably run out of fuel, but might have landed on Malta or the nearby island of Gozo.

The sky had been empty for hours, and the last of the waiting company in the Ops hut had drifted off to bed, when an Albemarle roared ten feet overhead, and I jumped into a Jeep to bring back one of the crews who had been dropping the S.A.S. Soon after breakfast Peter Davis was home, from Gozo. While he was trying to dodge a searchlight near the target, the towrope had broken, but he thought the glider pilot knew his position and should have got in. Bartram was next: his fuel tanks, wings and fuselage had been hit, and with his gunner likely to bleed to death, he had been kept circling interminably round Gozo before its lights came on; he learned that no warning had been given to Gozo to expect our aircraft, all briefed to land there in emergency. The last arrival of the day, at Goubrine One, was a Halifax damaged by small-arms fire; its pilot tried to land at Gozo to check the damage, but could raise no lights, and had to go on to Malta, where the radio procedure for emergency landing was on an American wave-length and could not be used. The night fighters on Malta had not been warned that Albemarles might come in. There seemed to have been some poor staff work; it was difficult to guess where, for as far as could be gathered, the planning H.Q.s were scattered between Algiers, Tunis, Oran, Malta and Cairo.

No more aircraft ever returned, but three days later, the quiet of the siesta was broken by a shrill cry outside —Hallo! Bu-ZEE-ta! Does anybody know me? I am Bu-ZEEEEE-ta! and Buzeta with his crew, oddly dressed, carrying an assortment of strange packages, including for some reason dozens of fly-swatters, was back from the dead, unheralded. They had been hit right over the D.Z., the tanks were riddled and both engines failed. The rear gunner baled out, his parachute did not open properly, and he fell 200 feet into the sea. The wireless operator got out of the upper hatch, and pulled his rip-cord, but it broke, and he climbed in again just before they ditched. The aircraft broke in two, and sank in a few minutes, but the whole crew reached the dinghy—even the rear gunner. A destroyer picked them up, and they had hitch-hiked back from Malta.

Against a background of pain, and violent death, and slow drowning, the job of chalking up the score on a blackboard is safe and comfortable enough, but it has its unpleasant moments, and it is better not to have too many close friends in the squadrons. In this second operation two Albemarle crews were lost, Wilkie and his Halifax crew; and one of the American Dakotas went down with that very gallant soldier John Lander.

Meanwhile the glider pilots, and the survivors of the Air Landing Brigade, were being evacuated back to our area, and when their stories had been added to those of the tug pilots, the profit-and-loss account for the first operation could be drawn up. It showed a dreadful deficit. The force had been reduced, at every stage of its journey, till a mere handful remained to fight the battle for the bridge.

Of 143 gliders loaded, 122 arrived near Sicily. Half of these were released outside the stipulated distance of 3,000 yards offshore; 68 went into the sea, and 54 reached land, scattered over a distance of 25 miles. Only two were hit by flak, but only 37 landed without injury to troops or pilots. Only 16 were on or very close to their proper landing zones, only 13 of these without damage or personal injuries. Thus only 1 in 11 of the initial fleet achieved its object in full.

There were no dinghies in the gliders. About 250 of the Air Landing Brigade were drowned, as against about 60 killed in action on land. Of the Glider Pilot Regiment, 57 died, mostly by drowning, some in crashing, a few in action. Total Airborne casualties were about 600. Gliders carrying Naval liaison units did not arrive, so there was no Naval gun support. 38 Wing had no casualties on this first operation, and no American aircraft was even damaged, but we had lost five aircrews in the preceding weeks.

The outcome of two months' intensive effort involving about 150 aircrews, 150 glider pilots, 2,000 Airborne troops and all their supporting formations, was the delivery of about 8 officers and 70 other ranks near enough to the Ponte Grande to take part in an action; and some isolated actions by scattered units. Three of the six guns arrived, but the guns and Jeeps were separated. Yet this tiny force captured its bridge. By the afternoon they had about 18 left alive and unwounded; relief by the seaborne force was 8 hours overdue, ammunition ran out, and they were overrun. They played for time while being searched and interrogated, and just as they were being marched off, patrols of the 8th Army appeared, and the captors became captives. Less than half of the Airborne force took any part in the land battle, mostly in improvised minor actions, but the scattered landings, both here and in the American sector, led the enemy to report that the attack involved at least a Corps, which so demoralised the defence that the seaborne landings met little opposition. Syracuse was occupied, with its port almost undamaged, that evening. General Montgomery said later that the Airborne landings shortened the capture of Sicily by seven days; that is, they saved the main force seven days' casualties. Thus the Airborne objectives were attained—at a cost. What might Airborne have done, rightly used?

Some of the glider pilots who failed to reach land were known to have released within gliding distance; a few released too far out after misunderstanding signals, or in imitation of others who did this. A few broke loose during violent evasive action. But unquestionably, most of the gliders that ended in the sea had never been brought within reach of the coast, and most of those whose inter-com was working had been ordered to release. At least ten tug pilots had themselves released the ropes, and only one of these gliders reached land. In 38 Wing there was an unwritten law (and it was observed on this operation) that the rope was never released at the tug end, except in dire emergency. Several glider pilots reported that on seeing distant flak, the Dakota pilots had turned away from the coast when three to five miles out, some switching off their formation lights, without which the gliders could not keep station. One glider was thus jettisoned ten miles offshore. The most scathing reports came from the few American glider pilots.

In the final analysis, the American ratio of success was 1 in 13, the British 1 in 5. Half of the American-towed, and one third of the British-towed gliders, landed in the sea.

Too much had been asked of the R.A.F. crews, and far too much of the Americans, whose aircraft were slower and more vulnerable, unarmed and unarmoured; they did not have self-sealing tanks; their pilots were unused to estimating flak, and might be compared to the Paris taxi-drivers who rushed reinforcements to the front, to save the Battle of the Marne in 1914; those drivers might have been excused if they had stopped somewhat short of the firing line, and had said to the professional fighting men —This is where you get off! Less than half of the Dakotas carried navigators; the rest relied on 'follow my leader', and the leader's skill decided the fate of all.

Even among those who got down in the right area, the terrain took its inevitable toll; at least a dozen gliders crashed into walls or trees, loads broke through the floors and could not be extricated, or shot forward through the cockpits. One glider was wedged on a cliffside, another marooned with its Jeep on an inaccessible hillock. In several gliders, including two of the three Horsas that landed near the bridge, ammunition blew up on impact. More pilots were killed in landings than passengers. Even after good landings, some crews took hours to get the guns or Jeeps out.

As for the second operation, the ground reports coming in made equally bitter reading. There was no fighter or bomber support to deal with flak positions. In the previous American parachute operations in the south, 23 Dakotas full of troops had been shot down by Allied naval and land forces, and it was unthinkable that this could be allowed to happen again. But at Catania, the trigger-happy sailors had shot down ten more Dakotas, and perhaps our three missing aircraft, many of them well outside the stipulated danger zone. Twenty-four Dakotas, and one Albemarle (whose captain was felt to have failed in determination) turned away from the enemy coast and brought their troops back to base. Not quite half of the British, and less than a third of the American crews, dropped within half a mile of their D.Z.s. Only one-tenth of the total ground force could be mustered immediately on the D.Z.s, and only one-sixth of it ever joined the battle. Further confusion arose from the dropping of German paratroops on the same D.Z.s, where British troops collecting their arms containers met Germans doing the same.

The little glider force fared slightly better: 5 were missing, 4 landed correctly and 7 further afield, and despite 4 crash-landings, many of the guns were unloaded and brought into action.

Again the objective was reached by a mere handful of troops:

one officer and 50 men captured the Ponte Primosole and removed the demolition charges. By dawn the force numbered about 120, with mortars and anti-tank weapons. They fought till evening, supported by fire from a cruiser offshore, but could not hold out, and the survivors surrendered. Before the Italians could blow the bridge, it was recaptured by seaborne troops.

There can have been few operations of war, before or since, in which the casualties exceeded the number of troops who took part in the battle.

For the next few days, relations between the Allies in the Kairouan area, and particularly between British Airborne troops and American aircrews, were strained. At best there were pregnant silences when meeting was unavoidable, nor did bitter thoughts always remain unspoken: one British commander was insistent that no troops of his should be lifted again by American aircraft. But a charged atmosphere that might have led to storm was suddenly dispelled by a firm order from above, and Americans found themselves invited to parties where they were welcomed cheerily by the survivors of Syracuse and Catania. It was with mixed feelings that one heard, at an open-air beer party given by the Air Landing Brigade, two comics guying the Western Brothers and their Old School Tie number:

A press representative, looking for copy,
Was sailing off Sicily, sea rather choppy,
And there on the wing of a glider was Hoppy
Wearing the Old Div Sign!

If 'Ladbroke' could be laughed off, anything could.

Harry Ward, the parachute king, who for some strange reason had become A.L.O. to this gliderborne Brigade, was also their Mess President, and had rigged them up a remarkable mess in a marquee. An assortment of furniture had been 'won' in bomb-damaged Sousse; electric lights shone in elaborate shades of pink, blue and green glass, every one different. The flower-boxes had lately held ammunition. Ready to hand by each armchair was a fan, decorated with the Old Div Sign. The floor, instead of the usual dust, was of clean crazy-paving, laid face downwards to conceal the inscriptions that would have betrayed its origin in a shattered graveyard. Wine and fruit came from a French-

Algerian-Jew merchant whose bombed-out family lived with an Arab olive-grower in a distant village, and on our buying expeditions there were starlit dinner parties in the high-walled courtyard behind huge iron-studded wooden gates. It was as well not to look closely into the improvised kitchen, but the cooking was superb. At nightfall, our host's host would lead in his camels, and having groomed and stabled them, bring out some token dish to our table, usually cubes of melon, indelibly finger-printed; when there was cous-cous, he would show you how to make thumb-holes in it, and find tasty bits to fill them. After months of service fare, we were not fastidious. Harry's conversations in French with the family I alone could enjoy to the full, for he and they were often discussing two quite different subjects, in an unbroken flow of emphatic agreement based on complete misunderstanding.

In the Officers' Club at Sousse, where one drank banana-water masquerading as alcohol from chopped-down beer bottles serving as tumblers, we met with Colonel 'Jonah' Jones, second-in-command of the Air Landing Brigade. From him we heard a brief, light-hearted outline (supplemented later by an account from his American glider pilot) of his share in 'Ladbroke'. Their glider cast off very high, but about 5 miles offshore, and they only just scraped in to land amid barbed wire surrounding a searchlight and gun emplacement. Eight of the party got out at one side and moved off, but seven who got out on the other were promptly taken prisoners. Jones shouted to them that he would throw an incendiary bomb to divert the Italians while they ran for freedom. Unluckily the bomb hit the glider and set it alight, exposing them all, and though they killed some Italians before retreating, only one of the prisoners had rejoined them. At a railway crossing they had to kill a sentry to get through. They got ammunition and water from a crashed glider, and bombs with which they wrecked communications as they went along. These doughty men were the staff and clerks of the Brigade H.Q. Joined by a dozen other troops, they came suddenly on a pillbox, which they captured, taking five survivors as prisoners. Setting up their H.Q. in a villa, they located a 6-gun battery that was firing on our ships, and attacked it. Jones, armed with an empty pistol and one hand grenade, mounted the cupola, gave a last call for surrender, then lobbed in the grenade. Unfortunately the casualties included a lady who had been entertaining the Italian gunners. Here they took 60 prisoners, including one who arrived when all was over and proffered his Late Pass. Contacting some seaborne units, who relieved them of their prisoners, they joined the action at the bridge. By the time they marched into Syracuse next day, with a mule cart for their supplies, their total bag was 150 prisoners. In Syracuse they exchanged their mule cart for a vintage fire engine, behind which they towed a 6-pounder gun; Colonel Jones certainly did things in style.

Another glider landed in the sea 250 yards out. Two men died in the water, and four of those who got ashore were too exhausted to move. Four officers, a medical orderly and a signaller crawled through 20 feet of barbed wire, marched 10 miles, captured 2 pillboxes, 21 prisoners, 3 machine-guns and an anti-tank gun, and rejoined their battalion. In many such independent actions, the glider pilots especially distinguished themselves, and fully justified Chatterton's policy of training them as 'total soldiers'.

# 10 SOLD DOWN THE RIVER

The worn and battle-scarred Halifaxes, now under Buster Briggs' command, began to fly home a few days after 'Fustian'. Except for a few small S.A.S. drops, the Albemarle crews, still awaiting spares, licked their wounds and awaited further orders. I was not pleased to learn that while the rest of 38 Wing went home, I was to stay, on attachment to the U.S. Wing as a liaison officer, a somewhat superfluous post in the circumstances. I knew Uncle Sam would not want me, or any other Britisher, in his Ops room, unless perhaps as a tribal captive on show. Before Wally Barton left, I hurriedly collated the 38 Wing, glider pilot and Army reports on the training and operations, together with such American reports as I could get, and all the maps and photographs; I handed him copies of a fat document that I thought might cause a stir at home.

A few days later I was to recall a trivial incident of two months earlier, at Netheravon, when Wally was preparing to fly to Africa. I had noticed his roll of camp kit, newly stencilled with his name, and on his desk a bottle of Indian ink.

—My ink! I protested —I've been looking for it everywhere! You didn't do that stencilling with it, I hope?

—You're not making a fuss about a pennyworth of ink?

—No, but you should have asked me, because it's *soluble* ink; you're going to look pretty silly when you ditch in the Bay of Biscay, and it washes off! It might have helped to identify you!

This unkind jest recurred to me when we learned that Wally's homebound Halifax was one of two reported missing, presumably shot down in the Bay of Biscay. There seemed to be a hoodoo on our commanders.

I reported for duty at A-3 (Ops) under Uncle Sam. The camp was in a pleasant olive grove; the continuous sizzling sound that I had supposed to come from a power plant, proved to be the song of the cicadas. By our standards it was all rather luxurious. The officers' mess was a gauze cage, free from flies and sand. Outside the officers' tents, a row of full-size domestic wardrobes and marble-topped wash-stands, of Italianate design, stood in the open. The sentries would wander away from the gate when an R.A.F. uniform approached, to avoid the question of saluting. In the signal ordering my attachment I was described, I noted, as SUGAR SLANT LOVE LAWRENCE (NMI) WRIGHT. The signalese for 'S/L' I could decipher, but the NMI defeated me, until I learned that it referred to the fact, an oddity to Americans, that I had No Middle Initial. To my American friends in the Wing (and I had more of them than the tone of my previous chapters might suggest) I became Sugar Slant, or to closer friends, plain Sugar. There was some consolation in knowing that the Commander-in-Chief Mediterranean was described in signalese as CHARLIE IN CHARLIE MED.

I presented A-3 with my monthly bottle of whisky, for which I had no taste in this climate, and relations opened well. They were an absurdly generous lot, offering cigars not by the handful but by the carton; when they had opened a bar, stocked by sending a Dakota to Jerusalem, I was never allowed to pay for a drink. To get ice, they reopened a damaged ice factory in Sousse, and my first useful job was to interpret to the Italian manager the importance of sterilising each block, by adding one crushed chlorine tablet to the water. Nodding his understanding, he took half a dozen glass phials of the tablets in his huge hand, crushed them in a gorilla grip, and dropped the bloody lot into the nearest ice-mould.

On the A-3 ops board, below the 'Chestnut Missions' which I knew as the code name for the S.A.S. drops, I had often noticed 'Doughnut Missions', which I assumed to be too secret for my ears. I now learned that the nearest doughnut machine was at Algiers, and thither a Dakota repaired about twice a week for this staple diet. When Bartram was forbidden by Uncle Sam to use his Albemarle for a 75-mile duty journey to Tunis, I did not tell him that a few days before, a Dakota had flown to Algiers solely to collect the Commanding General's spectacles, which not being ready, the 800-mile round trip had to be repeated.

The idea behind the ban on such Albemarle flights was in fact to conserve engine hours, because 296 had been warned of an intensive programme of glider pilot training. This led to my first vain attempt at liaison. It had to be put to the Americans that for want of spares, this menial task might leave the Albemarles unfit for operations. But they seemed almost to welcome the idea that future operations should be all-American. My next attempt, a suggestion that the drafting of this glider training programme was a job in which I might be qualified to help, brought the old answer —38th British will get their orders when they are ready.

As soon as I heard of the loss of Wally Barton's Halifax, I got out a fresh and amplified edition of the report that he had been carrying home. I now had full access to the American de-briefings, and the stories of the last survivors who had trickled back. Other reports would have reached home, but they would include much that, though true, was hearsay and undocumented. As an insurance, I sent copies by three different routes.* As far as communications with Netheravon went, we might have been on the moon. Meanwhile a draft came to hand of the report by U.S. Troop Carrier Command. It contained a certain element of fantasy. It said that the success of the first mission so far as the ground forces were concerned was 'close to 100%' because the objective was captured and held as planned, and that the air success was 'perhaps 75%'. Gliders 'accounted for' were indeed about 75%, but these included all those in the sea and those crashed or dispersed on land. Perhaps the estimate was based on the fact that 75% of the aircrews claimed success. The second operation was rated successful 'since the troops were delivered in a needed area'.

I was not concerned to question this complacent document, intended rather to be read at Washington than at Goubrine, but for one paragraph. While drafting his own contribution, an American colonel had buttonholed Major Philip Cooper of the Glider Pilot Regiment. Opening with a disarming admission that some of the American pilots had been lacking in nerve, he supposed that the British too had had a few bad cases? He was sure that Philip wouldn't mind telling him about them in confidence. Not having heard of one such case, Philip could not help him, nor I believe could anybody else; but in the draft, I was startled to read that on our airstrip on take-off for 'Ladbroke', 'one towship caught fire'—a mis-statement of no importance—and 'two pilots released because of fright'. I could not call an Allied superior a liar in public, but the same effect could be achieved by a strongly-worded letter to A.O.C. 38 Wing, and copies all in proper form to the American Wing and Command, and to 1st Airborne. No apology was offered for this unfounded invention, but the passage was deleted.

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* None of them ever arrived. Twenty years later, it occurs to me that all of them must have passed somewhere through American hands. Was their Intelligence branch above reading them? and perhaps losing them? Was I naive then, or am I unduly cynical now?

Towards the end of July, we were warned of an Airborne operation in Italy, planned for a few weeks hence. By this time, as predicted, only 5 Albemarles were fully serviceable; 15 were grounded for mere lack of tyres. One had burned up, for within a week of their return from sea, Buzeta and his crew had been pulled into the ground by a glider that flew too high on take-off, though again they all survived. General Dunn agreed to send a Dakota to England to bring back essential spares. Pressed by Bartram, I asked Uncle Sam what aircraft were expected from the squadron for this operation. Anticipating the reply, and seeking a showdown, I chose to ask him at lunch, in the hearing of others. He answered as usual —We would get our orders. I persisted that the main purpose of my being there was to keep 296 informed of their coming tasks; this was in my directive from Wing Commander Barton. That name did it.

—Wing Commander Barton! he snapped —Luckily we can forget all about Wing Commander Barton!

Better answers of course occurred to me later, but I did manage —You must be *so* glad he's dead! and wishing I had left some food on my plate, I went straight to the General's tent. He was mild and kindly as ever, almost soothing. —Yes, I was wasting my time in A-3, but he would like me to work under Colonel Gardiner in A-2, where some important things were afoot. Well, if I had to be sold down the river, Tudor Gardiner was the boss I would have chosen. I had puzzled as to why a man of his calibre, once Governor of the State of Maine, and lately responsible for the re-arming of the French Army in North

Africa, was content with Intelligence work for a transport unit. I had come in to the bar one evening to find him the centre of a merry group, with a crumpled red ribbon fastened crookedly to his chest with a huge safety-pin, and when he invited me —Squadron Leader, will you take a drink with a Chevalier of the Legion of Honour? I assumed that some gag was going on, and answered —Colonel, as an Associate of the Royal Institute of British Architects, I will! It was fortunate that he took this as being witty, for the ribbon was real. As a New Englander, one thought of him of course as an honorary Englishman; I used to send him morning cups of English tea, and we had taken to going off on swims and picnics, or to buy carpets in Kairouan.

The A-2 job proved to be the choosing of landing and dropping zones for Operation 'Avalanche', an amphibious assault in the Gulf of Salerno, aimed at capturing the port of Naples, and joining up with forces launched across the Straits of Messina. The occupation of Sicily was completed in mid-August, and Troop Carrier units prepared to move to airfields there. 296, which by this time had two aircraft serviceable, would stay in North Africa. It had three R.A.F. and one Army officer in its Ops hut, but they seemed unlikely to be busy. The hoodoo on our commanders did not lift: Bartram was its next victim, though he survived: he came off his motor-bike on the Sousse road. Somebody must have found and left him unconscious, for the bike had been stolen. In hospital, he gave us elaborate instructions about a variety of operations that would have to be flown in his absence, but none of these (thanks to concussion) had any bearing on reality. McMonnies took over as the third Squadron Commander in eight weeks.

A visit by Popski's Private Army enlivened things awhile at Goubrine Two. Expert in blowing up enemy aircraft on their own airfields, Popski came to advise how best to defeat such tricks. McMonnies assured him that an airman always slept in each Albemarle. —That, said Popski, is a mistake the Germans make too. When we blow up an aircraft, we *like* to knife a German first. 296 thought it was going a bit far, when their guests' time-bombs made the latrines usable only at grave risk for the next few days; no bomb could be worse placed for disposal.

Early in September the Troop Carrier units crossed to Sicily, and 51 Wing set up its H.Q. at Gela, in a school within a few yards of the sea. For a swim, you merely stepped out of a window. You might see a group of officers absorbed in a map, among them several stark naked. At mealtimes a Jeep with a trailer would haul sixteen officers at a time, up the steep hill to the mess. To walk up was not appetising; the slope was one great midden, with runnels of sewage; an occasional splash behind or ahead as the night soil was jettisoned from a balcony. On a waste patch half way up stood a cadaverous old horse with huge vermilion sores, always there, always motionless, overdue for shooting. The mess was a luxurious minor *palazzo* in the main square. The attic floor that I shared with a trio of junior officers was no garret, for our camp beds stood amid Corinthian pilasters, mirrors and gilt swags; the floor was marble. None of this trio had set foot in Europe before, and the impact of the Old World on the New coloured most of their conversation. They were unanimous that too much had been spent on churches, too little on bathtubs; after the war, the place would need civilising. The square was full, all day till curfew, of sullen, expressionless men of military age, in new-looking suits of poor fit. They seldom moved, except when some urchin lit a lump of gelignite (for unexploded munitions were still plentiful) which threw pink flaming blobs that divided and multiplied as they scattered among the new trousers. From time to time there were distant crumps as the bomb-disposal squad, or some unwary civilian, set off a mine or a booby trap, and the citizens were invited to hand such things in at the H.Q. Few male adults, I noticed, bore these gifts in person; some sent their wives, and most of them sent children. Several unlovable characters called, whose stories were alike—I have been in America, I was not a Fascist, Mussolini is no good, if you give me a job I will make you a list of bad men in this town who are Fascisti! One scruffy type kept bringing in long manuscripts that I was asked to translate. They proved to be complaints about roystering G.I.s hammering on doors or climbing up drainpipes (*come un topo*) in search of wine or women, so another translator was found. —Don't let it embarrass you, I might have said —you should have been in Salisbury when the Canadians came!

The 'Avalanche' plan showed that lessons had been learned.

The flight plan seemed fool-proof: the Airborne units would fly north from Sicily, by night, along a straight air lane 180 miles long, 14 miles wide, marked out at equal intervals by lights and radio beacons on an Air Sea Rescue craft, a destroyer, and finally a British submarine lying offshore about 40 miles west of Naples. At the submarine they would turn to starboard, and soon hit the mouth of the Volturno river, which would guide them to the dropping and landing zones, where pathfinders would set up Rebecca. The photo cover, embracing the whole of the Volturno plain to the north, and the Sele plain to the south of Naples, was very good and to a large scale. The plan had been chopped and changed to fit the changing tactical situation. First the paratroops were to be British and to drop near Salerno, then to be American and to drop near Capua to hold airfields and to blow the Volturno bridges. In what seemed the final plan, about 300 parachute aircraft and about 130 Hadrian gliders would be used. I thought it would be a good idea for the tug and glider pilots to have a set of oblique photographs taken along their route up the Volturno, at the right height, but these were not to be had, so I devised a substitute: a series of simple perspective drawings photo-printed in night-like negative. (It is easier, I found, to set up accurately a perspective of a cathedral, than of a winding river valley among mountains.) 296 would not take part in 'Avalanche' after all, but they were now doing a number of minor drops in Italy.

On September 7, all was set, when there was a new stir at 51 Wing, and Tudor Gardiner, in a cloak-and-dagger atmosphere, disappeared from the scene. A mysterious white aircraft with Italian and Red Cross markings came and went. I was favoured with a sight of his report when he came back a few days later. With Brigadier Maxwell Taylor of Troop Carrier Command, he had flown to Rome, to be smuggled across the city under the noses of the Germans, in an ambulance, to meet Marshal Badoglio. Mussolini had resigned six weeks earlier, and was under arrest; Badoglio was in command. With him, they now agreed the plan for a quick Airborne seizure of the airfields round Rome, and the flying in of troops, to be synchronised with the announcement of an armistice with Italy. The area was threatened by German Panzers, paratroops and fighter aircraft, but the Italians (rather boldly, and without wholly convincing the emissaries) undertook to sabotage the German aircraft, or fly them to Sicily; to destroy the German radar and flak positions, haul down the balloons, keep the airfields open for Allied landings, guarantee the Navy free passage up the Tiber, and join the battle in defence of Rome. Tudor Gardiner would stay in Rome as O.C. Troop Carrier Command Post.

Even at top level there had only been six days' warning. There had to be some quick replanning. We threw out some hundredweights of photographs, and pored over new ones of the Rome area. The flight plan for the new operation 'Giant' was similar to that for the abandoned 'Avalanche'; the marker ships and the submarine took up their new positions.

On the evening of September 8, Eisenhower broadcast the announcement of the armistice. No radio can have been audible to the sullen idlers in the square at Gela, but they began to coagulate into little groups, a murmur began, and soon there was a fermenting crowd below. The vanquished seemed as delighted by unconditional surrender as the victors. Jeeps overloaded with G.I.s and citizens, embracing, waving empty bottles, were weaving and honking. The American staff filled the long balcony, and acknowledged applause. A colonel beside me took off gold-rimmed glasses that impeded his unbridled tears. The new mayor was thrust through the crowd and came up to the balcony to make a speech, inaudible even to us amid the din. Two small Italian flags were brought, and stuck up alongside the Stars and Stripes. I thought a banner might be improvised along the balcony front, if I could put into Italian the slogan I had in mind; this was agreed, and bed-sheets were sought. But we could find no paint or brushes, nor could I be sure of my translation, so I dropped the project. I could hardly ask an Italian to help in conveying the precise flavour of

LONG LIVE ITALY! ALWAYS ON THE WINNING SIDE!

Unfortunately the Germans did not sit idle under the obvious threat of a stab in the back from their ally. That night, they disarmed the two Italian divisions in the Rome area; next morning they dropped paratroops who captured the Italian H.Q., and sent troops in to Rome. The Italians crumpled immediately and Operation 'Giant' was cancelled.

A brilliant little glider operation was carried out at this time by the Germans (who since the invasion of Crete had used gliders only for re-supply in Tunisia). Ninety troops were landed at the little mountain resort in central Italy where Mussolini was interned, followed by a Storch light aircraft in which he was whisked away to Austria.

1st Airborne, with 1st Battalion Glider Pilot Regiment, still lacking aircraft or even troopships to carry them to Italy, were taken into Taranto by the Navy, and captured the port almost unopposed. Having only the lightest of transport, they improvised with a railway train, and a steam-roller towing trailers, surely the heaviest transport ever used by Airborne forces. They made a dashing advance up the heel of Italy, but almost at the outset, General Hoppy was killed while observing an action.

With the Rome plan forestalled, attention switched back to the Volturno, and with only 24 hours notice, on September 13 about 100 parachute aircraft were made ready to drop that night near Capua. Before evening came another complete change: the Allied 5th Army in the Salerno beach-head, losing its arc of high ground about 7 miles inland, was in big trouble; liable to be cut in two, and threatened also on the south flank. These paratroops were therefore to drop, the same night, 4 miles behind the American lines near Avellino, as reinforcements. With only hours in hand, and no time to get photo cover, the D.Z. had to be chosen on the spot, and could not be stated exactly at briefing, but it would be marked by flares. The revised air route, for want of marker vessels, was taken along the coast, but for the final run-in, the Volturno night maps still served. All went well: the first stick landed right on the flares, and they had a Eureka working in a few minutes. Most of the troops were within 200 yards of Eureka, and all but one stick dropped within a mile of it.

Next day, for a drop behind the enemy lines, old photo cover was luckily to hand. About 40 aircraft took part, and most of the drops were accurate, though two unhappy sticks were dropped 20 miles to the north. At the same time, about 250 aircraft dropped more reinforcements at Avellino. Owing to the mountains, the drops had to be made in to the valley from 3,000 to 5,000 feet. The lights and radio beacons were picked up by only two aircraft, and the drops were widely dispersed. About 100 gliders were to have followed with re-supply, but their part was cancelled.

These varied results proved that Airborne could be a flexible weapon of opportunity, but that for such snap actions, the planning machine must be speeded up, and concentrated in one H.Q. with good communications with the tactical H.Q. The crisis at Salerno was averted, but the enemy contained the beachhead, and the battle-fronts congealed. U.S. Troop Carrier was put to casualty evacuation, and our Albemarles to a daily ferry service from Sicily to Taranto. It was getting late in the year for major Airborne operations, and we fell idle.

The rest of September passed pleasantly enough: flying to Algiers with Tudor Gardiner to collect his new personal aircraft, a little Fairchild monoplane into which you could just squeeze four, if you weren't going far; but we were, visiting sundry H.Q.s around the Mediterranean, for a purpose not divulged to me, though I divined it. While flying just off the African coast, we shared a dainty lunch of cold grilled trout and peaches, with a carafe of wine, supplied by our hosts of the previous night. —I wonder, Colonel, what this little trip would cost us in peacetime? I was puzzled by a strong insistent memory of our school-day nigger minstrel show ... blacking one's face with burnt cork ... learning one's lines from *Home Fun* ... There were curious strips of haze drifting out from the coast. For a few moments we flew through one of these, and I had the answer—burnt cork it was, from great fires in the cork-oak forests. I could not believe that we were wasting all this petrol on mere social calls, and some maps I was required to get, together with some chance remarks, led me to guess that Tudor Gardiner was the unofficial spokesman for a high-level American clique who were pressing for an invasion of Sardinia, lobbying among the generals. While he was thus closeted in one discreet little camp in Sicily, I took a stroll through the sheltering almond groves, and another nostalgic scent wafted over a low stone wall. Behind it was a sight to move an exile's heart: a table with a white linen cloth, patterned tea-service, dishes of scones, and little round cakes fresh from the oven; the chairs as yet were empty. The British orderly was startled, but human, and under the wall out of sight, I enjoyed my first real English tea for four months; thank you, General Alexander, though you didn't invite me.

Troop Carrier was soon to move to the Italian mainland, and airfields had to be chosen there; I was roped in as interpreter on a tour of inspection. Flying past Syracuse under a gloomy sky, we went low over those murderous little fields, and located the Horsas near the bridge. In the bay, Hadrians were still apparently floating, actually down in the clear depths, full fathom five. Towering above this watery graveyard, Etna made a noble ten-thousand-foot headstone. I remembered a young Lieutenant of the Glider Pilot Regiment, at our gramophone parties in the hut at Croughton, who could not bear to hear Sibelius' seventh symphony; it stirred up, he said, his recurring nightmare of a dreadful grey sea under a dark mountain; he was down there now.

We found the airfields in the toe of Italy still occupied by the Italian Air Force, its teeth drawn by deprivation of petrol. The Italian Station Commanders were hospitable and helpful; one of them apologised for the bomb-holes in the hangar roofs. I heard again the familiar comment, that if the French in North Africa had been half as co-operative as the Italians, the war might be over by now. One Station Commander showed remarkable poise. It was broiling hot when we arrived unheralded, and surprised him with his staff officers in a hut on the perimeter, playing poker. He was elderly, and wore pince-nez with a gold chain. I mention his poise because, throughout our conference, he remained courteous and unruffled while wearing only his service cap, long combinations and slippers. On our return to Gela, full of spaghetti and wine, my companions remarked on my fluent Italian. In fact, apart from an occasional *pista, capannone,* or other technicality, all the day's talks had been in French.

By this time I had had enough of the guilty pleasure of lazy days under the sun, evenings under the chandeliers; the corn was sweet, but it was alien. There was supposed to be a war on, and I was supposed to serve 38 Wing, where the planning for next year's inevitable invasion of the Continent might already be under way. In that I was determined to have my little say, at least when it came to glider landing zones and briefing. The Albemarles would soon be going back, and most of 1st Airborne. I urged the General once again. He, though I did not yet know it, had problems of his own, and was about to resign his command and go home. This time, not only did he agree to release me, he promised me a lift as far as Algiers.

Tudor Gardiner was a little cool when I gave him notice, but he offered a farewell drink, producing a new bottle that he bade me open. I saw the label with dismay: Tangerine Brandy. —I'm sorry, Colonel, but you mustn't drink this; I hope you didn't pay too much for it? He was hurt; he assured me it was excellent stuff. —Before we open it, I suggested —will you just taste a sample from *my* bottle? I brought an identical bottle, nearly empty, that had been stowed away ever since leaving Froha. After a good dinner in Algiers, Wally in lordly mood had required me to order brandy. They had produced this, but wisely would not serve it by the glass, nor open it until it had been paid for. Against our advice, Wally insisted on having it. The immediate reek of industrial alcohol was unmistakable; we had read of recent cases of blindness and death among unwary drinkers; one sip confirmed it as lethal. Tested there and then in a spoon, it burned hot and blue, so I took it back to camp, where we were short of methylated spirit to start up the pressure lamps. It also served to clean the Ops blackboards, though all too well, for it soon stripped the paint. One sniff at it now convinced the Colonel, but as he put it down he noticed something —What are all these names on the label? I had forgotten them: the signatures of Wally Barton, Peter May and his crew, the Adjutant, John Lander, seven in all. They dated from a night at Froha when Peter May's undercarriage failed. In radio contact with us, he dropped two of his crew by parachute, and stooged round for an hour to use up petrol while we warmed up the crash tender. The happy anti-climax, a normal landing, seemed to call for drinks all round in Wally's tent. When nothing remained for our pint mugs but Wally's precious Drambuie, he turned to me with an inspiration —Couldn't you spare them some of that splendid brandy we got in Algiers? To our surprise, they drank the stuff; Wally had taken a sip to lure them on. We then explained its nature and its known effects. It seemed a good idea that, as a check if death or blindness supervened, all who had partaken should sign their names on the label. I did not weary the Colonel with all this; I merely answered him —Oh, those are the names of chaps who have drunk it and survived. But then I thought and looked again, and I was wrong: they were all dead. I threw the beastly bottle in to the sea just outside. When I came back the Colonel had opened his own bottle, and it proved to be real Tangerine Brandy after all.

Sweating in shorts on take-off from Catania, soaking and shivering in battledress at Algiers, sweating again and then freezing all night in a 'hard-arse' Dakota from Gibraltar, I arrived at Hendon expecting a weary last lap to Netheravon. Even as we stopped on the tarmac, I saw through my window a blonde Waaf officer sitting in the cockpit of an Oxford: a familiar face, surely? It was Joy, in both senses, Clem Markham's girl-friend, in our own Com Flight Oxford, there by chance. Within the hour we were off for Netheravon. It was a Saturday afternoon, and in the week-end quiet nobody was to be found to report to save Charles Hurst, the one fit survivor of the Hudson crash. After five months, a couple of days leave seemed justified. O.C. Glider Pilot Exercise Unit agreed to provide air transport for the last short hop home, and at the expected time, a Tiger came in, flown by an Army glider pilot. I waved him to me, and climbed up; no need to stop the engine.

—You're from Chilbolton?

—Yes, sir.

—Do you know Barton-in-the-Clay? Little field near Luton?

—No, sir.

—Never mind, I can find it.

So I took the front seat, and we flew to Barton. Procedure there had become a little more formal; at one time you merely nodded to the aged lone Home Guard; now they had a watch office and a proper book, so under 'Departure Aerodrome' I entered 'Catania'. The glider pilot had followed me in, and looked worried.

—Excuse me, sir, but who authorised this flight?

—Didn't Group Captain Foreman send you?

—No, sir. I was just doing local flying, and you got aboard. I don't think I can find the way back.

As I have already said, some Army pilots were too much accustomed to unthinking obedience to orders.

# 11 ENTER FAIRY GODMOTHER

Back on duty, I reported to Nigel's successor, formerly one of his Station Commanders. To my surprise I found myself immediately being shouted at. That had not happened to me since leaving school, and I didn't like it. This was Netheravon in the 1940's, not Uxbridge in the 1920's. Nor could I grasp the cause. It seemed I was being accused of dereliction of duty, something to do with Albemarle spares of all things; also of taking illicit leave; I must go back to North Africa at once! Here the Group Captain lurking behind me intervened, to clear a misunderstanding. In the Dakota sent to England by General Dunn, we had put an officer charged with the urgent duty of getting the Albemarle spares aboard, and bringing them back. This useless type, meeting some difficulty or other, had abandoned the effort, given himself leave, and gone home; the Dakota crew had waited as long as they could, then flown back to Tunisia empty-handed. The A.O.C., it seemed, had confused me with this person, who was now brought in and dealt with while I stood aside. But there was no change of tone when my turn came again. As the juryman said —If he's not guilty, why is he in the dock? I was now accused of 'selling myself to the Americans' when I should have come home. And why hadn't I put in a report on the operations? My answer was cut short by a return to the charge that I had come home without authority. I managed to get in a mention of a signal ending my attachment and ordering me home. This was sent for, and read out. I was gratified to hear, for the first time, that General Dunn had added a piece expressing warm appreciation of my services. —I suppose, barked the A.O.C., —you wrote that bit yourself, and got them to put it in? The only fair answer to that one would have had me arrested. Told to take up no duties for the time being, I was dismissed.

The Group Captain seemed well content. I guessed the reason for this, and for the whole silly situation. Both these officers had been among those who did not care for orders written, and sometimes unavoidably signed, by what they called Wingless Wonders. They would have preferred an Air Staff manned entirely by pilots, or ex-pilots; I saw their point, and that would indeed have been a good thing, but there were not enough staff-trained pilots to go round. Most boys have wanted to be engine-drivers, but 'all drivers' would be no way to run a railway. As Dick Jesse had remarked once, when the Group Captain had overdone the Wingless Wonder jibe in the bar —But, sir, you must have a *sprinkling* of staff who can read and write! But this was the sort of thing you could never discuss, lest they thought you had an inferiority complex. Which by now I probably had.

Charles Hurst, after discreet enquiries, was able to clarify the import of 'taking up no duties'. —Would it be as well, I had asked him —to look for a new job, right outside 38 Wing and Airborne? It seemed a pity after three years of specialisation, but he thought I had better do just that. The present incumbents had been smarting under so much criticism of the Sicily affair (and what say had they had in it?) that anyone connected with it was now *persona non grata* (but what say had we had in it?) The wise monkeys would hear no Sicily, see no Sicily, speak no Sicily. But I assembled a last copy of that damned report, be it my last job with Airborne. Browning had said (and it had stung at Netheravon) that there was nothing to show that 38 Wing had done any better than the Americans; there was, now. A day or two later, the Group Captain threw it back to me across his desk. —I've read this. It doesn't thrill me.

Luckily for the future of Airborne planning, there was one report that could not be swept under the carpet, written from the unique standpoint of a pilot who took part in the operations, yet was an independent observer. Flight Lieutenant Tom Grant had been an instructor and tug pilot at Thame, whose qualities had not, I think, been appreciated by the self-sufficient Greig. He had gone thence to Farnborough, as a test pilot in the Glider

Flight, and then as its commander. It was the good custom to attach R.A.E. test pilots to operational squadrons, from which they returned with technical and tactical reports based on trained observation and stated in precise English. Thus Grant, attached for two months to Wilkie's Halifax Flight, took part in the ferrying over Africa and in both operations; at Syracuse it was he who towed the only Horsa to land undamaged on the precise target, and won a D.S.O. His lucid and outspoken report was widely circulated by R.A.E., and had a healthy influence on all subsequent thinking.

The Netheravon mess was full of strangers. Musty had crashed in a Horsa on a night exercise and was lying in hospital with one leg. Dick Jesse was in and out of another, while they built him a new face. If Ted Armstrong did come back, he would probably be invalided out. Buster Briggs had gone to Tarrant Rushton to revive the disbanded 298 (Halifax) Squadron. 295 had left Netheravon, and 296 was still in Sicily. At least I would not be leaving many friends.

> I have been laughing, I have been carousing,
> Drinking late, sitting late, with my bosom cronies;
> All, all are gone, the old familiar faces.

Oh, I was very sorry for myself just then.

But before I could polish my buttons and go in search of a job, I was summoned to London, and there was given one—in Peter Robinson's department store in Oxford Street. They would contact me at Netheravon when they wanted me to start work.

My first meeting with that unfriendly A.O.C. was also my last, for he moved out a few weeks later ('the man recovered from the bite . . .') and Air Vice Marshal Leslie N. Hollinghurst, D.F.C., moved in. Big things were afoot. 'Holly' was to be fairy godmother to the Cinderella of the services, at the touch of whose wand the pumpkin was to become a gilt coach, the coach a band-wagon upon which many newcomers were to climb. 38 Wing was to become 38 Group, within the Tactical

Air Force and Fighter Command, disposing the dazzling total of four squadrons of Albemarles, four of Stirlings, and two of Halifaxes; supplemented for Airborne operations by five squadrons of Dakotas of the new 46 Group in Transport Command under Holly's orders. This force, in two successive lifts, could deliver a whole Airborne Division to battle. A formidable programme of expansion: the opening up of new airfields, the conversion of bomber crews to Airborne work, and of present crews to new types; the fitting of Gee (navigational radar) and Rebecca to all the aircraft, and crew training in their use; combined exercises with the British and American Airborne Divisions and with U.S. Troop Carrier Command; the assembly and maintenance of a great fleet of gliders; glider pilot training ... all this demanded a dynamic organiser. We soon found that in Holly we had one. We approved his stylish mode of personal transport: a Spitfire, which cannot have had any official existence.

He seemed somewhat aloof, but service under people like Stiffy and Nigel had perhaps led one astray: it was soon clear that the new Group was not going to be run on any Old Boy basis. After some time, several of Holly's staff found themselves facing him across the mess tea-table. George Chatterton was discussing a new method of getting gliders on to the right approach, a harmless enough topic, but it seemed to be annoying Holly. His Churchillian expression darkened; the conversation faltered, then suddenly he snapped

—I don't know what 38 Wing has been *doing* all this time! I'd like to put every one of them on a charge!

Cups stopped half way to open mouths, jaws ceased to munch, saccharine tablets dropped from nerveless fingers. It would have been a brave man who had answered. The fairy godmother had started off by damning Cinderella for going so long in rags. (But it is not very brave to answer *now*.) The funny thing was that, as our spy in Air Ministry had told us, one of the persons least willing to supply anything to Airborne, had been the Director General of Organisation, Air Vice Marshal Hollinghurst. At the Ministry they had thought it very droll that he should be chosen now to run it.

Determined to root out inefficiency, Holly soon seemed to find it everywhere. Any existing practice, however well-tried, was suspect —I suppose that's the 38 *Wing* way of doing it!

but conversely, a new idea was as likely to be shot down —It's far too late now for changes like that! Why wasn't it thought of long ago? It seemed you couldn't win; but then you found that you could occasionally, if you held your ground and sweated it out; or as Holly doubtless saw it, you dared to argue. Perhaps his was a technique designed to elicit pros and cons, but most of us seemed to make Holly prickly, I especially. I was on the wrong foot from the moment I first stood on his carpet.

—Have you taken a course in Photo Interpretation?

—No, sir.

Signs of displeasure; he waved a signal.

—Then why should these people want you in London?

—I have *given* a course on Photo Interpretation, sir.

—Then what is your job here?

—I don't really know, sir.

True as my answers were, I saw that they had established me firstly as unskilled, secondly as cocky, thirdly as clueless. I explained (more briefly than I do now) my job at Peter Robinson's. The summons in October had required me to report to one General Morgan at Norfolk House in St. James's Square. His name meant nothing to me, and I couldn't think what mine could mean to him. Admitted after a stiff check, I was exhibited briefly to the General, then greeted by the genial round features of Colonel Ralph B. Bagby, lately Chief of Staff to U.S. Troop Carrier Command in Italy. After my reception at Netheravon only three days before, it was nice to find somebody pleased to see me.

—You gave us the real lowdown on those Dee Zees in Italy, he said —and now we have a lot more work for you.

Within the hour I had been told the little I needed to know of the COSSAC plan for the invasion of the Continent. (General Morgan was Chief of Staff to the Supreme Allied Commander; as COS he was in charge of the planning, though the SAC had not yet been filled.) The seaborne assault on D-day was to be led by an Airborne spearhead of two brigades. The possible areas for the landings had been narrowed to two: the Pas de Calais (from Dunkirk to the Somme) and Western Normandy (from Caen to the Cotentin peninsula). Both must be explored for landing zones, the capacity of these assessed, and outline Airborne plans made. The Caen area was favoured, fortunately from the Airborne point of view, for it offered some excellent terrain. I knew that already, thanks to a lucky hunch that had moved me to while away the drear evenings at Croughton, a year before, studying *Invade Mecum* and suchlike excellent Intelligence handbooks, poring over photo-maps, outlining likely broad areas for landing zones; I roughly knew my way about, which saved at least a week's work.

Thus briefed, I was taken round to Peter Robinson's where the job would largely be done. The front had been chipped a bit by a bomb, and was shuttered, but the back half of the store, walled off completely, could be penetrated through a staff entrance, where the guards fingered Sten guns. The windows were permanently blacked out, but the brightly-lit sales floors looked much as usual; only the merchandise and the assistants' dress had changed. The Navy shopwalker at the corset counter now proffered tide-tables, with as much courtesy and attention as his predecessor; lingerie had made way for landing craft; frillies for flak. —If we don't have it in stock, we can always get it for you! In a large inner room, papered with maps and spread with photo-mosaics, each British officer worked with an American partner; I was introduced to mine, a Colonel from Troop Carrier. The equipment was American, and very good. My new partner showed me the latest thing in stereoscopy, a single print that needed no stereoscope. The specimen subject was not one that our Air Ministry would have chosen for issue. Wearing polarised glasses and using the left eye only, you saw a girl in a dressing gown; when you changed eyes, the garment disappeared. The Colonel, important as he was in Wall Street, knew little about air photographs and less about gliders or parachutes, but he signed our joint reports, and his juniors were very competent.

There would have to be some sort of arrangement with 38 Group; I could stay on their payroll and work at Netheravon when I wasn't wanted here, but I must get back at once if I was. So from October 1943 until March 1944, I shuttled to and fro, whistling up an aeroplane in lordly style when the summons was urgent. Nursing such mighty secrets, taking a tiny hand in great affairs, I felt serene and smug amid the petty botherations of Netheravon.

Back there, a worried-looking Army officer called on me. —Had I been running Ops at a place called Goubrine? I had. —Had I authorised an Airborne officer to fly home on leave in one of our aircraft in July? Well, he had asked me, and when I had authority from his C.O., I got him a place in a Halifax, but he had been unlucky because it was the one that went into the Bay of Biscay with Wally Barton. No, we didn't signal internal air movements from Goubrine. We knew they had stopped off at Salé, and that they had been signalled out for the U.K. from there. Yes, if the job was done properly at Salé there would be a crew and passenger list. —Good God, said my visitor —this chap's been dead all these months, and his wife is asking us why she hasn't heard from him since July!

Meanwhile I had somehow become Air 1(G) or Squadron Leader Gliders, sharing a room with Air 1(P) or Squadron Leader Parachutes; though I doubt if either post was ever officially established. —Well, Batter my Proverbial! cried my room-mate when we met, and who else would use such an expression but Harry Ward? George Chatterton, too, was now an inmate of 38 Group. He had not been idle since his return from Sicily; he had been lobbying, in high places, his ideas for the future of the Glider Pilot Regiment. His own 1st Battalion was still in Italy, being frittered away as ordinary infantry, together with 1st Airborne to which the glider pilots seemed too much to belong. The 2nd Battalion was getting into good form at home, but it was camped miles from the airfields, so that the glider pilots seldom met the R.A.F. crews who towed them, and the Battalion was regarded as a unit of 6th Airborne. The original conception of a joint H.Q. shared by Browning and Norman, by paired Army and Air Staffs, had long since lapsed. This dispersion was all wrong. For a start, and with little or no authority (though this came later) Chatterton moved his H.Q. to Netheravon. True, this consisted only of himself and his Adjutant, but that was as well, because the only room to be had was a den where the coke was kept, and Waaf with buckets would clatter in and out. In due course he became Commander Glider Pilots, on the analogy of a C.R.A. or C.R.E., and a full Colonel, in command of both battalions. From then onwards we could, and did, work closely and harmoniously together on everything that concerned glider flying; up to the moment of landing this was an Air and not an Army matter. If only the Airborne Divisions too could have worked thus alongside!

From now on, the glider pilots lived more on the airfields, less in their dreary camps; they were crewed up with the R.A.F. as teams. Their units were given the airworthy names of Wings and Squadrons; all uncommissioned first pilots became Staff Sergeants, all second pilots Sergeants; and incidentally, one of our oldest battles was won, when glider pilots were authorised to inspect and pass out their own aircraft.

To work with George Chatterton was to confirm that he was in every way the opposite of Rock. It had been no secret that the Glider Pilot Regiment had tended to divide itself into 'Rock's Men' and 'Chatterton's Men'. Chatterton, unlike Rock, had the dual qualifications needed for this inter-service job. He had joined the R.A.F. in 1930, learned on the Avro 504, flown the Hawker Fury with the famous No. 1 Squadron, starred in the aerobatic team at the Hendon show, and after a crash had been retired to the Reserve. Recalled at Munich time for ground duties for which he had no taste, he had transferred to the Army, served in France during the 'phoney war', returned to dull home duties; then he had seen the appeal for volunteer glider pilots. Thus he became Rock's second-in-command; incidentally he had taught 'Boy' Browning to fly. Had gliders had any association with the Navy (other than the unhappy encounter off the shore of Sicily) he could have shown that qualification too, for in his teens he had been a Navy cadet at Pangbourne. Rock expected, but did not constantly insist upon loyalty and discipline; Chatterton was now putting up coloured posters on the subject that Rock might have thought embarrassing. Rock never shone at a party, as Chatterton always did, with his famous Hitler impersonation, his brilliant improvised lampoons in rhyme on every personality in his audience, his ballet dance as a piping faun in underpants. He was a born actor, and in that perhaps was a difficulty. When he was in angry, or exalted, or tragic mood, one could never be quite sure whether he was acting another part, and sometimes one laughed at the wrong moment. His Intelligence Officer, Captain (Count) George Roztzorowski, was a likeable and lively character; his energy and his English may be instanced by his remark that when there was work to be done, he didn't like to sit on his bottocks. Chatterton's adjutants, his operational co-pilots, worked splendidly with the Air side.

Under the new regime, the scale of the exercises and the skill of the crews steadily increased. On the day in November when Holly arrived, there was a mere 12-Horsa landing, and he was not impressed. Inexperienced tug pilots left a gap of 20 minutes in a supposedly 'close echelon'. The release height was absurdly low, 350 feet; it assumed the tug pilots to be more skilled than the glider pilots, but they were not; and it lost the great advantage of the Horsa, its fast steep flapped approach. If this simulated an operation, why bring the tugs down into small-arms range? A dummy field about 400 yards square had been formed with hurdles, but only nine of the twelve got into it. Next time, we built three fairly roomy fields for 40 Horsas to land in, but only 24 got in without hitting hurdles. We were ordering precise release points, but if these were near to the landing zone the tug pilots tended to order release too early; if distant, too late.

> But those behind cried 'Forward!'
> And those before cried 'Back!'

We took to stationing observers at the release points, to discourage personal caprice. This might seem illogical, in view of the personal caprice that had got Tom Grant's Horsa to the Ponte Grande: why not give excess height and leave it to the glider pilots? But we would soon be landing a hundred Horsas at a time, unthinkable as a rabble but feasible as a queue. From now on there would have to be two kinds of glider pilot: the many, by no means unskilled, who must nevertheless land to some extent by numbers; and the very few super-trained for tricky individual tasks. Flying from the final air rendezvous in parallel streams, stepped up in height, the tugs must feed in a steady flow of gliders from the given release points; if they did, and the gliders could not get in, it was our fault. Released upwind and in sight of the landing zone, the glider pilot flew one short straight leg ahead, then a wide semicircle that put him in position to lower his flaps and dive straight in. Meanwhile we watched, plotted and filmed him.

By January 1944 we could add loaded Hamilcars from Tarrant Rushton, where Tom Cooper was now in command. (—I asked a farmer the way to Tarrant Rushton, averred a brother officer —and he said, straight on, and for the next few miles you'll see gliders here and there in the fields, and they're *all* pointing to

Tarrant Rushton!) The Hamilcars might not get in to, and certainly could not tow out of the exercise fields, and had to land at Netheravon.

To ensure that each gliderborne unit arrived in action as such, well concentrated and with its weapons to hand, Chatterton introduced 'target gliders', each flying a long coloured streamer and landing well up the field in its appointed area; the rest of its company aimed to land alongside. This came to work well, and even if a target glider missed the right spot and its brood followed it, the soldiers would rather be together off the landing zone, than scattered on and around it.

The first big Allied exercise, complete with smoke-screens and fighters, came in February, when 1,500 paratroops were dropped within 15 minutes by a mixed force of 100 aircraft; followed at dusk by about 50 Horsas; the force was re-supplied by Stirlings after dark.

Marshalling and take-off methods still varied from airfield to airfield. At most of them the gliders were double-lined on the runway, tugs on either side, as we had done at Goubrine. (The tug pilots must be prompt, but not too hasty in taxying forward; at least one Horsa tail was blown off by a revving tug, and very surprised the soldiers looked as they peered out of the open stern.) But the mass of Horsas reduced the take-off run by at least 300 yards; by more, if the marshalling was not compact. We took measurements, and had numbers painted on all the runways to denote glider noses. But at some airfields, the ground was too soft for tugs to stand off the runway, so that both tugs and gliders had to be fed on to it singly from the perimeter track. This meant a take-off interval of two or three minutes: with 30 gliders, the first off might have to circle for an hour and a half before assembling at the rendezvous. The answer was to widen the main runways at such airfields, by concrete aprons for the tugs.

Thus lined up, ropes attached, hooks and inter-coms tested, Horsas could be got off at one-minute intervals. —You can do it in twenty seconds, piped Tom Cooper to a senior over-zealous for improvement —if you like to be silly enough! The limiting factor was the wake of the combination in front. In the air, this could be troublesome a mile astern, and on the runway even after a minute there was turbulence.

'Combination'? Yes, for we never hit on a happy word to express 'tug and glider'. A 'tuglider'? A 'glug'? No. So one of our songs went

SASO was in the Ops Room,
And did the Waaf turn red!
How quickly can you get your combinations off? he said.

'Tug' at least was a happy choice. Who thought of it? Probably Nigel.

Another problem, indeed a constant bogey, was that the wind might change after the gliders were marshalled. A moderate cross-wind was acceptable, but a down-wind take-off was not. It might take up to two hours to marshal the gliders afresh, and what if their take-off time were dovetailed into a great amphibian operation? One Station Commander adopted the compromise, when the wind was fitful, of putting half of his gliders at one end of the runway, half at the other. An hour or so before take-off, he would have half of them towed over to the other end. —Whatever the wind, he argued —we are always *half* right! —Whatever the wind, objected Holly —you are always half *wrong*! and he forbade the practice.

It was the multiplicity of gear: the tractors, towbars, towropes and inter-coms that made a glider force so unwieldy to move on the airfield. If each combination could move as a single unit in the air, I thought, why not on the ground? I made a sketch and took it to the resourceful engineer Austen, and within days he had improved and produced our 'tugbar'. It was a hinged bar with which a tug could tow a Horsa about. It carried a drum on which the towrope was wound with a bight inside (that is, you started winding on from the middle of the rope). When you had joined the two aircraft, you connected the rope ends to them and tested the inter-com. The wind could box the compass for all that it mattered; the tug taxied to the take-off point, the tugbar was uncoupled, the tug went forward until the rope fell off the drum and came taut, the tugbar was whisked aside on its little wheels, and the take-off could start about 30 seconds after arrival.

—It won't work, said the engineers who had just seen it do so —because the tug will overheat long before it gets round the airfield. So we tugbarred ridiculously round and round Hurn with a loaded Horsa, and well before the pyrometers neared the danger line, we had done twice the distance needed. The prototype was issued to one of our stations for further trials. We never heard that they found any snag, but we never heard anything else about it. Perhaps it might have fared better had Austen been a Regular, not a V.R.

—It's a good thing you have so many ideas, Wilkie had once said —because only about one in twenty is any good at all! I did hope the 'Minihorsa' or dummy glider might have been Number Twenty. We already had dummy parachutists; we had issued some for Sicily, and it had been touching to see an aircrew leaving the briefing hut in line abreast, linked by their dollies dangling hand-in-hand. Goon-like, about half life-size, some of them were stuffed with firecrackers, and could put up convincing sounds of battle after landing, or even take a crack at the natives on the way down. So why not dummy gliders? Four-foot span, cut by the dozen from plywood to Horsa silhouette, fin to fold down and wings to hinge back against the pull of rubber bands; a pack of 50 would be no bigger than a suitcase. Flung out of an aircraft, the loose paper parcel would open (as parcels of 'nickels' or of pigeons did) and down would come an imaginary Air Landing Brigade to spread fear and despondency. What matter if dummies were recognised and reported as such? That would cast doubt on any subsequent report of real gliders.

A day or two later, a visitor had a shock when he disturbed a flat package on my desk, and a black Horsa leapt out at him like a vampire bat. The first test flights led to a misunderstanding never explained. We took service transport to a remote hillside on the Plain, and sent the prototype skimming down the slope, adjusting the trim until the glide was at least as good as that of a real Horsa. But the expression on the face of the driver haunts me still; his unspoken scorn of bloody officers who could find time, and waste his, and burn petrol, to go out for an hour to play with a toy while there was a war on.

Flung out in a parcel from an Auster, right over Netheravon, at dusk, in a light wind, it was amply realistic. (In a strong wind, it went either incredibly fast, or more incredibly backwards, but that was the only flaw.) I fed this idea too into the proper channels, to be told at length that no production capacity was available. Any school workshop would have been delighted to make it. I remain unconvinced that it was one of the nineteen no-good ideas.

On a glider exercise you might still see a Jeep or a gun being unloaded with sweat and swear-words half-an-hour or more after the landing. The awkward turn at the side doorway, and the unwieldy ramp, were a legacy of the early Army indecision about loads. The tail of the Horsa could be unbolted to let the load out, but this was almost as slow a job. One drastic solution was to put a belt of 'Cordtex' explosive round the tail and blow it off, but this had a way of setting the whole glider on fire, and perhaps exploding the ammunition inside it. Some Horsas were produced with the tail attached, not with bolts, but with quick-release plugs as used for the towropes. A pull on the communication cord, and the tail fell off; the penalty for misuse, in the air, was more than five pounds. The final answer, though it came late, was the hinged nose and cockpit of the Horsa Mark II.

The Hamilcar also, despite the vast opening behind its hinged nose, was tricky to unload because of the height of the floor, unless it had landed on its skid, which it never did for reasons already given. This trouble was cured by another of those glimpses of the obvious that may escape the professional engineer. It was Tom Cooper who first opened the taps that drained the pressure from the oleo legs, whereat the Hamilcar sagged gently to the ground like an elephant obeying the touch of the mahout's stick, and let its tank out with scarcely a bump.

But the quickest time for unloading a tank was put up by a pilot who overshot the runway, and piled up his Hamilcar in a monumental write-off among a group of buildings. The tank continued ahead at perhaps ninety miles an hour (another record), and when it stopped, and its bewildered driver opened his hatch, a half-brick that fell on his head caused the only injury.

From America, by way of Farnborough, came the daring idea that a glider could be snatched out of a small field by a tug that could not land there. This promised the salvage of a lot of gliders after operations or forced-landings. The towrope from the glider ended in a nylon loop which was held open between two upright poles, about ten feet high and marked by flags. The tug dived at the loop, hooked it, and climbed immediately. For a moment the glider stayed where it was, because the tug's steel towcable beyond the hook was paying itself out from a drum. The drum was now progressively braked until it stopped, by which time the glider was airborne, and all that remained was to wind in the excess cable. Surprisingly, it worked, and the jerk was so slight that the glider passengers did not need to be strapped in. The chief risk was a premature release, which would leave anything up to a thousand feet of cable dragging from the tug. (Eventually, about 50 Horsas were to be salvaged by 'snatching', and many more would have been but for battle damage.)

But the most significant technical advance of 1943 in Airborne, pioneered by Buster Briggs' squadron, was one that foreshadowed the obsolescence of the military glider. When I first saw a Jeep, and then a 6-pounder gun, float down from the sky on clusters of parachutes, I felt there might be more future for Air 1(P) than for Air 1(G). True, no aircraft existing could drop Hamilcar loads, but Farnborough was already planning to deprive the Hamilcar of its gliderhood by putting engines on it.

That, if it had come in time, might have made all this complex glider effort unnecessary: an expendable Horsa or Hamilcar, driven by small, salvageable engines, might have been far cheaper in the long run.

Well, if this showed where we would go out, it was also where we came in, for the inevitable question of the layman at a gliding club had always been —Why don't you put a little engine in? To which there were several answers: Doc Slater would tell them —Yes, it has in fact been done; let me show you, look up there! (pointing to an aeroplane) —some chaps called Wright did it some time ago! But I preferred the answer —If you marry Greta Garbo, you don't expect a good cook!

# 12 PRELUDE TO 'NEPTUNE'

At Christmas 1943, Eisenhower had been appointed as Supreme Allied Commander, Leigh-Mallory as Commander-in-Chief Allied Air Forces, Montgomery as Commander of 21 Army Group and of the ground and Airborne forces for the invasion. I had seen Monty coming and going, in a numinous hush, at Norfolk House; he seemed to be making a stir there. Soon after his arrival, we were set to work on a bigger operation, for a wider area, including the Cotentin peninsula and perhaps Brittany. The mere two Airborne Brigades of the COSSAC plan had become two or three Airborne Divisions, though their fronts of attack had been narrowed. The more we studied the original area round Caen the better it looked, but the Cotentin was unpromising. The only feasible landing beach, on the east coast of the peninsula, was cut off by a mile-wide lagoon crossed by a few causeways, where a seaborne force could easily be trapped. U.S. Airborne troops were to drop inland and seize these exits; others to seal off the whole peninsula by landing across its base; but the coastal landing zones were poor and liable to flooding; the hinterland generally was *bocage*, small fields divided by deep lanes and dense old hedges on high earth banks. The flak might have been especially sited to destroy Airborne formations heading for this zone. On the broken coast of Brittany, the fields were tilted, stone-walled, and inland was more *bocage*; horrid country for Airborne, and it was a relief when the planners seemed to lose interest in it. From the outset we had also worked desultorily on the Calais area, but it was now tacitly understood that this was a blind, and need not be taken seriously.

The new and enlarged plan for Operation 'Neptune', the assault phase of Operation 'Overlord', was passed to the three services, and by February 1944 the Airborne planning centred on a new 'H.Q. Airborne Troops' in a discreet flat under the shadow of Westminster Cathedral. The map on the wall of the little War Room there was hidden by a curtain inscribed with the slogan that was to be seen chalked all over London: START THE SECOND FRONT NOW! It was there that I first learned the fateful date, when a naughty American General (who should not have assumed that everybody in every War Room knew everything) breezed in to announce —Monty's given us a new date! Fifth of June!

General Richard Gale's 6th Airborne was allotted the 'Neptune' tasks; 1st Airborne, returning from Italy, would stay in reserve. In mid-February, Holly and Gale were briefed, and in March, Gale opened a planning H.Q. in a secluded old rectory at Milston, near Netheravon. The enclosing hedge was wired, and hung with tinware that clanged at the passage of a sparrow; the windows so securely barred, that when one day the sole front door key was missing, the whole staff paced angrily for an hour in the garden. Here I found myself working with an old acquaintance, architect Major Gerald Lacoste; skilful and energetic as Intelligence Officer to the Division. Next to be briefed at Group was another architect, Squadron Leader Derek Wallace, the new Navigation Officer, my close partner for months to come. Lacoste and I plotted the landing zones and he agreed them with the Division; Derek and I plotted the glider approaches and agreed them with Chatterton; Derek worked out the complex flight plans, involving for each lift the assembly of aircraft from eight airfields, at perhaps three rendezvous points, and their routing through flak and shipping lanes to sundry dropping or release points, to arrive at a rate of one every ten seconds. At the same time he had all the duties of a Group Navigation Officer; both of us were involved in the planning, observation and reporting of exercises, and eventually busy with the briefing material for ten R.A.F. squadrons and the Glider Pilot Regiment. Here, surely, others might have begun to share the work, but so strict was security that as late as mid-April, only six officers of 38 Group had been allowed to know the plan. Ted Armstrong's successor in Intelligence was a specialist in flak, and made some nice models, intersecting perspex domes that showed the range of various calibres, but he came too late into the picture to help us in this unfamiliar specialised task. We were far too few.

A cinder track ran past the windows of the H.Q. hut, and hearing outside at intervals a jangling crunch, I saw Musty (not yet fitted with his new leg) sprawling among his bike. Nobody offered help as he essayed again and again the feat of mounting it. By the end of the morning his one trouser knee was bloody, but he could ride. Then, in the mess, he insisted on the old game of jumping all round the room without touching the floor. His take-off spring from the bookcase top, his landing on the slippery mantelpiece, would have been terrifying in a biped. Soon he could do it as of old. Next he was flying again, and when we went down to Cornwall in the Oxford to look at a landing field, I was made responsible for the left rudder, to which his temporary leg might be unequal in a bad swing. His rehabilitation programme that day included beating up an American airfield, and traversing North Devon six feet above the waves. A rather tactless senior, standing by Musty during a glider exercise, remarked as a Horsa held off too high —You know, Musgrave, these Horsas drop rather if you stall them! and Musty answered sweetly —Yes, sir, I *know*! I recall Musty formating alongside one of his less skilful captains, who was wandering in search of the dropping zone, and calling him gently over the radio —Excuse me, but do you intend to participate in this exercise? But the Musty flavour was usually too subtle for the victim to detect it; I knew only one senior whom it offended, a newcomer who remarked

—After all, Musgrave, the Group must have some new blood from time to time!

—Yes, sir . . . but new blood so often turns to clots!

My name was shouted one day from the porch of the mess, and out came a plump figure wearing a comic pink mask, who greeted me in the voice of Dick Jesse. It took an effort to look him steadily in the eye and keep a cheerful expression. Against my will, I wondered how he must have looked six months ago, before repairs began. Unspoken curiosity was to be satisfied: he proudly produced from his wallet a dreadful photograph taken on his first day in hospital. They had done a wonderful job on a friend of his, Dick said, they had even put back on his new nose the old dent where he had been kicked, playing rugger at school. Dick still went in and out of hospital from time to time, and gradually something like the old face emerged.

The Americans had presented Browning with a personal Dakota; it was based at Netheravon, and the American crew were popular in the mess, especially the navigator George Denny. He often spoke of a character he seemed to call 'Uncle Tooter', whom I was assumed to know, but it was some time before I realised that he was a nephew of Colonel Tudor Gardiner. He could imitate the posh R.A.F. officer accent to perfection, and when we had duties at American airfields he would come with us, causing bewilderment in a crowded bar to his compatriots who tried in vain to spot where this goddamn limey voice was coming from. It was thought funny, though a dangerous game, to utter outrageous anti-Americanisms in the Netheravon mess —Odd, how America has gone straight from barbarism to decadence without an intervening period of civilisation! or —After all, most of my best friends are Japanese! but Browning's crew would never be drawn, and knew some good answers. George Denny asked me one day for a copy of 'the report on Sicily'.

—Do you mean the American report that said that British glider pilots released because of fright?

—No, he said evenly —I mean the British report that said the Americans couldn't stand up to a little light flak.

Early in March, in the biggest glider exercise to date, we landed U.S. paratroops in 97 Horsas, on Welford airfield. An old trouble recurred in the planning stage, for there was no adequate inter-Allied conference, and *after* the issue of orders, changes were made in all the times, the release tracks and heights, the methods of approach, the Eureka positions, the subdivision of the airfield, and even the rope-retrieving arrangements. Nevertheless, 91 gliders landed in 15 minutes, and 82 were in their correct sectors as briefed. With one glider per 100 yards square, the landing was tricky for the latecomers, but there was only one minor collision. The standard of glider flying was getting very high, better than the tug flying. The arrangement for getting all this great gaggle out again was rather casual. To get a fraction of the total airborne outward had engaged the entire effort of each station, with all its equipment to hand, but the job of getting them all back, from a stranger airfield, was handed nonchalantly to two persons, Dick Jesse and myself. Each glider had to be married up to its proper pilots and its proper tug. Normal flying was going on by an American transport unit, and our take-offs had to be sandwiched in. To mark the rope-dropping areas the day before, near the artillery ranges, smoke candles had unwisely been chosen; all sorts of smoke goes up on the ranges, and every puff had drawn a shower of ropes, leaving us for hours without any. We were not helped by impatient Station Commanders who sent their tugs before they were wanted. But thanks to the resource and energy of the glider pilots, we got 90 Horsas out at an average of one every 4 minutes, the missing one having been hit by a Stirling that swung off the runway.

A week later, this exercise was repeated with the same success, carrying U.S. 101st Airborne. Seen from above, circling in an Oxford with cameras, these mass-landings were impressive. It was like watching a shoal of fish assembling in a deep pool. Some of the old-timers from Thame, I thought, ought to be here to see what their efforts have led to. The only one at all likely to make it was John Saffery, now with the Photo Reconnaissance Unit, and on the off-chance I sent him a cryptic postcard giving him a map reference, date and time to see something interesting. At the next big exercise (185 gliders on three airfields) as the streams converged below and we started the cameras, I was heartened to see a blue long-range Spitfire join us in the Gods, and after the show make aerobatic gestures of approval before streaking off for some unarmed reconnaissance over the depths of Germany. A pity we couldn't have ended up with a formation of three Kirby Kites.

In March, the whole of 6th Airborne dropped or landed in one Allied effort of about 700 aircraft; in April, one British Airborne Division defended an imaginary Normandy when the other dropped to attack it; by a brilliant avoidance of the obvious, 6th Airborne (who would attack on D-day) were made the defenders, and so had opportunity to simulate and predict German reactions. In May the King, the Queen and Princess Elizabeth watched a mass glider landing. The King noticed that the Air Commodore had a plan showing where each glider was to stop, and pointed out that in a nearby row: 46, 47, 49, 50, one was patently missing. But within a minute, No. 48 had rolled in to its appointed place. After this exercise, Musty was left at the control tower without transport, and limped back on his new leg to the mess, angry, hot and too dirty to join the Royal Reception in the Ladies' Room. So he went to the little bar, *The Glide Inn*; it was just opening time, and the clink of glasses could be heard inside, but the door was locked. His bang being ignored, he gave it a resounding kick (an artificial leg has its advantages), and it was opened ... by the King.

A culmination, in skill if not in numbers, was the landing of a hundred Horsas at Netheravon by night, a success so impressive that Holly ordered a repeat performance for the following night, and invited an audience of V.I.P.s to watch from the roof of Flying Control. At the entrance stood the Air Commodore, checking the credentials of the visitors; unfortunately he failed to recognise an officer in a plain raincoat, who refused in no uncertain terms to produce his invitation card or anything else, and after an angry exchange proved to be Air Chief Marshal Leigh-Mallory. Four streams of towed gliders, from four stations, loomed up through the darkness; some began to release at one end of the field, and to our horror, some at the other. There being no wind, the Ops Room (not 'my' Ops Room now, thank goodness) had passed a message —The run-in will be East to West; which proved ambiguous: half of the recipients had taken it that 'run-in' meant the towed run-in to the release point, the others, that it meant the glider landing direction after release. So about fifty gliders would land one way, about fifty meet them landing the other way. The attention of the V.I.P.s was not drawn to the situation, but there were agonised whispers among the lower orders. —What happens when an irresistible force meets an immovable object? was a question the Horsa had often answered; now we would see, or rather we would hear what happened when one irresistible force met another. All that we saw were leaping landing-lights and confused silhouettes. Johnny Walker, the London Gliding Club engineer, should have been present, for he could estimate by pure sound the cost of a crash; I had seen him at Dunstable, when an overshooting beginner passed the window at six feet and went out of sight, cocking an ear for the impact, and calmly costing it —About fifteen pounds. This night, by ear, the figure was perhaps fifteen thousand.

—I want a plot of where all the gliders have landed, ordered the Air Commodore.

—Yes, sir; we have an aircraft photographing them at first light.

—We can't wait for that. I want you to go round and plot them tonight, and let me have it first thing in the morning.

To plot the positions of a hundred gliders, on a field devoid of runways as reference lines, where Horsas could disappear in hollows, would have taxed a good surveyor even in daylight. But I did tour the scene of carnage before breakfast, sketching a phoney plan, while the Oxford overhead did the job in one click. Wingtips had been sheared, tails twisted, noses biffed. I photographed the worst-damaged Horsas singly, while Musty, who was limping round with me, posed with an air of proud authorship in the foreground of each picture, for him to carry in his wallet —Seen my prangs? But there were only about twenty badly damaged, and the personal injuries among the 200 pilots totalled . . . one broken ankle.

Browning had said almost at the outset that

> . . . the Airborne Division is not, and was never designed as, a 'suicide force' . . . [it] will never be called upon to undertake an operation where the ordinary hazards of modern war, which have been faced by all troops, are considered to be abnormal.

Whether this undertaking was honoured in Sicily, a question in which Browning seems free from blame, let the survivors of Syracuse and Catania judge; certainly we were observing it in planning the Airborne tasks in Normandy; but as reports came in of the glider operations in Burma in the Spring of 1944, it seemed that the old conception of the 'one-way ticket' to a desperate crash-landing still dominated some minds. The gallant but ruthless Major General Wingate, in his second Burma expedition, took the offensive against the seemingly invincible

Japanese, with the object of reopening the land route to China from the West. In an area of vast distances, tenuous ground communications and inhospitable terrain, he planned to bypass the slow murderous jungle warfare, and to put down a whole Division, by air, behind the Japanese lines, using improvised landing strips in three jungle clearings. Hadrian gliders carrying American airfield engineers, with enough combat troops to protect them during the task of making the strips, were to fly in to these clearings at night, by a nearly full moon. The state of the ground could be judged only from air photographs. Gliders were more plentiful than tugs, so most of the Dakotas were to tow two Hadrians, a tricky feat even in daylight. Many of the gliders had to be overloaded. On the night of March 5–6, 80 Hadrians were lined up in a double row; the tugs remained dispersed, against enemy air attack, until the last possible moment. Within half-an-hour of take-off time came news that one of the clearings had been obstructed, and it seemed possible that the Japanese knew of the plan, but Wingate decided to carry on, using only one unobstructed clearing despite the risk of congestion. By midnight, 52 gliders had disappeared into the darkness, when a radio call came from the objective, to send no more. Those in the air were recalled, and nine returned to base. Many ropes broke during the double tows; ten gliders were lost en route, though most of the crews eventually got back. Thirty-three landed in the clearing, but only three were undamaged. The surface was broken with deep ruts and buffalo-wallows, and heavy logs lay round the perimeter. Twenty-three men had been killed, many injured and many loads lost in crashes and ground collisions before a halt was called. But over 400 men and much of their equipment had been landed. By the next evening a landing strip (eventually its main runway was a mile long) was ready for the Dakotas. To open up a second strip, only twelve gliders were initially sent in, in view of the previous casualties, but within twenty-four hours another runway was ready, and further glider landings followed. The operation was completed within five days, the Dakotas flying in a total of over 9,000 men, with hundreds of mules and weapons, without the loss of a single aircraft. In the broad view, the glider losses were perhaps acceptable in relation to the incalculable rewards that followed.

Gliders had made an interesting little prologue to the operation in February, when a Long Range Penetration Brigade, heading for the same area, and held up by the Chindwin river, was supplied with collapsible boats landed in gliders on the sandbanks. A similar epilogue came when boats were landed to ferry a mobile column of about 700 men across the Irrawaddy. In May, the airfield at Myitkina, captured in a surprise assault by a small column of American Rangers, was held against counter-attack by immediate reinforcements flown in by gliders; this in turn enabled a whole Division to be flown in by Dakotas. The monsoon rains then put an end to this unique air campaign.

One of Nigel's predictions, dating from his earliest papers, had been fulfilled: to the effect that, in a suitable theatre of war, gliderborne supply could allow the continuous operation of an isolated force inside enemy territory.

# 13 OPERATION 'NEPTUNE'

Gale's task with 6th Airborne in 'Neptune' was to seize and hold the left flank of the assault bridgehead, where the main counter-attack was expected. Inland along this flank ran a double water-jump, the Orne river and canal, crossed by only one eastward road between Caen and the coast. Between midnight and dawn on D-day, 6th Airborne must take the two bridges at this point, occupy high ground to the east as a base for a later break-out, and protect the flank by demolishing five bridges in the flooded valley of the river Dives six miles further east. They must also destroy a coastal battery at Merville that could dominate the beach. In the final plan, two Parachute Brigades and about 80 gliders would take on these initial tasks. They would be reinforced by seaborne commandos, but not before noon on D-day. Then, in the evening, 250 gliders would bring in the Air Landing Brigade, and another wave would re-supply the Division the next day. The spread over two days was unavoidable, since 38 and 46 Groups could not carry the whole Division in one lift.

If 'Neptune' was the spearhead of the invasion, the Airborne assault on the Orne bridges was the very tip of the spear. Such indeed was the shape of a field whose point touched the canal bridge. The guards on the bridges might demolish them instantly if alerted, and gliders would have to crash-land right up against their defences. It was not so much a matter of choosing fields, as of reluctantly accepting them. Both were a bare 300 yards long, soft meadow, obstructed by trees; the triangular field had a pond at the apex, and was intersected by ditches. Far better fields offered a few hundred yards away, but they would not do; it would be a matter of seconds rather than minutes. Just after midnight, six hours before the seaborne landings began, about 200 men in six Horsas (if all arrived) would thus seize the bridges and remove the demolition charges. At the same time, three pathfinders would drop the Independents to set up beacons, half-an-hour in advance of the main parachute drops. One Parachute Brigade would relieve the force on the Orne bridges and secure the landing zone for the gliders bringing their guns and transport; the other would attack the Merville battery, and blow the Dives bridges.

The glider task at the battery was even more daunting than that at the bridges. The guns were in bomb-proof concrete emplacements 12 feet high, 6 feet thick, buried in earth; heavily defended, mined and wired. A hundred Lancasters would bomb the battery ten minutes before the attack, but the lightly-armed paratroops might still fail to breach the defences, so three Horsas would crash-land right on top of the battery. For weeks, the troops rehearsed the assault, with live ammunition, on a full-size mock-up built under Lacoste's direction near Newbury. Others rehearsed the bridge assault against similar bridges over the river and canal at Exeter, and at Lechlade.

Our air plan was, that the six Horsas should release over the coast at 6,000 feet, or nearer to the target if cloudbase forced them lower. After release the tugs, to explain their presence to the enemy and to divert their attention, would go straight on to bomb a gunpowder factory at Caen. Three Horsas would break away and approach their field from the seaward side, while the other three made a wide semicircle to approach theirs from the opposite direction, all six converging to land at the same moment. We had now to find replica fields in which the glider pilots could practise, correctly related to some well-defined release point that would simulate the coastal entry point, and to the radar grid. A long search on the 1-inch maps and from the air ended in finding the answer right on our doorstep, on the Netheravon boundary, a field that a row of hurdles made exact in shape. Stout trees represented the obstructions at the bridge end. Into this field, with full ballast, by day and then by night, the picked glider crews flew again and again. By a happy choice, Chatterton appointed Tom Grant to direct the aircrew and glider pilot training. As they grew more accurate, to undershoot by fifty yards came to be counted as failure. Flying round with one crew, I noted that far from being tensed up as they rounded the final turn, they were placidly discussing which flick they would see tomorrow night. The Horsa in front of us gently crunched into a tree at the apex; ours stopped a length and a half behind, and pointing to this gap, I accused the Staff Sergeant of undershooting. He took me seriously, and I had to explain that the jest was intended as a compliment. A lot of Horsas were broken in the early stages (once, one of them leapt indecently upon another's back) but in time they were achieving almost monotonous perfection.

It had occurred to me, as we prepared our overlays showing the good landing zones, that our German counterparts must be doing the same; by the time we knew the best areas, they would know where to expect us.

—The unfair thing is, that if Willy Stumpf isn't sure of his photo interpretation *he* can order up a car and have a look on the spot.

—Of course he can't! That would defeat the whole idea. He isn't there to say which *are* the best L.Z.s, he's there to say which *we* think are the best!

In mid-April came an urgent call from Lacoste, and when he showed the latest photo cover, it was clear that Willy Stumpf had indeed been at work. A regular diaper pattern of white dots was appearing on our ground, each one the site of a stout obstruction pole, soon to be confirmed as such by its shadow. How high were they? Lacoste's first estimate, for want of a better standard for comparative shadow-lengths, was —about twenty hens high. We kept photographic watch, and when Willy's work seemed done, I coloured up the fields that he had chosen for obstruction, and pinned his map alongside mine; they were almost identical, though I disagreed with him about one or two wee plots where he had wasted poles. It seemed possible that he knew our plan, and we were relieved when similar poles appeared all along the channel coast. Luckily it never occurred to him that any sane glider pilot would try to use the little fields by the Orne bridges. But the plan had to be radically changed. It had been the intention to put down the main glider force, with the Air Landing Brigade, in the dark, but one of the Parachute Brigades would have to take over their tasks. The pathfinders must drop sappers to blow a few clear lanes between the poles, for the landing of the essential gliders that night, but the main body would have to wait until the evening of D-day, by which time the landing zones might be cleared. Soon, Bulford Down echoed to explosive crumps, as the sappers demolished trial poles as fast as their comrades could erect them.

With the 6th Airborne plan dovetailed into ours, Air matters now engaged us, and we moved our War Room from Milston to Netheravon. It was a relief to escape the worrying business of travelling to and fro with dangerous documents. Early in April the C.I.U. at Medmenham had promised landscape models for briefing. They already had a complete model of the French coast, made for the Navy, and this they could ingeniously multiply by casting it in rubber, so that each section was as light, as portable and as durable as a bath-mat; a church tower, accidentally trodden on, would spring up again undamaged. This coastal strip did not extend inland as far as our zones, but C.I.U. would make the needed additions. We might not get a set for every station, but if two stations shared each, four sets would serve.

Not that the aircrews or glider pilots would see a model at all, if I had my way. For the ground troops they were invaluable, but for air use they were utterly misleading. The 'Neptune' models were to 1:5000 scale, or about one foot to the mile. Put one on a 3-foot table and stand near, and you saw the target as it would look from about 10,000 feet or nearly two miles up. At such a height, as in real flying, contour relief meant nothing, and a map would be as good. Most of our aircraft would cross the coast at about 1,500 feet; the glider pilots moreover would have to recognise their fields while their height steadily sank to nil. Crouch down and look at the model from lower? Yes, but the landing zones were anything up to six feet from the edge of the model; what use was this one remote offshore view? Were about 450 crews, in turn, to crawl over the model with their noses to the ground? Even so, how long would it take for such numbers to study and memorise it? Aircrew briefing was not to begin until two days before the operation. The soldiers were to be gated and briefed nine days beforehand, and the glider pilots were expected by the Division to be briefed with them, but since they were crewed up with the R.A.F., Chatterton rightly argued that tug and glider crews must be briefed together. It would be a rush job.

The answer was to go back to the old idea, tried out at Ringway, of a briefing film. Could P.R.U. send a Spitfire low over our routes with a movie camera? They could not, because for security's sake, if the aircraft were shot down, for every foot of film exposed in the real assault area, the Germans must find several feet that had been exposed elsewhere. Only a fighter could be asked to cross the coast at 1,500 feet in daylight, but no fighter could carry enough film. We would have to film the model. The camera must somehow fly over it with its wide-angle lens just above the surface (about 3½ inches for 1,500 feet). There were seven landing zones, and variations in the runs-in to each; no two stations would have quite the same task; so the camera would have to fly dozens of different sorties. To set up a model and light it, get or make some sort of travelling boom for the camera, shoot and process tests and then final films, cut the material with its titles and maps . . . all this could hardly take less than three weeks. So the first model must be delivered by D minus 24, and this Medmenham promised.

Holly agreed the idea, but he didn't think SHAEF would; nor did they, fearing a breach of security. At this stage Medmenham, worked to death, warned us that we would get only one copy of the model. That clinched it, and the film was agreed, with the proviso that every foot of it must be processed unseen by any eye but mine. Meanwhile the titles and maps could be filmed, also an animated cartoon in which the terrain was recreated, feature by feature, and drilled into the memory. The camera 'gallows' for this had to be built from brackets filched from under the flaps of the Air Commodore's desk; he must have wondered why these no longer stayed up. Where, in these overcrowded buildings, could we assemble a secret model 15 feet square? The one room just large enough was the Ladies' Anteroom in the mess.

> . . . can this cockpit hold
> The vasty fields of France?

War first, ladies last; the room was cleared, the windows masked with tracing paper, arousing the curiosity of the entire station.

The Waaf officers evicted into the small connecting room, sensing Top Secret activities, were almost too discreet, for as I came and went they would avoid even bidding me good morning, until they met me again two doors away. (Like the old English convention observed when meeting near the water-closet.) None of the little team so far briefed was free to help, and from the moment of unpacking the first crate from Medmenham, I was alone with the job I had wished upon myself. First I unpacked five yards of French coast in bath-mat, then my heart sank as I came to the hinterland: a set of 'photo-skin' models in an entirely different style. The bath-mats were in a few simple quiet tones, the photo-skins were in full bright colour, making a glaring junction. Not only did they stand inches higher than the bath-mats, they didn't even fit laterally, unless you nailed the rubber down at one corner and stretched it. There seemed no hope of blending the two parts of the model so that it would stand up to the close scrutiny of the camera, with its colour film. So thanks to me, we now had neither enough models, nor a film. I went out and had a drink.

I had to have help, and a chippy-rigger was reluctantly allowed in to work while the model was veiled in paper. As he hammered, a sheet of paper slipped, and for perhaps ten seconds revealed a few inches of coast. Months afterwards, the Engineer Officer told me that his chippy had come to him in great distress. By astronomical chance, he had spent a holiday at tiny Franceville-Plage, and in those seconds recognised it. —What was he to do? Luckily the officer knew his man well enough to answer —Nothing.

The model had come some days late, and now the hour allotted for setting it up became two days. Salisbury was scoured for plasticine, and unpacking my oil colour box for the first time since optimistically bringing it to war, I daubed hundreds of fields, blending the junction till it looked less like an earthquake fault. Medmenham would not have approved the result, but it would have to do. A backcloth had to be painted, and merged into the premature horizon of the model. The power circuit now proved unequal to ten photoflood lamps, blew up, and was hastily rewired. Fluctuating daylight came in to upset the colour balance. The camera set-up was pure Heath Robinson: a stout timber joist was cantilevered from a rickety table weighted with scrap-iron. Along this joist, smoothed and greased, a sliding box affair carried the 16 mm. camera. String, Meccano pulleys and a little crank handle imparted a more or less steady flight. Half way to the target, the clockwork would run down; the camera had then to be flown back to base, rewound, returned to the marked point, and restarted by means of a hooked pole. Flown below 1,500 feet, the camera tended to knock the trees down, and this would prevent completion of the important glides into the little fields by the bridges. But 6th Airborne had an accurate large-scale model of these, and I went over to Milston to film it in the secret garden. There I was met by an alarming sight, for on the lawn was the six-foot General Gale, knees fully bent, squatting on his heels and waddling to and fro, his knuckles on the grass like a gorilla's. —How high am I? he shouted. I was unnerved for a moment, then saw the model behind a bush, did quick mental arithmetic, and answered —About 1,200 feet, sir! When he had gone, I borrowed a table for the model, and waiting for a cloud to pass, I noticed some print on the clean whitewood of the table-top, idly read it . . . '5 Para Bde Group . . . . area BENOUVILLE-RANVILLE . . . battery at 107765 . . .' somebody had put down a wet stencil, and half a page of operation orders was fully legible; that table might have gone anywhere. I sent for a Security Officer, and while I took my films, there was no mean flap going on. As I left, they were trying to wrap the wooden document in an impregnable brown paper envelope, and to close all the gaps with sealing wax. I felt some sympathy for the wretched orderly who had fallen into this error.

Kodachrome film is processed automatically, reel joined to reel at one end of a virtual tunnel, separated at the other. It is first visible when it emerges into a well-lit glass drying cabinet. For hours I sat there, locked in, feeling rather silly to have had to carry a loaded revolver, watching the crawling ribbon: a hundred feet of baby on the lawn, two hundred feet of flower beds (movies ought to move), then a TOP SECRET title, and the run-in over Ouistreham . . . then more babies and flower beds. (It had not been easy to get Kodachrome for our job, because there was a war on.) I had learned to spool off the film, and work the cleaning and buffing and waxing machines. I brought the last retakes away four days before the first briefing, and began to edit the film.

—Who's emptied my ashtray? I shouted excitedly next day in the War Room. —Where's the ash?

—In the cinder-bucket. What's all the fuss about?

—My film clippings, you bloody fool! They might have been thrown out! Derek was scornful as I sifted a bucketful of ash and rubbish, an ounce at a time. —You don't think one of those scraps is going to give anything away? For answer, I handed him a two-frame fragment. It showed a map of the area, complete with all the D.Z.s and L.Z.s. We had long since discussed these frightening possibilities—what would one do, if one's taxi were in a collision, and one woke in hospital without one's brief case? and it never reappeared? The only answer was, we had agreed, to ring up SHAEF and tell them to start planning a new operation, then jump in the river.

Holly had lately ruled, that anyone briefed on 'Neptune' who wanted to fly on any earlier operation, must give an undertaking that in the event of a forced-landing on the other side, he would immediately destroy himself. (The Germans were believed to have a magic truth-drug.) There were no takers. At about this time came a peculiar incident: one of a 38 Group aircrew, on a sortie over the Continent, at a moment when nothing particular was happening, baled out without warning. The only comfortable explanation was that he might have misunderstood some order over the inter-com, but that seemed unlikely. He was never heard of again. Such aircrew knew no more of the coming operations than they could deduce from the training, but it was a disconcerting affair.

Louis Strange was back with us. Being a good starter-upper of unorthodox enterprises, on leaving his Parachute Training School he had commanded a novel fighter unit, whose Hurricanes were catapulted off from freighters out in the Atlantic, to shoot down enemy aircraft that shadowed the convoys; this being done, the pilot baled out into the sea, and the Hurricane sank. No doubt Louis had been the first to try it. A Wing Commander at the moment, he was the 46 Group liaison officer at Netheravon. When the senior commanders were briefed by Holly at the end of April, without being told precise targets or dates, Louis as so often before was naughty. Told that his Dakotas were to cross the enemy coast at 800 feet, he pointed out that the coast was defended, and advised 2,000 feet. —Eight hundred feet, repeated Holly sternly. Louis began to argue. I was too far off to kick him under the table, and he went on to invite and receive a firm rap. As we left he was still muttering —I'm going in at 2,000 feet! All I dared say was —Wait and see! for his dropping zone 'V' was only three miles inland, and even 800 feet hardly left time to get down to dropping height. Later, when all was known, Louis was due to see the model. It seemed to me fair that the leg of this habitual leg-puller should be pulled now. Caen, at one corner of the model, had got a bit knocked about, in the course of leaning on it, and there were plenty of loose buildings. Using his marked map to locate D.Z. 'V' on the model, Louis found it to be the heart of a minor industrial sprawl, all sheds and oil-tanks, with factory chimneys on the approach. He was about to storm out and look for Holly, when I persuaded him to check his map against one on the wall, thus turning his back. When he came again to the model, 'V' had reverted to a pristine group of open green fields. —Factories, Louis? You must have been looking at the wrong spot! I thought you said you were good at map-reading?

In April all Allied Airborne troops were pooled (at least in theory) and controlled from a new H.Q. Airborne Corps at Moor Park near Rickmansworth, an eighteenth-century mansion where bosomy goddesses and fat-bottomed cherubs looked down on bare boards, and tables-folding covered with army blankets. The Corps had Airborne Control Sections at each airfield. At the same time, all Allied aircraft intended for Airborne work came under the control of a new Allied Troop Carrier Command Post in a big Edwardian house at Eastcote, near Harrow, where Holly sat in equal state with Brigadier General Williams of IX Troop Carrier Command. Chatterton had representatives, all of them glider pilots, at both of these H.Q.s. This pooling of resources and command did not mean very much, since the Allied operations were as yet quite separate, and our Eastcote set-up was rather unreal, not much more than a telephone exchange between higher formations and Netheravon, where Group operations were still controlled. The spacious Ops Room (once a squash court) was never really used as such. Eastcote was mainly useful, after 'Neptune', as an Allied air planning H.Q., handy to Moor Park.

In May, the Germans moved Panzers in to Normandy; an infantry division and a parachute regiment on to the very zones chosen for U.S. Airborne, whose plan had to be revised, and the drops brought nearer to the coast. A final check of glider loadings now revealed that the weight of an infantryman with his equipment had been underestimated, and despite some reductions, the Horsas destined for the bridges and the battery would be landing with loads well above the limit. They were hurriedly fitted with arrester parachutes.

A fortnight before D-day, all but essential flying ceased, to ensure full serviceability. A team of shapely Waafs was trained and sent out in pairs, to haunt the pubs near the airfields, tempting the airmen to breaches of security; it is to be hoped that they did not pay too high a price for such information as they gleaned, for it was virtually nil. A week before D-day, all Airborne units were sealed in their camps and airfields; they might write letters, but these would not be posted until after D-day. A Flight Lieutenant, who had written to tell his wife how he wanted his child brought up if he did not return, craftily posted the letter some miles from his camp. The security branch was crafty too, and even civilian mail was being impounded within some 50 miles. He might have got five years' jail, but it was a good letter, and he escaped with a telling-off, to do well on D-day and survive.

By the end of May, the Parachute School at Ringway had celebrated its 200,000th jump; nearly 1,500 glider pilots, nearly 2,000 Horsas and over 100 Hamilcars were ready. On D minus 3, new photo cover was taken and issued all round, and final briefing began. In addition to the film, we took stills along each track, printed like comic strips, and every crew had a copy, as well as a special target map. It was June before the film was in the can, and the Air Commander-in-Chief and the Generals came to the preview. For all its imperfections, it was better than I expected. (Some weeks later, an American aircrew who had been flying daily over the area came in during a showing, and at the end, asked from what aircraft the pictures had been taken.) I toured the eight stations, accompanying each screening with a continuous patter, leaving at each station the reels that specially concerned it, and a script that they were enjoined to repeat word for word, so that each pilot almost knew the route by heart —Crossroads, field with a round clump of trees, village with a pond, landing zone coming up now, go in between the two houses! For the night operations, the show was repeated with a dark blue filter over the projector lens. One thing I had overlooked: nearing the first airfield, we were halted at a road block.

—Your pass, sir?

—Oh, dear! Er . . . I'm going inside to ask for one.

—Very good, sir! and I am saluted in.

Still too intent on other matters, I am stopped again on the way out.

—Your pass, sir?

—They didn't give me one. But you know me, of course; you passed me in.

—Very good, sir! and I am saluted out.

The last show, on the second day, was at Tarrant Rushton. I was just coming to the end of the sixteenth repetition, when my voice went; for hours I couldn't even whisper. I found the silence delightful.

It was an old saying, seized on and produced as fresh by every newcomer, that at Netheravon 'orders seem to be just a basis for discussion'. At a late hour came an order that I discussed and argued in vain; had Holly been there I would have appealed to him: the captains and navigators must see the model after all. They would number about 700. Even when it had been agreed to reduce this impossible crowd to Squadron and Flight Commanders and their navigators, they numbered over a hundred. They were travelling to and from Netheravon when they might have been studying their maps and photographs; no proper identity check could be maintained as they milled around, and anybody in uniform could have joined the crush, taking turn to squeeze past the table for a hasty glimpse. Fortunately no competent spy seems to have been around to take advantage of this rash performance.

We had never thought two days adequate for briefing, and the bad weather that caused the postponement of 'Neptune' for 24 hours came as a godsend. Complex as the tasks were, every man should know his part now. An hour before midnight on June 5th, six Halifax tugs took off from Tarrant Rushton with the gliders for the bridges, and six Albemarles from Harwell with the pathfinders. The good people of Littlehampton and Bognor Regis stirred in their sleep at the sound of a few aircraft passing over, unconscious of missing a historic sight. Feeling that all was going to be well this time, we resisted the temptation to hang around the Ops Room, and joined the gentlemen of England now abed.

The first photo cover to come in next day was encouraging, and by the evening of D-day, despite some failures, an overall success was evident. Most spectacular was the result at the canal bridge, where all three gliders had landed precisely as briefed. The leader, the only one to use his tail parachute, touched down 50 yards from the apex of the triangular field, knocked over a cow and a small tree, wiped off his nose-wheel in the outer wire, and came to rest with the nose buried in the inner wire by the bridge. The side exit had jammed, and the troops dashed out through the broken cockpit with grenades and Sten guns, closely followed by the other two platoons. They were met by machine-gun fire, and an officer was killed, but within five minutes the battle was over. Of the three gliders detailed for the river bridge, only one failed: the tug pilot got off track in cloud, and had to order a blind release, about 5 miles too far east. The glider did indeed land at a bridge, which the platoon promptly captured, but it was one of those on the river Dives due for demolition. Of the other two, one was close to the objective, the other just short of its field, and the bridge was taken almost without opposition. Both bridges had been prepared for blowing, but the charges had not been placed. Soon the little bridgehead was reinforced by an advance party of 5th Parachute Brigade, who had been dropped with perfect accuracy by Wing Commander McMonnies, O.C. 296 Squadron, the veteran of Ringway days and of Sicily.

The pathfinder force, two Albemarles for each of the three zones 'K', 'N' and 'V', all reached the target area, but they met partial failure that was to affect the main force following them. One of the 'K' aircraft dropped on 'N', where the wrong coded beacon was set up, and some troops were wrongly placed before the mistake was realised on the ground. On 'V', both sticks dropped accurately, but the Eureka beacons were damaged in the drop, and useless. Largely for these reasons, some of the main parachute drops, 50 minutes after midnight, were scattered, but about two-thirds of the force had assembled within an hour-and-a-half, and there was no shortage of arms from dropped containers. At the same time, 17 Horsas were to land with anti-tank guns, taking their chance of the obstructions being cleared. Some intended for 'K' were misled by the misplaced beacon, and 'V' was obscured by smoke from the bombing at Merville. Only 5 landed on the L.Z.s, not all of these the right ones. Meanwhile the sappers were at work on 'Rommel's asparagus', under intermittent shelling and machine-gun fire. The obstruction poles, they found, were wired together, and live shells and bombs had been balanced on top of them; but within about three hours, glider landing strips had been cleared and marked. Before dawn a bigger glider formation came in with heavy weapons; Major Bill Griffith, the Test cricketer, piloted General Gale and his staff. 68 Horsas and 4 Hamilcars had taken off, about 14 had cast off or broken their ropes in cloud, and several were hit by flak. 46 Horsas and two Hamilcars landed on the L.Z., in a cross-wind, many colliding with others or with obstructions. But order was emerging from seeming chaos, and soon after dawn 5th Parachute Brigade had attained all its objectives. At daylight the isolated force, now under constant fire, was heartened by the tremendous sound of the preliminary bombardment of the beaches. Ten of the gliderborne anti-tank guns were in position, and counter-attacks supported by tanks were driven off. At noon, the sound of distant pipes heralded the approach of Lord Lovat's commandos, who got through some five hours ahead of the seaborne force, and green berets mingled with red.

Meanwhile the Merville battery had been silenced, in a gallant action by a mere 150 men of 9th Parachute Battalion, all that could be mustered after a scattered drop. The three supporting gliders were unlucky. One parted from tow in cloud over England. On another, the arrester parachute streamed in mid-Channel, stalling both glider and tug, and though they recovered without breaking the rope, the glider tail was strained, the controls sloppy, and half of the undercarriage gone. Both gliders were hit by flak at the coast, and troops in one were wounded. The battery was expected to be a smoking ruin after attack by a hundred Lancasters. (I had 'bombed' the battery on the model accordingly, before making the briefing film, and had pointed it out as an unmistakable landmark.) There was indeed a smoking ruin, but it was not the battery, it was the village of Merville half a mile away, and this misled the glider pilots. The attacking force on the ground, short of equipment, could not set up Eureka, nor fire the agreed star-shells to mark and light the target. After four circuits on tow, still uncertain, the glider pilots released; one got within 50 yards of the battery, one was about 700 yards away, but the troops were too late to join the successful action, though they and the glider pilots were engaged in others. Meanwhile the 3rd Parachute Brigade, despite inaccurate drops, had blown four of the five bridges over the Dives. A major and seven sappers, who had landed in a glider miles from the objective, set off in their Jeep, fought their way into the town of Troarn, and blew the fifth and most important bridge there, returning on foot. A glider was hit by flak, and crashed beyond the Dives. The seven occupants swam the river, moved through the enemy for three days, blew up four lorry-loads of Germans and a staff car with grenades, and fought their way back to the L.Z. in a march of 45 miles.

Counter-attacks went on until evening, when the Air Landing Brigade came in, about 7,000 strong. Of 256 gliders, 246 landed accurately, under mortar and shell fire, over a period of about 30 minutes. Two pairs collided over the L.Z., one of each pair landing safely. A Hamilcar buried its nose in the soil, which jammed the exit, was hit by shell fire and began to burn; the tank driver started up his engine and smashed his way out. Not all of 'Rommel's asparagus' had been picked, but one glider pilot at least took advantage of the German passion for regularity: just clearing the tops of two poles, he immediately dived with full flap, hit the next two so centrally in the gap as to lose both wingtips without swerving, and before coming to the third pair, had stopped.

The Air Landing Brigade was Gale's strongest unit, and with its arrival almost entire, the holding of the bridgehead was hardly in doubt. Soon after midnight, after 21 hours of hard fighting, the position was consolidated, and seaborne reinforcements made contact. The British beach-head had not yet linked up with the American one to the west, and (as we learned later) a Panzer unit was setting out along the gap, towards the coast, to keep the Allies apart, but its commander, seeing the awe-inspiring glider formation coming in, stayed his hand and lost his opportunity. A German aircraft dropped a 1,000-lb. bomb on one of the Orne bridges, but it did not explode. No German fighters appeared in the area; they were seeking a 'ghost stream' of imaginary British bombers, simulated by anti-radar devices, far to the east. By the evening of June 7th, 6th Airborne had secured all its objectives save one strip of coast. Thereafter they held their ground for ten weeks, before breaking out to drive the Germans to the Seine.

Some days after the landings, a Frenchman was observed digging holes on one of the landing zones. Questioned, he explained that the Germans had paid him to erect obstruction poles.

In the night operations, only seven parachute aircraft were lost, no tug aircraft; one glider in five was missing. In the day operation, one tug crashed, one ditched; the gliders were more than 95 per cent. successful. 34 glider pilots, or about one in twenty, were killed, including those who fell in action on the ground. On June 8th the glider pilots were withdrawn through the beaches. In the first two days, 6th Airborne had 800 casualties. In all, the Allied Airborne formations had landed about 20,000 troops. Whether the seaborne force could have maintained its foothold without the Airborne spearhead and shield, and what casualties it would have suffered, may be left to the imagination.

# 14 SIXTEEN ABORTIONS

We moved our little planning set-up to Eastcote. The place was perhaps a bit too comfortable, with its quilted gold bedspreads, its billiard room, its stream running through a rock garden. There were only two gardeners, the head and the 'boy', but the hothouse was still working, and the right approach to the 'boy' (who was nearing sixty) would sometimes win a warm furry peach. The swimming pool was green with disuse, but a steam-jenny borrowed from Northolt (where it cleaned oily hangar floors) soon made it usable. It was pleasant to be able to throw parties for Airborne troops about to go into action, but for those who merely thought up brave things for others to do, a rather more monastic régime might have been easier on the conscience.

> If I were fierce, and bald, and short of breath
> I'd live with scarlet majors at the base
> And speed glum heroes up the line to death . . .

but in Airborne, the scarlet majors went up the line with the others. The American cuisine was good, but rich. On General Williams' birthday a great cake was produced, with fat strata of butter icing. A reluctant Holly was made to attend the cake-cutting ceremony on the lawn, and stand in a row to be photographed with the kitchen staff, though he did manage to duck behind a cook at the moment of exposure. For days the cake stood dwindling, on the mess table. Hardened as I was to American eating, I did blench when my neighbour mopped up his plate of beef stew with a thick slice of cake on which he had spread peanut butter.

From D-day we had been keeping two operations simmering on the hotplate, one small, one large, ready to be delivered anywhere along the Allied beach-heads where things might go agley in the first days. The large one looked likely to be needed when the U.S. Airborne ran into trouble in the Cotentin. The division that landed just inland of the beach had been put down fairly accurately, but the other had been scattered over an area 25 by 15 miles. The terrain for the relief operation, near St. Sauveur, was grim for gliders; the weather failed, and the operation was cancelled—an ending that was to become familiar. The next, 'Wild Oats', required 1st Airborne to land round an airfield just south of Caen, to complete an expected encirclement of the city. New photo cover at a late hour showed flak guns right on the landing zones. An unpleasant decision was avoided when the Germans concentrated in strength at Caen, and the operation was postponed, and not revived.

Attention now turned to the desirable port of St. Malo, where 'Beneficiary' was to be an Airborne lodgement followed by a seaborne landing. The whole of 1st Air Landing Brigade was to glide in by night, but there were no fit fields, so we chose the beaches, below high-water mark. The surfaces were an unknown factor, until the appropriate counter at Peter Robinson's produced an exiled Breton who confidently outlined the firmer sands on our map. The Navy, not liking this heavily defended area, asked for an undertaking from Airborne that when the sea landings began, not a shot would be fired. As this could not be given, the operation was off. We moved our stereoscopes westward to Lannion, southward to Rennes, then in mid-July back to Caen, where 1st Airborne was to open a gap for a break-out by Montgomery's armour. Another cancellation, then back to Brittany with a plan to blow a viaduct at Morlaix, to delay German reserves moving east to plug an American break-out. Again our plan was overtaken by events.

So many areas for possible operations were under study, that I took over the huge unused map table in the middle of the Ops Room to assemble photo-mosaics. About five hundred prints had been arranged, when we were asked to clear away the lot; the room was urgently needed. Cameras and lights were set up, and the Commanding General began an inspiring address to his staff, about the great mission now imminent. Thanks to their unremitting efforts, he said, it could not fail; if it did, they could not be to blame. He wished the combatants God speed. It was splendidly done; but for me, if not for future audiences in America watching historic documentary film, the impact was weakened by the fact that the operation ('Neptune') had been over for some weeks. But it was just that our Allies did things differently. One of their official cameramen displayed, on the notice board at Eastcote, a dramatic battle-action photograph of two Hadrians, diving in neck and neck to land among shell-bursts, while troops lurked in foxholes in the foreground. It must have been widely reproduced over there, but not, I hope, over here; others too might have recalled seeing the same picture (without the gliders) captioned as showing an exercise on home ground, or have looked at the gliders closely enough to spot that their numbers were identical.

Despite the surrender of Cherbourg, the port would not be usable for some time, and the Navy now looked to Brest. 'Hands Up' was to be a landing round Vannes airfield, in support of a westward drive by General Patton. Late one evening, the duplicators at Eastcote were churning out the operation orders, when a news-flash came: Patton's armour had already raced through Vannes; he had sealed off the peninsula, and was well on the way to Brest. This was our seventh cancellation. Apart from the complexity of the orders, the mere physical production of a gross of copies of a 50-page illustrated booklet, at top speed, had always taxed the tiny team allowed by security to handle it. One misprint, one missing page, could have fatal consequences (though the only misprint I recall was a reference to Hadrian gliders which were to cross the Channel 'each carrying a Jeep and a diver'). I judged it right to send the weary Waafs to bed; they could run off file copies in the morning, while we turned to operation 'Lucky Strike'. But our current Air Commodore was a stickler for orders. —Yes, the operation was officially cancelled, but we had been ordered to get out orders for it, and we had not been ordered not to, so we would get them out as urgently as ever. Once again we laid out the stacks of pages round the edge of the Ops table; once again like Fabre's caterpillars we marched round and round, binding in both senses, picking up pages 48, 49, Map 4, 50, Appendix A, Overlay B . . . to cheer us all up, I typed out a quick Appendix K, to update the orders to the changed situation: glider pilots landing at Vannes must avoid the flagpole flying the Stars and Stripes, the hot dog stand would be marked by Eureka on channel AB, and suchlike simple humour. It got its laughs, and eased the tension a bit. Derek thought it worth a stencil, and had copies run off. I did not learn until too late that he then slipped them in to be bound with all the outgoing orders. In the unlikely event of those orders being read, even in the Imperial War Museum, Appendix K is going to puzzle some historian.

A week or two later, a French parachute regiment forming at Vannes found itself unable to pay its troops. The British Treasury produced a great cake of new French notes in a brown paper parcel, and we were asked to fly them over. This seemed a good opportunity to have a look at some of the previous landing zones, to check the accuracy of the 'terrain appreciations'; or perhaps an excuse for a brief change of scene. It was a mistake to put the parcel on the grass at Northolt while our Anson warmed up; the wrapping suddenly tore in the slipstream, and only a quick tackle prevented four million francs being distributed to the inhabitants of Ruislip. From the air, the busy Mulberry harbour at Arromanches was a stupendous sight, but the shattered towns were depressing. I knew Vannes of old. We took tobacco, chocolate and soap, as beads for the natives, who were friendly, and some of that four million francs came back as drinks for us. The landing zones looked all right, but I was worried by one excellent clear area that I thought I must have overlooked, till I checked with the map and recognised Ste. Mère Église, where we had picked these very fields for the Americans in the COSSAC period, eight months ago. This war was dragging out somewhat.

In mid-August the retreating German army was heading for the 'Paris-Orleans gap'. 'Transfigure' was designed to cut them off by landing two Allied Airborne Divisions near Chartres. The terrain was excellent; between dense forests that offered cover, and a clear map-reading pattern, was country so open that air-strips might be made for the flying-in of reinforcements in the Wingate manner. 1st Airborne sent a seaborne element ahead, to be flown in from French airfields later. The main force was ready on the home airfields, but again the pushful Patton beat them to it. Part of the Division, and a lot of its stores, were now on the wrong side of the Channel.

Meanwhile 6th Airborne, breaking out from the Caen bridgehead in mid-August, were close on the Germans' heels, when they were held up on the river at Pont l'Évêque near Havre. General Gale adopted a novel move, *reculer pour mieux sauter*: his troops would retreat to air bases in France, fly over the river obstacle, drop on the heights beyond, and support an assault crossing by attacking from the enemy rear. But once again, planning and execution lagged behind in a situation that changed hourly, and the generals lost another opportunity to 'hit 'em where they ain't'.

Over and above these official planning tasks, we were plagued by amateur strategists. When a call from some Airborne officer asked for an immediate report on some new landing area, one might not know whether the plan had any higher authority, or was a mere private enterprise that the caller hoped to sell. It gave me some satisfaction, when a Royal Engineer rang up asking urgently for landing zones and an air plan for a *coup de main* assault on a bridge over the river Rance, to call him back ten minutes later to say that much water had flowed over his bridge in the past week. From time to time my khaki counterpart at Moor Park would tip me off not to waste time on area A; that the bush telegraph advised B or C; we would explore one each and swop overlays; all this at a time when A alone was under official consideration. The week after, I might give him a like tip-off. The security mania still threw too much work on too few; it could have been relaxed after D-day. In my experience it was not the clerks who talked too much; the worst gaffes came from British and American Army officers at and above Colonel level. Derek and I still had to waste time drawing maps and diagrams; few of these in the orders or even in the subsequent reports were drawn by any other hands, for want of a few security-vetted assistants. But better too few than too many; I believe our little team was as efficient, and more speedy, than the unwieldy Allied planning set-up of later months.

Group Captain Hockey, who joined us just before D-day, showed what could be done by 'the ideal committee, of two persons, one of whom is absent'. He was responsible for the dropping by 38 Group of S.A.S. and S.O.E. parties, before and after D-day. At Ringway in 1940 there had from time to time been sundry civilians in the mess, bearded professors, young and middle-aged ladies; we had pretended not to see them going to and from the Parachute School, special agents all. (Only the enemy has 'spies'.) Others were flown across, or brought back, in small aircraft landing at night on improvised strips. That had been Hockey's job, though I never heard him say so. A lone wolf, he did not take kindly to staff work.

—Settling down yet with 38 Group, Hockey? asked Holly.

—I think so, sir, was the reluctant answer—except that every now and then a wave of nausea *does* come over me!

Hockey laid on these little operations with a minimum of paper work. In the month before D-day, there were about 200 of them. Whenever possible the routes had been taken over the Caen area, to accustom the crews to the landfall, and the Germans to the traffic. (Unknown to the aircrews, Hockey was passing on check reports on their navigation that came from agents on the ground. These helped in the selection of Pathfinder crews, a choice that caused some heartburning: the Squadron Commander is not always the best map-reader.) The dropping or landing zones, which Hockey would sometimes ask me to look at, were seldom chosen more than a day and sometimes only hours ahead. Not all of these were single drops: a certain amount of paper did have to be used, for instance, when 42 aircraft from 5 of our airfields went to 22 different D.Z.s, while 11 Hadrians with troops and Jeeps landed behind the German lines in Brittany, all on the same night.

My Nissen hut was overflowing with obsolete photographs and maps, and I had two truckloads taken away as Secret Waste, some measure of our labours. One truck was carelessly loaded, and there were alarming reports of Top Secret maps fluttering along the road to Pinner, which proved true, but these being target maps for D-day, and it now being D plus 90, panic was stilled.

But a more subtle and unpredictable breach-of-security trap was being laid for me, and my barely evaded fall into it might have had nasty consequences. Hockey gave me a lift to Moor Park in his black Morris Ten. I had a roll of maps covering the area of current interest to Airborne. He parked immediately alongside the main portico, and walked towards the S.A.S. huts while I went into the main building. When I came out, I sat in the car to await him. I fell into conversation with a Brigade Major, and paced the gravel with him, never ten yards from the car in which my maps lay on the back seat. As we talked, Hockey in the car drew up beside us, I got in, and we drove back to Eastcote. When we got out, the maps were gone. One reads in fiction about sweat breaking out on the brow at such moments. It literally does. When we had worked it out, the trap proved a cunning one. As I went in at Moor Park, Hockey changed his mind, walked back to the car, and drove to the S.A.S. huts. In the next few minutes, another black Morris Ten pulled into the very same parking space, and it was in that car that I had waited. It was close behind us when Hockey drove up, apparently from that spot. The guard at Moor Park seemed to take minutes to answer the telephone, hours to look for the car just outside. If it had gone, it might be going anywhere, belong to anybody ... but it had not gone, and the guard took charge of the maps. All very well to tell oneself that they had never been outside the guarded grounds, that the coincidence was unfair—it was the sort of thing for which people were rightly shot. But having no taste for that, I deferred my confession ... for over twenty years.

One night at Eastcote we heard an aircraft going low overhead, with obvious engine trouble. Assuming, rightly if without good reason, that it was 'one of theirs', we cheered to hear its engine fail altogether, then a crashing explosion. It was in fact a V-1 or flying bomb. When London had been receiving these for about three weeks, I dined with Derek Wallace's parents. His father was getting a bit old for his round in the city, and he came home wearily from a fruitless day: his first place of call flattened, his next evacuated by an unexploded bomb, his lunchtime restaurant windowless, his homeward train delayed ... but I wished all Germany could have heard his only comment —Do you know, Derek, it's getting rather *tire*some! I wished too that we could have told Mr. Wallace that we were working on operation 'Boxer', designed to occupy the V-1 sites. The same troops were still standing by at the airfields, as they did for 'Axehead', to capture bridges over the Seine; 'Linnet', just over the Belgian border; 'Linnet II' to block the Maastricht gap to the retreating enemy; still the higher commanders failed to foresee in time a single opportunity to use this flexible instrument of generalship. A costly weapon too, it might soon get rusty.

At about this time, I was leafing through some new air cover when I sensed —I have been here before! A pattern seemed familiar: we were back at Fort Eben Emael on the Albert Canal, going the other way.

'Infatuate' (what bloody awful titles, still!) was an assault on the island of Walcheren. The so-called landing zone had the sea at either end, soft surface, and deep dykes across it. We turned it down flat —Tell it to the Marines! which in due course they did.

'Comet' was a code-name about which one junior Ops officer, and the Signals Section at Eastcote, were to become very sensitive. This officer, more skilled with the control-column than with the pen, sent out a widely distributed signal on the subject of what he spelled 'Commet'. It was decreed that proper form demanded a correction, and this went out to all concerned. Unfortunately, the teleprinter operator now slipped up, and about fifty recipients (re-check their deciphering as they might) puzzled over the message:

... FOR OPERATION COMMET READ OPERATION COMMET...

The only possible further correction must have read:

... FOR FOR OPERATION COMMET READ OPERATION COMMET READ FOR OPERATION COMMET READ OPERATION COMET...

Even the stickler for form could not face that, and he agreed that no further action be taken.

It was at this stage, our sixteenth abortive plan in three months, that one of our seniors became pardonably confused, and after a discussion over the 'Comet' photographs that did not seem to us to make sense, it dawned on us that he had got one operation behind; as Derek put it later —Here we are on the Rhine, and poor old B is still fighting his way through the Maastricht gap!

I have remarked on the security-mindedness of the 'other ranks', but it must be admitted that within two minutes of a scrambled telephone message to Eastcote cancelling 'Comet', a note came to Ops from the kitchen asking for confirmation that midnight sandwiches would not be wanted.

The American Airborne forces still in Italy were going through the same exasperating experience as ourselves: from March to May, over thirty Airborne operations were planned for them, and then cancelled. Not until August did their opportunity come at last, in Operation 'Anvil', the invasion of the South of France. 51st U.S.T.C. Wing, our one-time parent unit, took part with 125 parachute aircraft, 26 Hadrians, and about 36 Horsas flown by British pilots. Based on Rome, they flew to Corsica, and thence to a point near Fréjus on the French Riviera. There they found the coast blanketed in mist, returned to base, re-marshalled, took off again, and reached the L.Z. again after a total of six hours on tow. Some of the pathfinder drops were as much as 20 miles out, and the force assembled on the ground at only half strength, but the glider landings were good, and two artillery batteries were delivered to support a successful seaborne landing. Within a month these forces had joined hands with those that invaded from Normandy.

Meanwhile, yet another and bigger Airborne H.Q. had come into being. First Allied Airborne Army, commanded by Lieutenant General Lewis H. Brereton, with Browning as his Deputy Commander, had been set up at Ascot. (Brereton had one unquestionable claim to the job: he was the originator of the Airborne idea. In World War I he had put forward a plan to break the deadlock of trench warfare by flying troops in bombers to land behind the German lines. This had not, of course, appealed to the General Staff, who had complained only a few years previously, on pre-war manoeuvres, that 'the aeroplanes completely spoiled the war'.) The further multiplication of staffs and division of responsibility did not seem to improve the efficiency or speed of planning. Where co-ordination was needed, as in the Allied flight plans, Derek Wallace was still quite capable of arranging this with one opposite number. Derek's first visit to Ascot was unluckily timed, for on going there to discuss such a flight plan, he found the offices deserted, and before he could do his urgent business, had to watch a prolonged musical parade that included long-legged Drum Majorettes; hardly the sort of show that Holly would have organised at 38 Group. But as I have said, it was just that the Americans looked at things differently; an R.A.F. mission returning from the States reported that at an official demonstration of the latest troop-carrying glider, it did not carry soldiers, but a jazz band, which as the glider came in to land was heard through amplifiers playing 'Coming in on a Wing and a Prayer'. (In that mission, incidentally, was the same

Group Captain who had not been thrilled by my report on Sicily. He brought back from Washington, and handed to me, an American invention that he had admired and thought I might learn to imitate. I eyed him closely, but he was not being funny. It was my night target map of Syracuse, Augusta and Catania, of which a copy had been bound with that same report.)

As abortive plans piled up, the probability that the current effort would be wasted as usual, brought a dangerous temptation to relax, but we had always to assume that this one might be 'it'. For the troops and aircrews it was far worse; like playing Russian roulette. At the cancellation of 'Comet' the Division might well have grown restive. The stand-down signal came only four hours before take-off time, when the odds on going to war at last seemed high. The repeated deflation of courage must have been almost unbearable. But better bloody-minded than bloody-nosed; we knew later that 'Comet' was an unsound plan, for it gave to one division a task that eventually proved too much for two, with a third covering their rear. We thought the air plan practicable, though it included *coup-de-main* glider landings in the same class as those at the Orne bridges, demanded two lifts by all available aircraft in one day, and took them into an area said to be thick with flak. We were not qualified to judge the Army plan subsequent to landing. But one Army staff officer who was so qualified (virtually my opposite number) had the courage to denounce 'Comet', knowing that this must cost him his appointment if not his commission; he had at least the solace of being proved right. With the cancellation came orders to plan for operation 'Market' one week later: the same task, but with more adequate forces. This task, as briefly defined by Montgomery, was 'an Airborne carpet from Eindhoven to Arnhem inclusive'.

# 15 ARNHEM

In mid-September 1944 the German armies, after a long and hurried retreat from the Seine, were thought incapable of much further organised resistance. To everybody but them it seemed obvious that their war was lost. Their line was held by the remnants of some good divisions, still fighting hard, but they had few reserves and had lost much of their armour. Behind their backs, the 'last ditch' on which to defend their homeland comprised the Albert and Escaut canals, the lower Rhine, and the Siegfried Line. Montgomery, who had never accepted Eisenhower's doctrine of attacking everywhere at once along a broad front, favoured a bold concentrated northward thrust through Holland, turning east into the Ruhr to cripple the German war machine, and thence to Berlin. Incidentally this thrust would cut off the bases from which V-2 rockets were now being fired into London. Along this very narrow axis of attack, three major river crossings would have to be seized in advance, and simultaneously, by Airborne troops: the Maas bridge at Grave, the Waal bridge at Nijmegen, and the Rhine bridge at Arnhem, as well as five other bridges over minor waterways. (There was also a rail bridge at Nijmegen, and rail and pontoon bridges at Arnhem.) This 'Airborne carpet' had been the basis of the 'Comet' plan, but the only force then allotted for all three tasks was 1st British Airborne, some subsidiaries (a Polish Parachute Brigade, an American Engineer Battalion to build landing strips) and Browning's Airborne Corps H.Q. The whole Division was to be put down in one day, in two lifts, the first arriving before dawn. Of nearly 700 gliders, 18 were allotted to *coup-de-main* assaults on the three main road bridges. The engineers and the Poles would land in gliders on the second day. This plan was scrapped chiefly because the American aircrews were not up to the required high standard of night flying.

In the new plan, for operation 'Market' nine days later, the objectives were the same, but the force was almost trebled by the addition of two U.S. Airborne Divisions, one to drop in the Eindhoven and one in the Nijmegen-Grave sector, while 1st British Airborne dropped furthest in, at Arnhem. For Arnhem, 38 and 46 Groups undertook all the pathfinder dropping, glider towing and re-supply; the Americans undertook all the main parachute drops, and the later flying-in of engineers and defence units. The other sectors were all-American, except for the gliderborne British Airborne Corps H.Q. to be towed to Nijmegen by 38 Group. The whole operation would now be in daylight, but for want of aircraft, even the main drops and landings would have to be spread over two days, and re-supply deferred until the third. A break in the weather after the first day could be disastrous, but this was one of many obvious risks that had to be accepted.

The tasks in the three sectors were clearly interdependent. Control of the Arnhem bridge would protect the American forces from any southward attack, which must come down the one narrow road axis through the impassable polderland. Conversely, if the Americans failed to seize and hold their bridges, the British at Arnhem would be cut off. Their early relief by ground forces would be essential. A single lightly-armed division landed some 60 miles deep into enemy territory could not be expected to hold on unaided for many days. Inevitable enemy reaction would soon require the Division to concentrate within a fairly short perimeter around the bridge, but unless the landing zones were within this perimeter, part of the force would have to be detached to defend them until the second day's lift was completed, and the enemy might then prevent a reunion. Thus the distance of the landing zones from the objective was of first importance.

Only three areas offered any possibilities. About four miles north of Arnhem, beyond a dense belt of woods, was some rough heath and dune land, quite fit for parachute dropping and for limited glider landings, but this was an active military training zone, with an active airfield in its centre, heavily ringed by flak and ground defences. This we rejected as unsuitable. (Subsequent knowledge confirmed this, though it weighted the reasons differently: the flak risk had been overestimated, but the ground forces were far more formidable than predicted.)

Extending almost continuously southward from the river bank is a vast area that might be thought, from a glance at a small-scale map or even from a superficial view on the spot, to be ideal Airborne terrain, flat and free from walls or hedges. But all this is reclaimed, low-lying, soft polderland, cut up by countless ditches and banks into small fields, with very sparse road or track access. In a 3-mile radius from the bridge, only one group of fields deserved closer study: the 'Malburgsche Polder'. This was enclosed on two sides by power transmission lines, and ringed all round by a dyke 8 feet high. The flak map showed a battery of 6 heavy and 6 light A.A. guns on this perimeter, and the tugs would have had to fly on after release over the airfield area predicted to be thick with flak. If a tug had to jink, and shed its glider, or if the glider was shot down, they might just as well never have started. During deplaning and unloading (which often took half-an-hour) the whole area would have been under observation and fire from good cover on the higher north bank. We accepted the Malburgsche Polder as a D.Z. for the parachute reinforcements to drop on the third day, by which time the Division should be concentrated around the bridge and able to offer some protection, but Chatterton and his staff supported our view that it was quite unfit for mass glider landings.

The only really good air landing terrain was W.N.W. of the town. In Holland, an elevation of a few feet greatly affects the firmness of the surface and the need for ditches, and here the level rises above 65 feet, in large grass clearings in a wooded belt offering excellent cover for assembly. A high railway embankment intersected the area, but left ample spaces. The one serious drawback was that when sufficient ground had been chosen to accept the two successive lifts (and it was unlikely that many of the first could be moved to make room for the second) the line of landing zones extended from 2½ to 8 miles from the objective.

Command of 1st Airborne had been taken over by Major

General R.E. Urquhart, D.S.O.; this was his first experience in Airborne. We had thoroughly thrashed out the landing zone problem with his Intelligence officers for about a fortnight, when I went to Moor Park for a final agreement with them. My arrival threatened to spoil their plan to take an hour off for a well-earned swim, but the General hearing of this, sent them off and summoned me; thus I was honoured with a first-hand exposition of his thoughts about Arnhem. I found him alone in the garden, seemingly painting a landscape, but his easel held the battle picture. He was of course fully aware of the basic dilemma. Although his initial force, with the advantage of surprise, might assemble successfully at an objective so distant, the protection of the zones for the next day's landings would require all the gliderborne troops from the first lift, leaving only the lightly-armed Reconnaissance Squadron and 1st Parachute Brigade to hold the bridge for 24 hours. —We shall be too thin on the ground, he predicted, and he reopened the question of landing gliders on the polder, making me restate the pros and cons of the terrain. It was not for the Air side, not even for Holly or for Leigh-Mallory, to say whether greater losses would be suffered in landing on bad ground near the objective, in a flak area, than in fighting several miles towards it with a force initially intact. That was for Urquhart to judge, and he chose the latter. We were soon writing our orders accordingly.

The flight plan involved 22 airfields, and 38 and 46 Groups alone were to send off more than 350 gliders in each lift, to fly for 100 miles across enemy-occupied territory. Flak in the target area built up rapidly in the week before the operation, until the plotted flak circles covered all the landing zones. Anti-flak sorties, fighter escort and dummy parachute dropping were laid on (involving a further 2,500 aircraft) but we expected heavy losses. Eureka beacons were set up at all turning points in England, and midway on each sea crossing; the 21st Independents (whose late commander John Lander had a most worthy successor in the dashing Major Boyd Wilson) would set up Eureka and ground signals on the landing zones. A very promising 5-day weather forecast was issued, and on September 17 weather at all the bases was fit for the morning take-off.

Of the 320 gliders detailed for Arnhem, only one failed to take-off; another returned to base twice after engine failures;

both loads went next day. But before the English coast had been crossed about 24 went adrift in patches of low cloud. Only one crashed badly, and all but two of these loads went with the next lift. Over the sea, four were forced to ditch; one of these was shelled for two hours by coastal guns, but all four crews were picked up. The air column reached the Dutch coast at the ominously-named island of Over Flakee. Nine more gliders went down in Holland, mostly with broken ropes. Forty-four squadrons of fighters ensured that no enemy aircraft interfered. Flak was slight until the target area, where a few tugs were hit, but none shot down. The Independents, dropped accurately, soon had all the ground aids working, visibility was good and the landing zones were easily recognised. 286 gliders landed on or very near to their appointed fields. In the light wind there was some overshooting, and a few collisions on the ground. Two Hamilcars, ploughing up waves of earth and nosing in, overturned, and two 17-pounder gun loads were lost. During unloading there was some desultory rifle and machine-gun fire, but this did not give much trouble. The main parachute drop was very good. Urquhart later reported the air effort as being easily the most successful and accurate yet achieved even on exercises. Within an hour of landing, Brigadier Hicks' Air Landing troops were deployed in defence of the landing zone, and Brigadier Lathbury's 1st Parachute Brigade was on the way to Arnhem. Not one of the Arnhem aircraft had been shot down. In the Nijmegen sector, 35 of the 38 gliders carrying Browning's Airborne Corps H.Q. landed correctly.

Next morning, on the crucial day, the unprecedented total of 1,200 gliders were marshalled on the Allied airfields. Of these about 300 were destined for Arnhem, and due to land at 10 a.m. Not until then could Hicks' troops with their heavier weapons withdraw from the landing area, together with the new arrivals, to support Lathbury's attack on the bridge. But thick fog lay on all the airfields. At the American bases, take-offs were about two hours late, and at ours, where the fog was slower to clear, five hours late. There was still extensive cloud, and haze patches. Seven of the Arnhem gliders landed in England, two in the sea. Flak over Holland had so intensified that three towropes were cut by it, and 15 more gliders were lost in various ways.

A tug of 575 Squadron (46 Group) was hit, and the only pilot was killed. The second navigator, who was slightly wounded, took control, and agreed with the glider pilot to try to complete the mission. The glider's ailerons were then shot away, but it was towed back to friendly territory before releasing. Low cloud prevented the tug from landing at Brussels, so its amateur pilot flew home to Martlesham Heath, and there made a perfect landing. This was the first time he had ever attempted to land any kind of aircraft.

All the ground aids were working, and the gliders already on the ground confirmed the landing zones. Releasing in heavy flak, the glider pilots landed amid small arms fire. There was by now some congestion, and photo cover showed at least one in twelve damaged in the two successive landings. Sniping and mortar fire hampered the unloading, and a few gliders were badly hit, or had to be destroyed to deny their loads to the encroaching enemy. About fifty were burned out, but many of these had been unloaded. The main drop of 4th Parachute Brigade was very accurate, and four-fifths of the supplies dropped reached the troops, the rest being dropped high, and drifting into enemy hands. Only one tug and two supply aircraft were missing, though over 40 were damaged. But for the disastrous lateness, the overall air operation was over 90 per cent successful. Reports of the ground situation were sparse, confused and disturbing. Eastcote was in touch with Browning's H.Q. at Nijmegen, but he was out of touch with 1st Airborne only 15 miles away. We had some quick air photographs taken on an Old Boy basis, which showed that the Arnhem road bridge was still intact, but blocked by burnt-out armoured vehicles, and there was every sign of a battle in progress there.

On the morning of the third day, 1st Airborne was still cut off from all contact. The Americans had taken the bridge at Grave, and 5th Guards Armoured Brigade had crossed it, but the bridges at Nijmegen were still in enemy hands. The advantage of surprise had long been lost, and German reaction was quicker and stronger than expected. The proposed fly-in of the engineers, and the drop of the Poles immediately south of Arnhem, were postponed, and only the re-supply drops and the glider landing of heavy equipment were ordered. Low cloud and haze again delayed take-off, until afternoon.

Thirteen gliders went down with broken ropes, three of these in the sea and five in Holland. In another, both pilots were wounded but flew on to land as briefed. Near the final rendezvous several more were hit, and one shot down. Communications with the fighter bases on the Continent were so bad that they did not learn of the postponement, and no escort appeared. German fighters moved in to attack the gliders in the air, and then on the ground. The main landing zone was now almost in enemy hands. Some troops were forced to leave their loads in burning gliders, and there were many casualties, though a few guns from this lift reached the Division.

The supply drops were made in intense flak. The slow, low-flying aircraft, coming in dead straight in broad daylight, made easy targets, but they carried out the task with all the precision of an exercise. A Dakota of 46 Group flown by Flight Lieutenant Lord was hit during its run-in, and caught fire. The ground troops on both sides, it was said, paused to watch in awe while Lord turned to make a careful second run-in, the crew throwing the panniers out of the blazing aircraft until it went out of control and crashed. The commander of a Stirling squadron of 38 Group, with one engine on fire, which in a Stirling meant almost certain disaster, likewise completed dropping before climbing to give his crew height enough to bale out; some or all of them did, but the pilot, Peter Davis, (of Dunstable, Ringway, Haddenham, Sicily, Normandy) stayed at the controls until too late. Of 165 re-supply aircraft, over a hundred were damaged and 13 missing. This high courage was all to no purpose; the signals breakdown had prevented the Division from warning us that the supply-dropping zone was no longer in their hands. They had marked out a new one within their shrinking perimeter, but this was hidden by trees, and whenever ground strips were displayed, enemy fighters strafed the area. Nearly all the supplies went to the enemy.

That evening came the first clear report from Arnhem. On the first day, only a handful of paratroops had arrived at the bridge, and had occupied the north end at the same moment as S.S. troops coming from Nijmegen occupied the south end. A force of about 600 eventually assembled there, under command of Lieutenant Colonel Frost, but was out of contact and heavily engaged. Lathbury's other units were held up in actions between Arnhem and the landing zones. Urquhart was missing, and

Brigadier Hicks of the Air Landing Brigade took command, but he could make no contact with the Airborne units or with the outside world. All attempts to fight through to the bridge met bloody repulses.

By the third day, disorganised units were driven back to an area midway between the landing zones and the town, where troops forced to abandon the landing zones joined them in a small defensive perimeter. Urquhart was back in command. There was little chance now of their being reinforced by air, but they asked urgently for re-supply drops.

On the fourth day, 160 Allied aircraft were detailed for this task. Flak had still further increased, and the dropping height was raised to 1,000 feet. Nine aircraft were missing, 62 damaged, but a fair proportion of the supplies reached the beleaguered force. Frost at last contacted Urquhart, through the unmilitary medium of the civilian telephone exchange, to learn that he could hope for assistance only from such ground forces as might fight through from Nijmegen. But not until the fifth day, after a brave but bloody assault in boats across the river Waal by a U.S. parachute regiment, which reached the north end of the Nijmegen bridge while the Grenadier Guards attacked it from the south, was the road to Arnhem opened to relieving forces. It was at least a day too late: the mere 140 survivors of Frost's gallant party had been overrun, with their last stronghold building collapsing in flames. German tanks were already coming southward over the Arnhem bridge.

A signal that morning from Urquhart said that reinforcements and supplies were vital. We could at least send the latter. Even before plotting his six-figure map reference for a new dropping point, it was evident from the digits alone that the difference from yesterday's point was a mere 200 metres; grim evidence of the state of affairs, and an exacting task for our aircrews. Over a hundred aircraft were sent, in four waves. After the first wave, weather began to ground the fighters; the second wave had little protection, the third and fourth had none. For the first time the enemy fighters came in strength. They shot down seven out of ten aircraft from one squadron; a total of 23 were missing, and less than half were undamaged. Very little was retrieved from this costly drop. Casualties at this rate would soon put 38 and 46 Groups out of action. Air Commodore Darvall. A.O.C.

46 Group, flew to the battle area, consulted with Browning and sent a Dakota squadron to Brussels to carry out re-supply under local orders. This meant shorter flights, quicker turn-round and better fighter support. Over two further days of flying, this squadron lost only one more aircraft.

On the sixth day two infantry brigades were still fighting slowly along the exposed bottleneck from Nijmegen to Arnhem. The Division's perimeter was reduced to about 1,000 yards square. The Polish Parachute Brigade was dropped by U.S. aircraft on a newly-chosen zone south of the river, to secure a ferry crossing for a last attempt to link up with 1st Airborne, but the north end of the ferry was in German hands.

On the seventh day, after being delayed by weather till late afternoon, 123 aircraft dropped more supplies, but not much reached the tiny area, and despite strong fighter cover, six more were lost, and again half were damaged.

On the ninth day the last re-supply was flown from Brussels; nothing reached the Division, which was preparing for evacuation that night. When this was completed the next day (September 26th), of about 10,000 Airborne troops who had landed, just over 2,000 had returned, about 6,000 had been captured, about 1,100 killed; hundreds remained at large and filtered back. At the end of September, when no less than 120 aircrew had got home from enemy occupied territory, 38 and 46 Group casualties totalled 270, R.A.S.C. supply despatchers 170, and glider pilots over 700.

A gamble that had offered the opportunity of winning the war by the end of 1944 had failed.

The causes of failure could not be assessed until the end of the war brought enemy documents to light. One by one, a series of mischances had weighted the odds against 1st Airborne. On the first day, though nine-tenths of the gliders arrived, the missing ones carried most of the armoured Jeeps with which the Reconnaissance Squadron should have made a dash for the bridge. Signals equipment was missing or damaged; the radio sets used were inefficient in a built-up area, and they were jammed by a

British station. The Airborne units could neither contact one another, nor the relieving forces, nor could they call up close fighter support. Dutch Resistance sources had reported only some battered Panzer units refitting in the Arnhem area, believed to total less than two brigades. But a whole Panzer Division was there, not refitting but merely resting, and there was a training battalion between the landing zones and Arnhem, strong enough to hold positions until the Panzer tanks and armoured cars moved in. The one German who knew most about Airborne assault and how to deal with it, General Student, was in the H.Q. of his Parachute Army only a few miles from an American dropping area. General Model, in charge of the whole defence of Holland, was even closer, on the western edge of Arnhem, and as the first parachutes appeared he took energetic local command. That afternoon an American glider was shot down near Student's H.Q., and a complete set of orders for the Allied operation, carried by an irresponsible officer, was in German hands. Model knew in advance exactly the moves he had to counter. He was so confident of the outcome that he forbade the Arnhem bridge to be demolished.

These mischances alone might not have been decisive. Churchill, Eisenhower, Montgomery and Student are unanimous in giving the weather as the basic cause of failure. It wrecked the plans for the crucial second and third days, and disrupted the subsequent re-supply.

Others whose authority is undeniable give a different emphasis. Chester Wilmot, in the best-balanced of all accounts,* has it that the Division

> . . . landed too far from the bridge, and, having landed, devoted too much of its strength to securing a 'firm base', too little to capturing its objective.

In this he is supported by the War Diary of the S.S. Panzer Battalion; though he does not quote it:

> The D.Z. was doubtless very well chosen in view of the objectives—to take Arnhem and establish a bridgehead . . . As the surface of the D.Z. was of strong turf and there were woods surrounding it, the troops could land well and get into

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* *The Struggle for Europe* (Collins, London, 1952) p. 524.

> cover in the shortest possible time. Nor could it be seen from several main roads.
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> ... The adversary only made one big mistake, and that not only thwarted his own intentions but exposed him to destruction.
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> In the opinion of the writer, if the enemy had pushed straight on to Arnhem after having surrounded the Battalion instead of trying to wipe it out, he would have succeeded in capturing the town. The Dutch terrorists were waiting there for him and were fully prepared to render him assistance.*

When Urquhart himself concurs, the point seems beyond dispute:

> We must be prepared to take more risks during the initial stages of an airborne operation. It would have been a reasonable risk to have landed the Division much closer to the objective chosen, even in the face of some enemy flak ... Initial surprise was gained, but the effect was lost because it was four hours before the troops could arrive at the bridge. A whole brigade dropped at the bridge would have made all the difference ... Both the Army and the R.A.F. were over-pessimistic about the flak.†

But Urquhart adds a passage that must be questioned:

> The forecast about the impossibility of landing gliders in the polder country was also wrong. Suitable D.Z.s and L.Z.s could have been found south of the bridge and near it.†

Another military writer has even stated that the polder was 'eminently suitable as a landing zone for gliders'.‡ The 38 Group forecast, accepted and urged by Leigh-Mallory, was not that it was impossible to land gliders in the polder, but that the polder was unfit for a mass glider landing. This view can be confirmed by a simple test, though it could not have been made before the operation. The actual glider landings of the first and second days were carefully plotted, from photo cover, on a map overlay. Let this overlay be superimposed on the map of the Malburgsche Polder. Even ignoring the maze of ditches (substantial enough to feature on a 1:25000 map) and assuming (absurdly) that gliders could have landed there at the same high density as was attained on the great clear spaces actually used, there is room for only a fraction of the number that landed on the first day alone. Many, probably most of the loads would have been damaged, and others marooned amid impassable ditches. The use of Hamilcars was unthinkable; even on the comparatively firm ground used, two nosed in and another broke up. Some Horsas did the same on the far better fields in Normandy.

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* Quoted by Chatterton, *op. cit.*, pp. 272, 275.

† Quoted by Wilmot, *op. cit.*, p. 524.

‡ Deane-Drummond, Lt.Col. A. J., *The Sunday Times*, September 13, 1953. Some correspondence followed in the same paper.

We had long since agreed landing zones in the polder close to the bridges, for the *coup de main* glider operations of the 'Comet' plan, but though proved feasible, at the Orne bridges, this was for some reason omitted from the 'Market' plan.

Nor did we report the terrain unfit for parachute dropping; the Malburgsche Polder was the very zone accepted for the parachute reinforcements to drop on the third day, by which time the flak must have built up. The flak risk was the only point on which the R.A.F. might have debated a plan (which to hindsight seems an obvious one) to drop a Parachute Brigade south of the bridge, supported by a few gliders, on the first day. Exhumations are dreary affairs, but let us have the record straight.

A much more important point has been ignored by most of the analysts, but it is given first place by Lieutenant General Brereton, who as Commander, Allied Airborne Army, could take a broader view. The tragic outcome at Arnhem has obscured the simple fact that 1st Airborne did *not* fail in its primary task of holding the bridge, for two or perhaps three days according to intention. The bridge was held, or at least denied to the enemy, and the Nijmegen force thus protected, for more than four days. At any time up to the fourth day, relief from the south would almost certainly have brought overall success. The U.S. Airborne forces suffered the same setbacks from bad weather, and fought with great gallantry, but they took their bridge too late. As Brereton judges:

> It was the breakdown of the 2nd Army's timetable on the first day—their failure to reach Eindhoven in 6 to 8 hours as planned—that caused the delay in the taking of the Nijmegen bridge and the failure at Arnhem.[*]

While British glider pilots were fighting in the houses and trenches of the Arnhem perimeter, about a thousand American glider pilots who had landed at Nijmegen were, as one observer put it, strolling around like tourists with Leicas. Not trained even to use a rifle, they could not even take over guard duties, and so release as many combat troops to sway the outcome of the battle.

Wilmot attributes the failure to an over-cautious advance from Nijmegen to Arnhem. Wherever it occurred, Frost's force was still at its bridge, fighting what the American General Gavin judged 'the outstanding independent parachute battalion action of the war.' Let Churchill have the last word:

> Heavy risks were taken in the Battle of Arnhem, but they were justified by the great prize so nearly in our grasp.

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[*] Quoted by Wilmot, *op. cit.*, p. 527.

# 16 THE BEGINNING OF THE END

—Airborne in Europe has had it, said Browning (a little prematurely), and he went east, as Chief of Staff to Mountbatten, the 'Supremo' in South East Asia, where the invasion of Japan was preparing. Gale took over as Deputy Commander at Allied Airborne Army.

A substantial parachute force had been trained in India, and an Indian Airborne Division was forming, though the glider effort there was a bit like Haddenham. A scheme to build 10-seater gliders locally had produced a prototype, and it flew, but its wings had already warped in the humid heat, and it did not go into production. Four hundred Horsas were tendered for by an Indian aircraft company, but the price came out at ten times the sum authorised. A few Horsas were imported from England, but four-engined tugs, essential in the Indian climate, were lacking. A few glider pilots sent from North Africa trained some R.A.F. volunteers on Hadrians, eventually on a scale demanding three airfields, but no gliderborne troops had gone into action (save Wingate's force) when the war with Japan ended.

The Japanese, incidentally, had been training their own Airborne forces since 1940, using German parachute instructors. In the Pacific they used them widely, but on a modest scale. There is no record of Japanese glider operations, but a 70-ton glider was reported. The troops played musical instruments during their attacks, by way of communication, identification and perhaps moral support. They carried and were supposed to memorise lists of English phrases to be used in battle:

Kill a Yankee!

Go to Hell, Beast!
It is resistless, so that get away from here in this night, do what I say, must help your life.
Have done, all the resistance!
If don't, shall die!

Holly, too, went east, to command Base Air Forces, South East Asia, at Delhi. There was a party on his last night at 38 Group, and he unbent, making a nice speech from which it seemed he had found the Group quite efficient in the end. Several drinks later, I became aware that he was at my side. He hissed into my ear —How you used to anNOY me! You had to know Holly, to recognise and value this as a compliment.

Air Vice Marshal Scarlett-Streatfeild took over 38 Group. Like Stiffy or Nigel, he could be sociable without losing authority; it was a long time since I had been invited to discuss something with my boss over lunch at his house, or to fly around with him.

The battle front on the Continent had moved some 300 miles eastward since D-day, stretching the range for any Airborne operations, and our bases moved accordingly to East Anglia, where 38 Group took over six airfields. 46 Group took over only two, but were now operating mainly from the Continent in their transport role. Louis Strange now commanded a 46 Group squadron in France; he had not changed his ways. He came to me with a proposal that his Dakotas and gliders should deliver a complete airfield, including tracking to form runways on virgin ground, somewhere in France, and operate from the new address, just by way of a demonstration. He seriously expected that I alone would write, sign and issue the necessary orders. He thought me very fussy when I held that his A.O.C., and certainly mine, should be consulted first. Louis was still living in 1915. His first act on taking over his squadron in France was to demand a horse from his Equipment Officer, who did not take this seriously until Louis had him put under arrest. Donning his R.F.C. uniform, he toured his units on a fine Arab grey, and when he could no longer use it, he presented it to a farmer who had befriended him during World War I. A slightly tired look, I noticed, came over the face of Air Commodore Darvall, A.O.C. 46 Group, when Louis' name was mentioned.

Our little planning unit had been ordered from Eastcote to the new 38 Group H.Q. at Marks Hall, handy for co-operation with Chatterton (who invited us to live in his mess nearby) but too remote from Allied Airborne Army and the Airborne H.Q.s. This crumbling Jacobean pile, especially when swathed in the frequent ground-mist, looked like a model film-set for the House of Usher. There had been deer in the park—could it be true that our American predecessors had hunted them down in Jeeps with Sten guns? Some of us worked under lofty vaults that might well have concealed bats, others in tiny dens, the tiniest of which was identifiable by a large nude scrawled on the door and the inscription 'Joe's Place'.

Montgomery now aimed to exploit the partial advance that had been stopped at Arnhem, by a 'left hook' along the west bank of the Rhine, crossing it when and as opportunity came. We planned two Airborne operations to support such crossings, one near Coblenz, one between Mainz and Mannheim; and two others designed to jump the Siegfried Line. Four more abortive plans went on to the shelf. All that we achieved on the Continent in the six months after Arnhem was a cross-channel exercise. A French parachute regiment, mainly Dunkirk evacuees, trained in England, was ready for action, and its return to French soil could usefully be a practice drop by 38 Group. Its base was to be at Épernay in the Champagne. In November, three of us went there in advance to make ground arrangements and to observe the drop. Weather delayed the exercise, leaving us stranded for three days, to become very tired of drinking champagne. The P.M.C. had demanded some for Christmas in the messes, and it was contrived that next to me at dinner on the first night should be M. Pol Roger himself. (I would have to tell that to my sister, who used to boast of having met Mr. Owbridge of the Lung Tonic.) Next day he showed us the vast underground *caves*, and one stack of full bottles the size of an army hut. It would take days to remove the outer layers of sweet fizz labelled 'Reserved for the Wehrmacht' and reveal all the best vintages intact inside. Pol Roger had willingly collaborated with the Germans who wished to store their more precious equipment in these rambling catacombs, and his labourers had carried it in with an enthusiasm that should have made the Germans suspicious. —They ought to have known, said our host sadly, that it would rust away there in a few weeks. When the Americans neared Épernay, he was one of the able-bodied Frenchmen press-ganged to dig trenches. A sergeant went round shouting at any go-slow squads, but he was followed by an apologetic corporal —I'm sorry that our sergeant spoke so rudely, gentlemen, but there is something about him that you may not know. You see, he still thinks we are going to win this war!

The bends of the nearby river Marne were obscured by wide flooding, and this confused some of our navigators. Many of the troops landed on the dropping zone, one of them almost literally into the embrace of his white-bearded father, but some were miles away. Naturally they had to run the gauntlet of vinous welcome on the way back to assemble, and in the eventual attempt at a parade, a lot of mutual support was being given; the march-past reminded me of G.T.S. parading at Ringway.

We were at work on yet another Rhine crossing plan, in the Wesel area, when in mid-December the Germans made a violent and wholly unexpected comeback, driving through the lightly held Ardennes. By Christmas they had made an alarming penetration. Not for the first time, the generals were tempted to use the battle-tested Airborne formations as ground troops. Both U.S. Airborne Divisions were thrown in; the 101st, surrounded while holding a vital road junction, were to become famous as 'the battered bastards of Bastogne'. Our 6th Airborne was still fighting in the north, the first Allied unit to reach the Baltic. 1st Airborne was out of action until its casualties and its depleted equipment could be made good. The Glider Pilot Regiment, also badly mauled, would need months to train replacements. It looked as if Browning was right; that Airborne in Europe had had it.

My next task of terrain study seemed certain to be the last, for dropping zones had to be found, for two Airborne divisions, as close as possible to the centre of Berlin. The political urgency of getting there before the Russians was no secret*. They were advancing through Poland towards the Reich at a rate of a hundred miles a week. Airborne was hardly likely to operate further east. If the Berlin operation 'Eclipse' came off—even if it did not—we could 'roll up the map'. The timely offer came of a job in Transport Command, that still meant some contact with Airborne, through 46 Group, and with any future Airborne operations in the Far East. I said good-bye to 38 Group.

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* At the Yalta Conference in January 1945 President Roosevelt, more suspicious of Britain's aims than of Russia's, agreed the eventual Russian occupation zone that included Berlin. In mid-April, when the Allied forces were more than 100 miles inside that zone, the Russians had not even entered it.

In January 1945 Montgomery counter-attacked the German salient, and when improved weather enabled Allied air power to be used, Hitler's last gamble turned to disaster. He ordered his generals to stand and fight west of the Rhine. Eisenhower mounted another broad drive, and two minor crossings had already been made, when the main assault, to cross the lower Rhine on a 20-mile front near Wesel, was entrusted to Montgomery. This was the plan on which we had been working before the Ardennes offensive, but the preparations, for the biggest amphibian operation since 'Neptune' and the biggest Airborne lift ever made, were not completed until March. Allied Airborne Army had made good use of this ample time, and their operation order was a superb piece of staff work.

The river here was 500 yards wide and ran in a broad plain. The Germans had withdrawn to the east bank. Four divisions of ground troops and two Airborne divisions, the U.S. 17th and the British 6th, featured in a highly unorthodox plan. They would not, as usual, precede the waterborne forces, which would attack before dawn; but six hours after the battle had begun, they would drop in the midst of it—a formidable order despite a colossal preliminary bombardment and continuous artillery and air support. Small friendly units, said the orders guardedly, may be in the vicinity of the landing zones on arrival. The Germans would know that Airborne attack was coming, but if they deployed to meet it, they could not prevent the river crossings; if they concentrated to defend the river, Airborne would take them in the rear. If, as expected, they split their forces, they would lose both battles; but even so they might have some 12,000 troops within ten miles of the landing area, to deal with about 14,000 lightly armed Airborne troops. The timing was to be very different from the 3-day spread at Arnhem. The entire force, including a big re-supply drop, would go down within three hours. The landing zones were 5 to 6 miles behind the enemy front line, on a plain dominated by wooded hills. 6th Airborne, now under Major General E. Bols, D.S.O., must fight through these hills to the river Issel, to take and hold bridges for the further main advance into Germany. The terrain was far enough from the river, on gravel subsoil, to be dry and firm, with good field groups, mostly divided by wire fences, with few trees or ditches; but there were many patches of woodland, tree-lined roads, farmsteads and overhead cables. The landing zones, variable in quality but not generally hazardous, covered an area about two miles wide by one mile deep.

The U.S. Airborne troops were to be lifted by U.S. aircraft from fifteen bases in France; the British by 38 and 46 Groups, helped out by some U.S. aircraft, from eleven bases in England. The 'English train' would be about one hour long, the 'French train' two-and-a-half hours long; both would meet and fly parallel to the objective. About 1,800 parachute aircraft included Curtis Commandos which could carry 36 paratroops at over 250 m.p.h. About 860 Hadrians, 440 Horsas and 48 Hamilcars would take part, requiring about 2,700 glider pilots, a number far beyond the strength of the Glider Pilot Regiment. They had a casualty list of over 500, and no reserves. Chatterton had to look to the R.A.F., which had a pool of nearly 50,000 pilots, few of whom were likely to get any operational flying at this late stage of the war. 1,500 of these, some of them volunteers, were integrated into the Glider Pilot Regiment. After a brief course on Hotspurs, they needed only a few hours on Horsas, and some flew Hamilcars. It was unfortunate that the first operation in which R.A.F. pilots flew gliders should involve landing in the heart of a battle, but they were given three weeks' military training. Brief as their war was, they could boast of having flown their first and last air 'op' and taken part in a land battle, on their one and only day in action.

Since January, Transport Command had been awaiting the appointment of a new A.O.C.-in-C., and the Deputy, Air Vice Marshal Collier, had been in charge. On the eve of the Rhine operation 'Varsity' he was at Gosfield, a 46 Group station; thus in my new job as his Personal Staff Officer, I found myself once again, and for the last time, seeing a great Airborne force assembling. Moreover my Air Vice Marshal, not too busy to remember my former affiliation, bade me take his transport and drive over to 38 Group to stay with my old friends, and see many of them off on the morrow. This was the last opportunity to fly with them, in the comparative safety of a tug, and to see a sight to remember for a lifetime. I cornered my former A.O.C. in the 38 Group bar.

—Sir, I began —I have been working for Airborne for over four years . . .

—The answer is no!

I opened my mouth again, but he repeated the answer in a tone that closed it. At least I had the solace, a few hours later, of hearing Tedder say the same thing to him.

Fighter squadrons were milling above our assembling Airborne formations over Essex, and the morning sky was a fantastic domed birdcage, plaited from wiry contrails. The weather was ideal. There were many I wished could have lived to take part in this climax.

Of 440 British gliders, 416 arrived at the release points. Not one towrope had parted. Smoke and dust from the bombing of Wesel had drifted across the area, and many pilots failed to see the landing zones or even the river, until down to 500 feet, but glider releases and parachute drops were 97 to 98 per cent. successful. The Luftwaffe was not allowed to participate; tug and parachute aircraft losses were less than 4 per cent. The worst losses were suffered by the free gliders, hit by light flak and especially by small arms fire, and only one in five landed undamaged. The glider pilot (including R.A.F.) casualties were about 25 per cent. Luckily for 6th Airborne, an American parachute regiment dropped, by mistake, on the Division's landing zone, and had cleared much of the enemy opposition before the gliders arrived. Most of the Horsas were the Mark II type, from the hinged nose of which a Jeep and gun could roll straight out into action, which must have saved many casualties. Soon after midday 6th Division had captured all its objectives, though one in eight had been killed or wounded, or was missing. The first of the *coup de main* parties, in six Horsas, landed accurately on both sides of their bridge over the Issel; the second party was incomplete, but both bridges were captured. Next morning the Airborne forces were strongly linked up with 2nd Army. Eleven days after the operation, railway trains were crossing a new bridge built by U.S. engineers at Wesel. The

Ruhr with its arms factories and oil plants was by then surrounded, and 325,000 Germans surrendered there.

6th Airborne returned home with a total casualty list, on all its operations, of about 50 per cent. The hoodoo on our commanders struck again at the very end. In May 1945 a small Airborne force, controlled by 38 Group, flew to Norway to accept and enforce the German surrender there. Air Vice Marshal Scarlett-Streatfeild's aircraft was missing; it was found weeks later, crashed in a wood, with no survivors.

Airborne warfare was finished in Europe. Finished in Asia too, though we were not to know that awhile.

# 17 OUT

Five years, to the day, I thought, as I made my farewell round at Transport Command. My last call was on the Equipment Officer. Given his signature, the gates of Bushey Park would open to the civilian world outside.

—Clothing card?

—Sorry, I've lost it. (I knew that one. From his look, so did he.)

—Well, you wouldn't have flying kit, anyway. Respirator? Thank you. One helmet, steel?

I handed over my fifth helmet; three I had lost, one given away in Italy as a souvenir; this last I had acquired an hour ago.

—Revolver, Smith and Wesson, .38. Thank you. One drawing board, double elephant?

—Oh, *no*! That was years ago, at Croughton, and anyway it was morally mine. Look, I'd been using my own drawing board till then, and that winter we ran out of fuel, and some clot broke it up and burned it. So I got one from stores to replace it.

—Well, where is it?

—As far as I know it's at a place called Goubrine in Tunisia.

—Well, it's still on charge to you, and I can't sign you clear until I have it.

—Or another like it? Back in five minutes!

If that was all that stood between me and freedom . . . in five minutes I was back with somebody's drawing board, only a half-imperial, but he didn't seem to know what double elephants meant.

—Then that's the lot? I asked.

—And one bomb, he answered.

—Bomb?

He described it in detail. An indubitable bomb, on charge to me.

—Somebody's made a silly mistake. What would I want with a bomb?

I remembered that bomb well enough. It was a magnesium flash bomb that I had procured for Operation 'Sparks', to photograph the damage on the 295 target from Wilkie's Halifax. It had not been used, Wally Barton in his passion for pyrotechnics had taken possession of this new toy, and I had last seen it bouncing on the back seat of his car.

—Look, I said —bombs disintegrate, and get written off. Anyway, this is an obvious boob by somebody in your branch, and I shall have to ask Air Vice Marshal Collier's advice about it.

That was unfair, for his record system was evidently most efficient. But I wanted to go home. Reluctantly, he wrote off one bomb, and I was free.

The barbed-wire compound still covered our landing ground at Dunstable; the dilapidated clubhouse and hangar still housed Italian prisoners; we had no gliders, no funds. But the west winds still blew up the hill, and the soaring birds showed that the thermals went up as of old. From some obscure hiding place a fuselage emerged, and an illicit pair of wings was made, no easy matter at a time when the raw materials for a mousetrap needed a permit. We had no elastic 'bunjy' ropes, but somebody found a winch, and we pooled our precious petrol. Carrying the components from Tom Turvey's barn at Totternhoe, and up the hill, we rigged our hybrid Tutor on the brow. The bushes had flourished in our absence, and the take-off run was a mere hundred yards, across wind. To land at the bottom, in the strip between the barbed-wire and the hill, would be slightly less tricky than to land downwind and uphill on the brow, but it would not be popular with those who would have to carry the glider up again. There could be no dual instruction to refresh the rusty, though few had flown since the shut-down. As soon as the glider was airborne, you had to release the cable (if you didn't want to go between the winch rollers) and make a smart right turn into the hill-lift.

My turn came, and I did this; the delightful, responsive little machine instantly heaved up skywards, and within a minute the ground, and five long and rather bitter years, had dropped away.

# INDEX

Abd-el-Kader 118
Accra 135
Aero Club, Royal 4
AERODROMES, AIRFIELDS, AIR STRIPS
  Algiers 115
  Andover 85
  Barton-in-the-Clay 22, 175
  Bone 89
  Bourn 107–9
  Brize Norton 59
  Brussels 232
  Cardington 4, 16
  Catterick 46
  Christchurch 4, 113
  Cranfield 73
  Croughton 76–84, 173, 181
  Disforth 71
  Duxford 37
  Farnborough 42, 72–3, 82, 177, 188–9
  Feltham 72
  Froha 120–2, 126, 133, 136–7, 139, 141–2, 147, 174
  Gibraltar 114–15, 175
  Gosfield 242
  Goubrine 143–56, 167, 181–2
  Gozo 156
  Haddenham (Thame) 27–50, 52–8, 60–8, 71, 76–8, 82
  Harwell 209
  Heath Row 73
  Hendon 175
  Holmsley South 112, 141
  Hurn 74, 100, 186
  Inverness 25
  Jurby 106
  Kidlington 43, 59, 66, 76, 81
  La Senia (Oran) 114–16, 135
  Lyneham 114
  Maison Blanche (Algiers) 115
  Malta 146, 156
  Martlesham Heath 229
  Mildenhall 107–9
  Myitkina 198
  Netheravon 59, 68, 72–5, 82–7, 90–114, 121, 163, 175–87, 191–6, 200–9
  Northolt 217
  Oran 114–16, 135
  Oudna 89
  Portreath 112–21, 140–1
  Ringway 7–27, 31, 42, 51, 54, 58, 68, 72, 208, 218
  Salé 112, 140–1, 182
  Sherburn-in-Elmet 86–7
  Shobdon 76
  Shrewton 59, 82, 85, 112
  Side Hill (Newmarket) 25
  Skitten 87–8
  South Cerney 63, 76
  Stoke Orchard 76
  Tarrant Rushton 178, 184, 209
  Thame (Haddenham) 27–50, 52–8, 60–8, 71, 76–8, 82
  Thruxton 85, 100, 113
  Upavon 90
  Vannes 216–17
  Welford 193
  Weston-on-the-Green 76
AIRBORNE
  Army, 1st Allied 222, 237, 239, 241
  Control Sections 207
  Corps 207, 225, 228
  Divisions:
    British, 1st 59, 85, 87, 109–17, 120–9, 135, 146, 157–60, 166, 171, 173, 182, 191, 194, 196, 215, 217, 223–36, 240
    British, 6th 76, 110, 121, 182, 191, 194, 199–202, 205, 208–13, 218, 240–4
    U.S., 17th 241
    U.S., 82nd 225, 235, 240
    U.S., 101st 194, 225, 235, 240
  Forces:
    German 12, 13, 16, 37, 47, 52, 89, 143–4, 159, 170, 208
    Italian 13
    Japanese 237

AIRBORNE—*contd.*
  Forces—*contd.*
    U.S. 110, 119, 159, 169, 171, 179, 190, 193–4, 215, 221–2, 225, 231, 235, 240–3
  Forces Committee 76
  Forces Experimental Establishment (AFEE) 68, 70–1, 73, 86, 112 n.
  Troops, H.Q. 191
Airbrakes, dive-brakes, lift-spoilers 43, 50, 68, 136
AIRCRAFT (B = bomber, F = fighter, G = glider tug, L = light aircraft, P = parachute-dropping, T = trainer, Tp = transport)
  Albemarle (BPG) 86, 100, 103, 108, 111, 114, 120, 125, 129, 134, 136, 142, 146, 148, 150–1, 154–9, 163–7, 172–3, 179, 209–10
  Anson (T) 92, 96, 98
  Avro 504N (TG) 5, 11, 16, 42, 61, 63, 183
  Battle (B) 13
  Beaufighter (F) 140
  Commando (TpP) 242
  Dakota (TpPG) 89, 109, 120, 125–9, 136, 152–9, 164, 166, 175–6, 179, 193, 197–8
  Defiant (F) 37
  Gladiator (F) 42
  Halifax (BPG) 86–8, 101, 103, 111–12, 121, 139–42, 146–7, 151, 155–7, 163, 165, 179, 182, 209
  Hart (FG) 14, 42, 92
  Hector (FG) 42–3, 46, 61–2, 64, 82
  Heyford (BG) 13
  Hudson (BP) 113–14, 121–2, 131
  Hurricane (F) 37, 206
  Ju52 (TpPG) 13, 52
  Ju88 (B) 141
  Lancaster (B) 200, 211
  Leopard Moth (L) 92
  Magister (T) 21, 45
  Manchester (B) 26
  Master (TG) 64, 82
  Spitfire (F) 179
  Stirling (BPG) 26, 107, 179
  Swallow (L) 13, 42
  Tiger Moth (TG) 15, 29, 31, 35–7, 42, 45–7, 61, 63, 65, 71, 92, 95, 175
  Vega Gull (L) 92
  Wellesley (B) 13
  Wellington (BPG) 71
  Whitley (BPG) 11, 12, 19, 20, 51–2, 70, 75, 85–6, 94, 96–8, 100, 103, 108, 112–13, 125
  (*See also* Gliders)
Air Directorate, War Office 76
Airfields (*see* Aerodromes)
Air Fighting Development Unit 37
AIR LANDING BRIGADES, BRITISH
  composition of 13, 53
  1st 59, 85, 125, 127–8, 148, 154, 157, 160–1, 215, 228, 231
  6th 199, 201, 212
Air Ministry 1, 3, 5–8, 12, 15, 22, 33, 44, 55, 114, 179
Airsickness trial 74
Airspeed Ltd. 43, 69, 70, 73
Air support for airborne operations 140, 200, 211, 227–8, 230–2, 241, 243
Albemarle (bomber/para/tug) 86, 100, 103, 108, 111, 114, 120, 125, 129, 134, 136, 142, 146, 148, 150–1, 154–9, 163–7, 172–3, 179, 209–10
Albert Canal 9, 221, 224
Alexander, General 172
Algeria, Airborne training in 111, 116–38, 141
Algiers 89, 114–15, 119, 122, 131, 164, 172–5
ALLIED
  Airborne Army 222, 237, 239, 241
  Troop Carrier Command Post, Eastcote 207, 214–16, 219–21, 239
Andover 85
'Angle-of-dangle' instrument 14, 69, 80
Anson (trainer) 92, 96, 98
Antonopoulos, S/Sgt. 141
'Anvil' operation 222
Ardennes, German offensive in 240
Armstrong, S/L E. W. xi, 102–3, 113, 115, 119, 178, 191
Armstrong-Whitworth 11
ARMY
  1st 89
  2nd 236, 243
  5th 171
  8th 154, 158
  Air Corps 59
  Co-operation Command 33, 44–5, 56, 101, 103–4
  Group, 21st 190
  Liaison Officers 91, 130, 133, 150
Arnhem 223–36, 239
ARTILLERY
  gliderborne (*see* Guns, gliderborne)
  support for Airborne operations 157, 160, 241
Ascot 222
Ashwell-Cooke, W/Cdr. J. R. ('Toby') xi, 12, 17, 27, 33–4, 54–5
Astro-navigation 94–5, 145
Atomic bomb 89 n.
Augusta 127–8, 146
Austen, F/Lt. 65, 107, 186–7
Automatic pilot in glider 72
'Avalanche' operation 167–70
Avellino 171

Avro 504N (trainer/tug) 5, 11, 16, 42, 61, 63, 183
'Axehead' operation 220

Badoglio, Marshal 169
BAFSEA 238
Bagby, Col. R. B. 180
Barratt, Air Marshal 109–10
Barton, W/Cdr. W. S. v, 91, 97, 103, 114, 119, 121, 126, 128–9, 144–6, 153, 163, 165–6, 174, 182, 246
Barton Flare 97–8, 143
Barton-in-the-Clay 22, 175
Bartram, S/L 153, 156, 164, 166–7
Bastogne 240
Battle (bomber) 13
Beacons, radio (*see* Rebecca-Eureka)
Beaufighter 140
'Beggar' operation 139–41, 178
'Beneficiary' operation 215
Berlin, plan for Airborne operation at 240, 240 n., 241
Blaicher 70
Blenheim Palace 67
Blind- and night-towing devices 14, 69, 72, 80, 140
Bols, Maj. Gen. E. 242
BOMBER Command 13, 53, 86, 104, 104 n.
  Squadrons transported by glider 106–9
  support for Airborne operations 200, 211, 241
BOMBING
  by gliders 14
  operations by 38 Wing 101–4
Bone airfield 89
Bourn 107–9
'Boxer' operation 220
Bray 51
Brereton, Lt. Gen. L. H. 222, 235
Brest 216
Briefing for Airborne exercises/operations 21, 93, 102, 131, 147, 150, 152, 202, 206–9
Briggs, W/Cdr. G. H. ('Buster') xi, 18, 34, 37–9, 54, 61, 72, 90, 100, 109, 112, 140, 163, 178, 189
Brize Norton 59
Browning, Lt. Gen. F. A. M. 59, 69, 76, 90, 101, 110, 129, 177, 182–3, 193, 196, 222, 228, 232, 237, 240
Bruneval 85
Brussels 232
Bulford 92, 98–100, 202
Burma, Airborne operations in 196–8
Buxton, W/Cdr. G. M. xi, 4, 11–12, 16, 21, 22–3
Buzeta, F/O 156, 166
Caen 180, 190, 200, 215, 218–19
Calais area, Airborne plans for 180, 190
Cambridge Gliding Club 72
Camouflage 3, 53
Campbell, Lt. Col. W. 116, 121, 153–4
Capua 169, 171
Cardington 4, 16
CASUALTIES
  Arnhem 232
  Burma 197
  Normandy 213
  Norway 88–9
  Rhine crossing 243
  Sicily 157–8
  6th Airborne Division 244
Catania 127–8, 146, 153–4, 175
Catterick 46
CENTRAL Flying School 35, 63
  Landing Establishment/School 7–28, 56, 68, 73
  Interpretation Unit, Medmenham 44, 202, 204
Chartres 217
Chatterton, Brig. G. J. S. xi, 78, 83–4, 95, 127–8, 129 n., 137, 149, 153, 162, 179, 182–3, 185, 191, 200, 203, 207, 226, 234 n., 239, 242
Chearsley 56, 60, 66
Cherbourg 216
'Chestnut' operations 153, 155, 164
Chindwin river 198
Christchurch 4, 113
Churchill, Winston S. 12, 51, 75–6, 233, 236
Cleaver, F/O 151
Cobham's Circus 11
Coblenz 239
Collier, A/V/M A. C. 242
Combined Operations 12, 20
'Comet' operation 221–4, 235
Commander Glider Pilots (*see* Chatterton)
Commando (transport/para) 242
Commandos 12, 211
Communication Flight, 38 Wing 92
Condor (sailplane) 15
Containers, equipment, parachuted 20, 97
COOPER, Major A. J. 140–1
  Major R. P. xi, 165–6
  G/Capt. T. B. 87–8, 90, 100, 111, 113–14, 122, 126, 128, 184–5, 188
Cordtex 188
COSSAC plan 180, 190, 217
Cotentin peninsula 190, 215
Cranfield 73
Crete 52–3, 127
Crichton-Miller, F/Lt. C. v, 93–4, 103
Croughton 76–84, 173, 181

Dakota (C-47) (transport/para/tug) 89, 109, 120, 125–9, 136, 152, 154–9, 164, 166, 175–6, 179, 193, 197–8
Darling, S. 25
Darvall, Air Comm. L. 231, 238
Davie, S/L D. B. S. v, 16, 72–3
Davies, P/O, R.A.A.F. 87, 89 n.
DAVIS, W/Cdr. P. B. N. v, 11, 16–17, 23, 34, 54–5, 86–7, 90, 103, 111, 156, 230
  Lt. Col. S. J. 119
Deane-Drummond, Lt. Col. A. J. 234 n.
Defence, airfield 38–9, 47
Defiant (fighter) 37
Denny, G. 193
Development Unit, C.L.E. 12
DFS-230 (glider) 49, 52
Dieppe raid 85
Disforth 71
Ditching of gliders 71, 99, 140–1, 228
Dive-brakes (*see* Airbrakes)
Dives river 199, 200, 210, 212
Dixon, C.Q.M.S. R. 34
Doig, Sgt. 87
Dream experiment 95
Dummy gliders, parachutes 187, 227
Dunn, Brig. Gen. R. A. 119, 121, 151, 164, 166, 173, 176
Dunne, J. W. 95
Dunstable Downs 2, 15, 19, 37–8, 42, 195, 246–7
Duxford 37

Eastcote (Allied T.C. Command Post) 207, 214–16, 219–21, 239
Eben Emael, Fort 9, 56, 221
'Eclipse' operation 241
Eindhoven 223, 236
Eisenhower, General D. D. 119, 154, 170, 190, 224, 233, 241
El Djem 143
Elementary Flying Training Schools (glider pilots) 17, 59
ELIZABETH, Queen 54, 194
  Princess 194
Épernay 239–40
Errington, G. B. S. xi, 73–4, 74 n.
Escaut canal 224
Eureka beacon (*see* Rebecca-Eureka)
Everleigh 75
Exercise Unit, C.L.E. 54–5, 65, 67, 85, 105
Experimental Flight, A.F.E.E. 71
*Experiment With Time, An* 95

Falcon III (sailplane) 43
Farnborough (R.A.E.) 42, 72–3, 82, 177, 188–9
Feltham 72
Fender, S/L R. E. H. xi, 16, 23–4, 34, 71
FIGHTER attacks on Airborne operations 37, 141, 230–1
  Command 1, 2, 179
  support for Airborne operations 140, 227–8, 230–2, 241, 243
FILMS
  to analyse parachute failures 20, 27
  for briefing 20–1, 203–6, 208–9, 211
Flares, lights, ground signal 88, 92, 96–8, 126–7, 129, 138, 152, 155, 169, 171
Flare paths 72, 82–3, 92, 98–9, 137
Flycast towing 70
Flying Training Command 59, 61–2, 64
Fraser, Sgt., R.A.A.F. 87
Fréjus 222
French Army in N. Africa 124–5, 166, 173
'Freshman' operation 87–8
Froha 120–2, 126, 133, 136–42, 147, 174
Frost, Lt. Col. J. D. 230–1, 236
Furlong, F/Lt. O. H. ('Pop') xi, 17, 21, 23, 26, 34, 52, 81
'Fustian' operation 153–7, 159–60, 178

Gale, Maj. Gen. R. N. xi, 76, 191, 199, 205, 211–12, 218, 237
GARDINER, S/L F. T. 34–5, 43
  Col. W. Tudor 119, 123, 166, 169–70, 172, 174, 193
GAS: anti-gas measures, Gas and Fire Officer 38–9
  School, Porton 99
Gavin, Gen. J. M. 236
Gee (radar) 179
Geelong 19
Gela 168, 170, 173
General Aircraft Ltd. 14, 72
George VI, King 51–2, 54, 109–10, 194
GERMAN airborne operations 9, 13, 52–3, 159, 170–1
  glider pilots trained in U.K. 2, 19
  gliders, military 2, 9, 16, 47, 49, 51–2, 56–7, 171
'Giant' operation 170
Gibraltar 114–15, 175
Gladiator (fighter) 42
GLIDER Exercise Unit, C.L.E. 54–5, 65, 67, 85, 105
  Operational Training Units (O.T.U.s) 59, 76
  Pilot Regiment 59, 60, 76, 78, 82, 90, 105, 130, 157, 162, 171, 182–3, 191, 240, 242
  pilots, British Army:
    badge 46, 59
    enlistment, selection 44–6, 56, 59
    flying training 17, 44–7, 53, 59, 64, 76, 105, 120, 124, 127, 135, 137, 141, 165
  German 2, 19, 38

- GLIDER—*contd.*
  - Pilots—*contd.*
    - R.A.F. 6, 34, 59, 60, 67, 237, 242–3
    - R.A.A.F., R.C.A.F. 60, 87
    - U.S.A.A.F. 110, 135, 148, 158, 161, 236
  - Testing Flight, R.A.E. 42, 72–3, 82, 177, 188–9
  - Training Manual 33, 53, 57–8
  - Training Schools:
    - No. 1 (Haddenham/Thame/Croughton) 12, 15, 24, 27–58, 76–84
    - No. 2 (Weston-on-the-Green) 59, 76
    - No. 3 (Stoke Orchard) 76
    - No. 4 (Kidlington) 76
    - No. 5 (Shobdon) 76
  - Training Squadron (*see* G. T. School No. 1 *above*)
- GLIDERS, civil (including sailplanes) (*see* Condor, Falcon III, Kestrel, Kirby Kite, Minimoa, Rhönbussard, Scud II, Tutor, Viking I and II, Wren)
  - dummy 187
  - German 2, 9, 16, 47, 49, 51–2, 56–7, 171
  - Japanese 237
  - military (*see* DFS-230, Goliath, Gotha-242, Hadrian [Waco CG4A], Hamilcar, Hengist, Horsa, Hotspur, Merseberg)
  - motorised, powered 189
  - rocket-assisted 73
  - target 16, 73
  - trailer-wing 73
  - (*see also* Bombing by g., Ditching of g., Loads/loading/unloading of g., Marshalling of g., Range of g., Refuelling from g., Rigging/de-rigging/inspection of g., Towing methods, Transport by g.)
- GLIDING CLUBS, SITES
  - Cambridge G.C. 72
  - German 2, 32
  - Imperial College G.C. 16
  - London G.C. (Dunstable Downs) 2, 15, 19, 37, 42, 195, 246–7
  - Midland G.C. (Long Mynd) 24, 32
  - Oxford G.C. 14
  - Wasserkuppe 32
- 'Glutton' operation 152
- Goliath (glider) 57
- Gosfield 242
- Gotha-242 (glider) 57
- Goubrine 143–56, 167, 181–2
- Gozo 156
- Grant, F/Lt. D. A. 151–2, 177–8, 184, 200
- Grave (Holland) 224, 229
- Greig, F/Lt. D. F. 31, 34, 52, 61, 76, 177
- Grice, G. 4, 16
- Griffith, Major W. 211
- GROUPS, R.A.F.
  - 23 Gp. 62, 76, 84
  - 38 Gp. 178–9, 238–9
  - 46 Gp. 179, 206, 238
- Guns, gliderborne 69, 70, 106, 111–12, 136–7, 157, 159, 188, 211, 222, 228, 243

- Haddenham (Thame) 27–50, 52–8, 60–8, 71, 76–8, 82
- Hadrian (Waco CG4A) (glider) 109, 111, 125, 127, 135–7, 141–3, 148–155, 169, 173, 197, 237, 242
- Halifax (bomber/para/tug) 86–8, 101, 103, 111–12, 121, 139–42, 146–7, 151, 155–7, 163, 165, 179, 182, 209
- Hall, John (a pseudonym) 39–41
- Hamilcar (glider) 72, 86, 184–5, 188–9, 208, 211–12, 228, 235, 242
- 'Hands Up' operation 216
- Harman, Cpl. 61
- Harvey, G/Capt. L. G. ('Stiffy') xi, 12, 18, 22, 27, 30, 58, 68, 70–1
- Hart (fighter/tug) 14, 42, 92
- Harwell 209
- Heath Row 73
- Hector (fighter/tug) 42–3, 46, 61–2, 64, 82
- Hendon 175
- Hengist (glider) 14, 71
- Hervey, S/L H. E. xi, 1, 5, 6, 10, 12, 17–18, 27, 34–5, 48, 58, 63, 76
- Heyford (bomber/tug) 13
- Hicks, Brig. P. H. W. 228, 231
- Hire, F/Lt. 11, 90, 109–10
- Hirth, Wolf 38
- Hockey, G/Capt. R. C. 218–20
- Hollinghurst, A/V/M L. N. xii, 178–80, 184, 186, 191, 195, 203, 206–7, 209, 214, 219, 227, 238
- Holmsley South 112, 141
- Hopkinson, Maj. Gen. ('Hoppy') 65, 72–3, 110, 116–17, 122, 124–5, 128, 129 n., 142, 153, 160, 171
- Horne, F/O 141
- HORSA (GLIDER) 53, 59, 68–76, 86–8, 105–12, 127, 139–43, 146–55, 159, 173, 184–5, 188, 192, 196, 200–1, 208–12, 222, 228, 237, 242–3
  - airframe, controls 68
  - ditching 140–1, 228
  - handling, performance 68–70, 74, 86–7, 184
  - loads, loading, unloading 69, 70, 106, 111, 188, 208, 243

HORSA (GLIDER)—*contd.*
  Mark II 188, 243
  requirements, design, production, modifications 69, 70, 87
  test and development flying 70–1, 73, 76
Horses for glider launching/retrieving 32
HOTSPUR (GLIDER) 14, 42, 45, 49–77, 82–3, 99, 100, 105, 149 n.
  airframe, controls 49, 50, 56
  automatic pilot 72–3
  ditching 71
  handling, performance 49, 50, 62–4, 69, 149 n.
  requirements, design, production, modifications 14, 45, 49, 50, 64–5
  test and development flying 42, 72–3, 82
Hudson (bomber/para) 113–14, 121–2, 131
Hurricane (fighter) 37, 206
Hurn 74, 100, 186
Hurst, G/Capt. R. W. xi, 83–5, 113, 120–1, 175, 177
'Husky' operation 139, 149–62
Hygiene in N. Africa 132

INDEPENDENT PARACHUTE COMPANIES
  16th (the second) 200
  21st (the first) 96, 127, 154–5, 227–8
India, Airborne forces in 237
'Infatuate' operation 221
Inter-com(munication), tug-glider 68, 87–8, 136, 152, 186
Interpretation of air photographs 4, 5, 44, 56, 62, 180, 201
Inverness 25
Irrawaddy river 198
Issel river 242–3
ITALIAN Airborne forces 13
  Air Force after armistice 173
ITALY
  Airborne operations in 166–72, 221–2
  airfields 173
  armistice with 169–70

Japan, invasion of 237
Japanese Airborne forces 237
Jeeps, gliderborne 69, 106, 111, 136–7, 151, 157, 188, 219, 232, 243
Jesse, F/Lt. R. M. 113–22, 177–8, 192–4
JONES, Col. O. L. 161–2
  G/Capt. 6, 7
JU-52 (transport/para/tug) 13, 52
  -88 (bomber) 141
Jurby 106

Kairouan 135, 141–5, 148, 167
Kemp, F/O F. 61–2
Kennington, Eric 57–8
Kestrel (sailplane) 4, 16
Keyes, Admiral Sir Roger 20
Kidlington 43, 59, 66, 76, 81
King's Regulations 15, 26
Kirby Kite (sailplane) 16, 17, 21, 31–2, 37, 40, 43, 45, 51–4, 61, 109
Kit bag, parachutists' 97
Kodachrome 205
Kronfeld, S/L R. 14, 23, 70, 80

Lacey, F/O A. W. ('Buzz') v, 4, 16, 34, 37
Lacoste, Maj. G. xi, 191, 200–1
'Ladbroke' operation 147–54, 157–62, 166, 178
Lancaster (bomber) 200, 211
Lander, Maj. J. v, 45, 47, 54–5, 90, 96–8, 154, 157, 174, 227
Lannion 215
Larkhill 99
La Senia (Oran) 116
Lathbury, Brig. G. W. 228, 230
Lawrence, T. E. 57–8
Leaflets, propaganda 2, 85, 92–3, 98, 100
Leigh-Mallory, A/C/M 190, 195, 209, 227, 234
Le Mans 101
Leopard Moth 92
Lifeboat, airborne 92
Lift-spoilers, airbrakes, dive-brakes 43, 50, 68, 136
Link Trainer 80–1
'Linnet' operations 220
Loads/loading/unloading of gliders 69, 70, 106–7, 111, 137, 142, 148, 151, 159, 188, 208, 243
Lochore, Sir James 60, 66
London Gliding Club 1, 2, 4, 11, 15, 19, 33, 37–8, 42, 195, 246–7
Long Mynd 24, 32
Lord, F/Lt. (V.C.) 230
Lovat, Lord 211
'Lucky Strike' operation 216
Lyneham 114

Maas river 224
Maastricht gap 220
Macclesfield 21
Magister (trainer) 21, 45
Mainz 239
Malburgsche Polder 226, 235
Malta 146, 152, 156–7
Manchester (bomber) 26
Mannheim 239
Maps (briefing, night, target) 94, 130–1, 150, 171, 208, 223
'Market' operation 223–36
Markham, F/Lt. 122, 143, 147, 150–1, 175
Marks Hall 239

Marshalling of gliders 149, 185–6
Martlesham Heath 229
Mascara 114–25, 129, 132–5
Master (trainer/tug) 64, 82
May, W/Cdr. P. v, 108, 129, 133, 144, 151, 153, 174
McMonnies, W/Cdr. 167, 210
Medical tests 5–7, 45
Mediterranean Air Command 115, 126
Medmenham (*see* Central Interpretation Unit)
Melville-Jones, Prof. 37
Members of Parliament gliderborne 100–1
Merseberg (glider) 57
Merville 199, 200, 208, 211
Midland Gliding Club 32
Mildenhall 107–9
Milston 191, 205
'Minihorsa' 187
Minimoa (sailplane) 15, 23, 38
Ministry of Aircraft Production 71, 80, 140
Model, General 233
Models for briefing 131, 202–5, 207, 209, 211
Montgomery, General B. L. 158, 190–1, 223–4, 233, 239, 241
Morgan, Lt. Gen. Sir F. E. 180
MOON charts 92, 134
  eclipse 134
  light, visibility 93–4, 126–7, 152
Moor Park 207, 218–20, 227
Morlaix 215
Morocco 112, 119, 121, 139–41
Motor Boy of Mascara 124
Mountbatten, Vice-Admiral Sir Louis 237
Muirhead, F/O 140
Multiple towing 13, 42, 52, 55, 70–3, 197
'Mungo's Circus' 16
Musgrave, W/Cdr. T. C. xi, 121–2, 130, 134, 144, 152, 155, 178, 192, 195–6
Mussolini 169, 171
Myitkina 198

Naples 167, 169
Naval liaison/gunnery support 157, 160
Navigation 20–1, 63, 94, 129, 159, 219 (*see also* Astro-navigation)
'Neptune' operation 190–1, 196, 199–213
Netheravon 59, 68, 72–5, 82–7, 90–114, 121, 163, 175–87, 191–6, 200–9
Newmarket 25–7, 106
'Nickels' (*see* Leaflets)
Nielan, J. 71
NIGHT maps 94, 150, 208, 223
  towing devices 14, 69, 80
  vision 93–4, 103
Nijmegen 224–5, 228–32, 235–6
Noakes, G/Capt. J. 64
Norfolk House 180, 190
Norman, Air Comm. Sir H. N. St. V. v, xi, 9, 10, 12, 15, 21, 33, 51, 55, 57–68, 72, 75–6, 85, 87, 90, 106–7, 112–4, 121, 129–30, 182, 186, 198
Northolt 217
NORWAY:
  glider operation in 87–8
  parachute operation in 88–9 n.
  leaflets for 98, 100
  surrender in 244

OBSTRUCTIONS TO AIRBORNE LANDINGS
  U.K., 1940–1 29–31, 51
  Normandy, 1944 201–2, 211–13
Operational Training Units (glider) 59, 76
OPERATIONS (CODE NAMES)
  Anvil (invasion of S. of France) 222
  Avalanche (Salerno) 167–70
  Axehead (Seine bridges) 220
  Beggar (glider ferrying to N. Africa) 139–41, 178
  Beneficiary (St. Malo) 215
  Boxer (V-1 sites) 220
  Chestnut (S.A.S. and S.O.E., Sicily) 153, 164
  Comet (Eindhoven-Arnhem) 221–4, 235
  Eclipse (Berlin) 241
  Freshman (Norway) 87–8
  Fustian (Catania) 153–7, 159–60, 178
  Giant (Rome) 170
  Glutton (Augusta) 152
  Hands Up (Brest) 216
  Husky (Sicily) 139, 149–62
  Infatuate (Walcheren) 221
  Ladbroke (Syracuse) 147–54, 157–62, 166, 178
  Linnet (Belgian border) 220
  Linnet II (Maastricht gap) 220
  Lucky Strike (Yvetot) 216
  Market (Eindhoven-Arnhem) 223–36
  Neptune (assault phase, invasion of Normandy) 190–1, 196, 199–213
  Overlord (invasion of Normandy) 173, 190–1
  Sparks, Sparklet (railway, Le Mans-Paris) 102–4, 246
  Torch (N. Africa) 89
  Transfigure (Paris-Orleans gap) 217
  Varsity (Rhine at Wesel) 241–4
  Wild Oats (Carpiquet) 215
OPERATIONS ROOMS
  Eastcote 207, 215–16, 229
  Froha/Mascara 114, 119, 121–2, 126, 131–4, 150
  gliderborne, portable 107, 121
  Goubrine 143, 146–59, 163, 164–6, 181–2

OPERATIONS ROOMS—*contd.*
Netheravon 83, 91–3, 99, 102–4, 113–34, 195
Oran 114–16, 135
Orne (river and canal) 199–201, 208–9, 212
Oudna 89
Oujda 122
'Overlord' operation 173, 190–1 (*see also* 'Neptune')
Oxenford, Lt. A. A. R. v, 48
Oxford Gliding Club 14

PARACHUTE
containers, supply 20, 97
dropping techniques 19, 20, 75–6, 96–7, 189
drops, emergency 16, 61, 73, 156, 174
exercises, training 12, 19, 20, 27, 51–2, 55, 75–6, 85, 92, 96–7, 125–6, 129–30, 134, 185, 194, 208, 218–19, 222, 224–35, 237, 239–40
failures 19, 20, 27, 89, 118
operations 85, 89, 89 n., 154–5, 159, 168–71, 199–200, 210–3, 242–3
tail arrester, glider 208, 210–11
undercarriage dropping, glider 87, 140
units, British:
1st Para. Bde 59, 76, 85, 89, 110, 125, 153, 227–8
3rd Para. Bde 212
4th Para. Bde 229
5th Para. Bde 210–11
16th Independent Coy. 200
21st Independent Coy. 96, 127, 154–5, 227–8
units, French 217, 239
Parachute Training School, Ringway 12, 19, 20, 27, 51–2, 208, 219
Parades 22–4
Parkinson, F/Lt., R.C.A.F. 88
Patter, patter-book, instructional 15, 35–6
Patton, General G. S. 216–17
Perrin, Harold 4, 5, 44
Photographic Reconnaissance Unit (P.R.U.) 44, 103, 194, 203
Photography, air 3, 9, 19–21, 27, 127–8
Photographic interpretation 4, 5, 44, 56, 62, 180, 201
Phuket 102 n.
Pickard, W/Cdr. 85
Pike, F/O 79
Polish Parachute Brigade 224–5, 229, 232
Pol Roger, G. 239–40
Ponte Grande, Syracuse 157, 173
Ponte Primosole, Catania 154, 160
Pont l'Évêque 218
Poole Harbour 99
Popski's Private Army 167
Porton, Gas School 99
Portreath 112, 121, 140–1
Postlethwaite, Sgt., W.A.A.F. 99, 101
Public address system sabotaged 104–5

Radar, Radio beacons 16, 85, 140, 179, 200, 213 (*see also* Rebecca-Eureka)
Ramsay, Capt. A. 133
Rance river 218
RANGE of free gliders 49, 128, 149 n.
of glider tugs 111–12, 146–7, 150
R.D.F. (*see* Radar)
Rebecca-Eureka 88, 89 n., 96–7, 129, 169, 171, 179, 210, 212, 227
Reconnaissance Sqn., 1st Airborne Div. 227, 232
Refuelling from gliders 14, 73
Rennes 215
Reports on Airborne operations xi, 163, 165–6, 176–8, 193, 223
Rhine crossings 239, 241 (*see also* 'Market', 'Varsity')
Rhönbussard (sailplane) 15, 21
Rigging, de-rigging, inspection of gliders 17, 43, 135, 148
Ringway 7–27, 31, 42, 51, 54, 58, 68, 72, 208, 218
Robinson, Peter, Ltd. 178, 180–1, 215
Robson, Major 82–3
Rock, Lt. Col. J. F. v, xi, 12, 55–61, 78, 82–3, 183
Rocket-assisted glider 73
'Roger' operation 102 n.
Rome, Airborne plans to capture 169–70
Roosevelt, President 240 n.
Rotorchute 43
ROYAL Aircraft Establishment (R.A.E.), Farnborough 42, 72–3, 82, 177, 188–9
Air Force (*see* Air Ministry, Groups, Commands, Squadrons, etc.)
Australian Air Force 60, 87
Canadian Air Force 60, 88
Roztzorowski, Capt. G. 183
Ruffle, F/Lt. C. L. xi, 16, 34
Ruhr 224, 244
Russian occupation zone 240 n.

Saffery, S/L J. H. xi, 19, 34, 45, 58, 63, 76, 194
Sailplanes (*see* Gliders, civil)
Sainte-Mère-Église 217
St. Malo 215
St. Sauveur 215
Salé 112, 140–1, 182
Salerno 167, 169, 171–2
Salisbury Plain 59, 89, 90, 94, 98
Sardinia 127, 172

Scarlett-Streatfeild, A/V/M J. R. v, 238, 243–4
Scott, Roy 15
Scud II (sailplane) 22–3, 58
Sector light 14
Security, precautions, breaches 25, 27, 86, 102, 134–5, 191, 203–6, 208–9, 218–21, 233
SHAEF 203
Sherburn-in-Elmet 86–7
Shobdon 76
Shrewton 59, 82, 85, 112
Sicily, invasion of 127–62, 177
Side Hill (Newmarket) 25
Sidi-bel-Abbès 125
Siegfried Line 224, 239
Skitten 87–8
Slater, Dr. A. E. xi, 38, 139
Slingsby, F. N.; Slingsby Sailplanes Ltd. xi, 4, 14, 16, 43, 71–2
'Snatch' take-off of gliders 188–9
Soaring 1, 2, 23, 46, 49, 247
Souk-el-Arba 89
Sousse 143, 146, 160–1, 164
South Cerney 63, 76
South Staffs Regt. 151
'Sparks', 'Sparklet' operations 102–4, 246
SPECIAL Air Service (S.A.S.) 153, 155–6, 163–4, 218
  Operations Executive (S.O.E.) 218–19
Spitfire (fighter) 179
Spoilers, airbrakes, dive-brakes 43, 50, 68, 136
Sproule, Lt. Cdr. J. S. xi, 34–5, 43, 49, 54, 71
SQUADRONS, R.A.F.
  No. 1 183
  No. 3 90
  No. 15 107–9
  No. 295 85, 93–4, 96–7, 101–4, 139, 146–7, 150, 163, 178
  No. 296 104, 106, 114, 121, 125, 129, 134, 141, 143–4, 146, 151, 153, 165–9, 173–4, 178, 210
  No. 297 85, 104, 106, 113
  No. 298 86, 178, 189
  No. 575 228
  No. 601 10
Stereoscopy 56, 181
Stirling (bomber/para/tug) 26, 107, 179
Stoke Orchard 76
Stonehenge 98
Strange, W/Cdr. L. A. 10–12, 51, 206–7, 238
Strathdee, Staff Sgt. M. F. v, 44–6, 87–8, 88 n.
Student, General Kurt 233
Sutton Bank 23
Swallow (light aircraft) 13, 42
Syracuse 127–8, 146, 158, 162, 173, 178

Tactical Air Force 178
Tangerine Brandy 174–5
Tanks, gliderborne 188
Taranto 171–2
TARGET gliders 16, 73
  maps, night maps 94, 130, 150, 171, 208, 223
Tarrant Rushton 178, 184, 209
Tatton Park 9, 20, 71
Taylor, Brig. Maxwell 169
Tedder, A/C/M 116, 119, 243
Terrapins 132–3
Thame (Haddenham) 27–50, 52–8, 60–8, 71, 76–8, 82
Thomas, Eustace 15
Thruxton 85, 100, 113
Tiger Moth (trainer/tug) 15, 29, 31, 35–7, 42, 45–7, 61, 63, 65, 71, 92, 95, 175
Tilshead 78
'Torch' operation 89
Totternhoe 2, 38, 246
TOWING METHODS
  blind 69, 80
  flycast 70
  ground 186–7
  low tow 69
  multiple 13, 52, 55, 70–3, 197
  night 14, 69, 80
  snatch, pick-up 188–9
  yoke 68
Towropes 14, 65–6, 71, 73, 186, 194, 211, 229
'Trailer wing' glider 73
Transport by gliders 106–9, 141
Transport Command, R.A.F. 179, 241–2, 245
Troarn 212
Troop Carrier Command, IX U.S. 122, 165–6, 169, 172–3, 179–80, 207
'Tugbar' 186–7
Tunis 89, 164
TUNISIA:
  Airborne operations in 89, 110
  Airborne operations based in 127, 141–62
Turner, Gunner 34, 65
Tutor (glider) 246

Upavon 90
Urquhart, Maj. Gen. R. E. 227–8, 230–1, 234
U.S.A., R.A.F. mission to 222
U.S. Airborne forces 110, 119, 159, 169, 171, 179, 190, 193–4, 215, 221–2, 225, 231, 235, 240–3
  Airborne Divisions 194, 225, 235, 240–1

U.S.—*contd.*
  Airfield engineers 197, 225, 229
U.S.A.A.F.:
  Troop Carrier Command (IX) 122, 165–6, 169, 172–3, 179–80, 207
  Troop Carrier Wings:
    51st 119–21, 126, 129–30, 134, 147, 149, 151–4, 163–73, 222
    52nd 119
Ushant 85

V-1, V-2 weapons 220, 224
Vannes 216–17
'Varsity' operation 241–4
Vega Gull 92
Vemork 87
Vice Chief of Imperial General Staff (V.C.I.G.S.) 22
Viking I & II (sailplanes) 15–16, 54
Volturno river 169, 171

Waal river 224, 231
Waco CG4A glider (*see* Hadrian)
Walcheren island 221
Walker, J. 195
Wallace, S/L D. R. L. xi, 191, 206, 217–18, 220, 222
War Office 3, 12–13, 21, 51, 55, 76
WARD, S/L Harry 11, 27, 90, 160–1, 182
  Sgt. 61
Wasserkuppe 32
Welford 193
Wellesley (bomber) 13
Wellington (bomber/para/tug) 71
Wesel 240–1, 243
Weston, Cpl. 45
Weston-on-the-Green 76
Whipsnade Zoo 2, 23
Whitley (bomber/para/tug) 11–12, 19, 20, 51–2, 70, 75, 85–6, 94–8, 100, 103, 108, 112–13, 125
Wick 87
'Wild Oats' operation 215
WILKINSON, S/L A. B. ('Wilkie') v, 16, 22, 34–7, 43, 49, 54, 72, 87–8, 89 n., 90–2, 94–5, 101–3, 111–12, 142, 147, 150–1, 153–7, 187
  Miss Ellen, M.P. 101
  K. G. xi
Williams, Maj. Gen. Paul L. 207, 214–15
Wills, Philip 15, 23
Wilmot, Chester 233, 234 n., 236, 236 n.
Wilson, Major Boyd A. 227
Wing, No. 38 85–6, 90
Wingate, Maj. Gen. Orde 196–7
Wren (sailplane) 34

Yalta Conference 240 n.
Yoke towing 68

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