Sailplane and Gliding

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February 1961

SAILPLANE AND GLIDING

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P 5525

The Epilogue of the Oklahoma Cow

by Philip Wills

In the December issue Mr. Wills gave a general account of his participation in the 1960 United States Soaring Championships. Now, in the following epilogue, which is reproduced by permission from "Flight", he describes in detail his memorable experiences on the "Free Distance" day.

It was a calf really which produced the epilogue to this flight, possibly assisted by a pony, but I don't want my title to be ambiguous.

Although a lot of people try and hide it, the fact is that most sailplane pilots (and I am very definitely amongst them) really adore nothing so much as a good old vulgar down-wind dash on a corking day. This gives the maximum amount of trouble to everyone, including the pilot, but particularly the retrieving crews, and the organisers don't like it much because it means Operations has to stay up all night waiting for landing reports, and a blank rest day the next day whilst everyone struggles back. So, as I say, a lot of people pretend they are superior to the siren call of Free Distance, but I suspect that few are without the hunger. Like sex.

Certainly at every morning briefing at the 1960 U.S. Nationals at Odessa we eagerly awaited the announcement of this task, and there was mounting disappointment as it was delayed. For the weather situation meant that time was not on our side. The weather at Odessa itself, and for 200 miles around, never altered—strong thermal and cumulus streets building up each morning from 11 a.m. onwards, dying between 6 and 7 p.m., but further north a giant front looped across the United States like a 2,000-mile girdle across the stomach of a wide woman, and this moved slowly south, eventually reaching Odessa and blanking out the thermals with clouds and thunderstorms on the ninth day.

WHICH WAY TO TURN

Now our winds every day blew at the surface from the south-east, 20-24 knots, and above 5,000 ft. (8,000 ft. a.s.l.) from the south-west 10-15 knots; thus a down-wind dash took one up to the approaching front; as one got nearer the winds veered or backed so one could turn and parallel the front either way. (See sketch map, p. 6).

In these circumstances probably either Friday 5th or Saturday 6th August would have been good days for Free Distance, but our task-setters were overburdened by a promise to our sponsors, who had required an Air Display on Sunday 7th; so finally the big day was announced at briefing on Monday 8th. By this time the front was barely 200 miles north, and the decision to be made was whether to attempt a cross-wind flight into the lee of the mountains to the north-west in New Mexico (where the upper winds were westerly), into a region of subsiding air and dry thermals, or towards Oklahoma in the north-east, where conditions looked better but the cross-wind component on the way was much worse. After much agonising thought I and most of the leaders chose north-east, but in the event it made little difference, as both contingents made almost the same distance.

SKYLARK v. FLYING BOMBS

By now the days already flown had made it clear that, on short tasks simply involving three hours or so flying across the best of the day, the Skylark could not be expected to keep up with the leading Flying Bombs designed exactly for this comparatively narrow spectrum of conditions; whereas on long tasks using everything the day had to offer, my ability to start earlier and finish later than them gave her a better chance. So this was in another sense a Big Day for me, for by now Dick Schreder in his HP-8 had piled up a maximum score of 5,000 points in the five tasks we had flown, and I was lying 5th, with an annoying Ka-6 (slightly cleaned up) piloted by Kit Drew just on my toes at 4th place.

The first small cu. could be expected exactly at 11.00 hrs., the heavy stuff to take off about 11.30, so I put myself down for 10.45, intending to hold the air on dry thermal for the first quarter of an hour. In the blinding hot blue heat we dragged our way to the head of the line, I was packed in in my shirt and shorts, my hat on my head over a small wet towel (a very useful and refreshing way to keep one's senses in these conditions), another wet towel over the

". . . round and round in plus or minus 100 ft./min. over the inhospitable ground".
(Courtesy of "Flight")

perspex cockpit canopy which is whipped off at the last minute, a bottle of drink also wrapped in a wet towel, my maps, food, pen and ruler in the canopy pocket, both barographs installed, sealed and ticking, oxygen on, my devoted and perspiring crew buzzing around, running out the tow-rope, last-minute polishing of wings and canopy, holding the wing-tip, flagging the tow-plane, running, letting go—we were off.

Wheels dropped, we left the runway, the flat and chequered brown landscape of Texas opened up and widened to the ever-expanding dusty horizon all around. We climbed in a wide left-handed circle which brought us round over the runway again at 2,000 ft., the tug wagged its wings, and I released and turned right. Looking round, I saw a few of the earlier starters had struggled off downwind in a northerly direction and were now circling in a small bunch low down about 3 miles away. I wanted neither their direction nor their altitude, so forged ahead towards the town of Odessa itself to try for lift off its roofs, which I duly found. I held this without much difficulty for a quarter of an hour, being joined by a contingent who were also clearly destined for Oklahoma, when dead on time the first barely visible puffs of cu.

started to form in the sky around and above, based about 4,000 ft. above it. The upper wind was much stronger than forecast, and retained the south-easterly direction of the surface, so it was with a sinking heart that I set off across and slightly into it to the north-east. In a wild way I had declared a goal at McAlester, 425 miles to the E.N.E., as near the line of the advancing front as I dare go, but I had warned my crew that I might have to fly north of the track to begin with, and this became clearly a must.

DAPPLED CUMULUS

The lift was still only around 250 ft./min. but the game was on, and I struck off at 55 kts. for the shadowy hint of high white steam some 5 miles over the mesquite bush to the north-east, followed closely by three or four other aircraft. Within half-an-hour the sky had developed into the usual Texan elysium of dappled cu. based at 5,000 ft. above the surface, their shadows below racing across the ground, alas, at right angles to my course. There was no hope of holding my track, and furthermore I was finding unexpected difficulty in striking the lift areas, coming in as I was from the side of each upcurrent, and suddenly I missed one altogether. Before I knew where I was, I was down to 800 ft., one hour and 20 miles from base, in a sky looking like silent dynamite. Only sailplane pilots will feel my agony—was this to be the end of my Big Day? No thoughts now of speed or holding my track; I struggled round and round in plus or minus 100 ft./min. over the inhospitable ground, not daring to go further afield. I knew that almost certainly in one direction or other I could find strong lift if I could reach the heart of the thermal in whose edge I was clearly confined, but if I took the wrong one I would be certainly swept in the strong surrounding downcurrent to an ignominious—and possibly expensive—landing.

In such a circumstance a sailplane pilot seems to run out of eyes. All one's attention is needed for the instruments, yet some has to be spared for the ground below and some for the sky above, and suddenly in the latter I saw my salvation. A soaring hawk on rigid outstretched wings came into my line of vision from the south. Clearly he had been in my thermal, and on seeing this Brobdingnagian brother circling in the distance he had assumed my wisdom was in proportion to my size, and had come over to see if I had found a better bit than he had. He did a couple of circles just over my head, and I could almost see his beak curl into a contemptuous sneer as he tasted the miserable rags of my lift; then he turned and glided straight back the way he had come. No thought of saving the face of my theoretically superior species prevailed on me to hesitate—I straightened up and followed my feathered friend and in two minutes was circling up at 500 ft. a minute to cloud base and competition again.

I was once more in the running, but sadly off course and perhaps half an hour of distance lost. Lamesa was just to the north of me, and since Distance was the order of the day irrespective of direction, I must now clearly reduce my attack on the wind and alter course as far north as I dare. Poor crew, struggling away to the east! If I had had radio, I am not sure that at this moment I would not have called them up and set off for New Mexico; but the prospect of my landing point finishing up around 800 miles from them that evening was too daunting, so I carried on.

OVER THE WET

Twenty miles covered the first hour was followed by 42 miles the second, and south-east of Lubbock I came over a wide stretch of wet, irrigated land, with large round muddy ponds in every field, which I had been warned might be a trap. But no, all went well, and soon I flew over a line of low hills, and for 50 miles or more a stretch of wild bush-covered country cut into by a series of jagged sandy dry river-beds, which the thermals alone made safe for me. Then we approached and crossed a larger river which, having clearly been discovered by some devotee of T.V. Westerns, goes by the name of Prairie Dog Town Fork, and the country below became greener and kinder. We were in Oklahoma; the ground had imperceptibly receded to only 1,500 ft. a.s.l., the time was 17.00 hrs., our average speed was only 40 m.p.h. The wind had almost dropped and the day was starting to die. But there was still no sign of the dreaded front in the sky to the north.

Out of the haze to the north-east appeared a few high granite outcrops—the first sign of hills we had seen in three weeks, and south of them the last cumulus in the dying sky lured me over the town of Altus. There I climbed gently to 7,000 ft. and set

off on my final glide. I was now off my original map, so the exact direction to fly away from Odessa as far as I could was rather a guess; but I set off north-east, scanning my map for suitable airfields, and at last it seemed as if one on the south-east of the small town of Hobart might just about come up and meet my skid. But as I got lower I entered a strong southerly wind and this carried me further than my chart had led me to expect, so that I reached this airfield at 1,500 ft. A comfortable and safe landing, or another 9 miles to an uncertain and possibly lonely one?

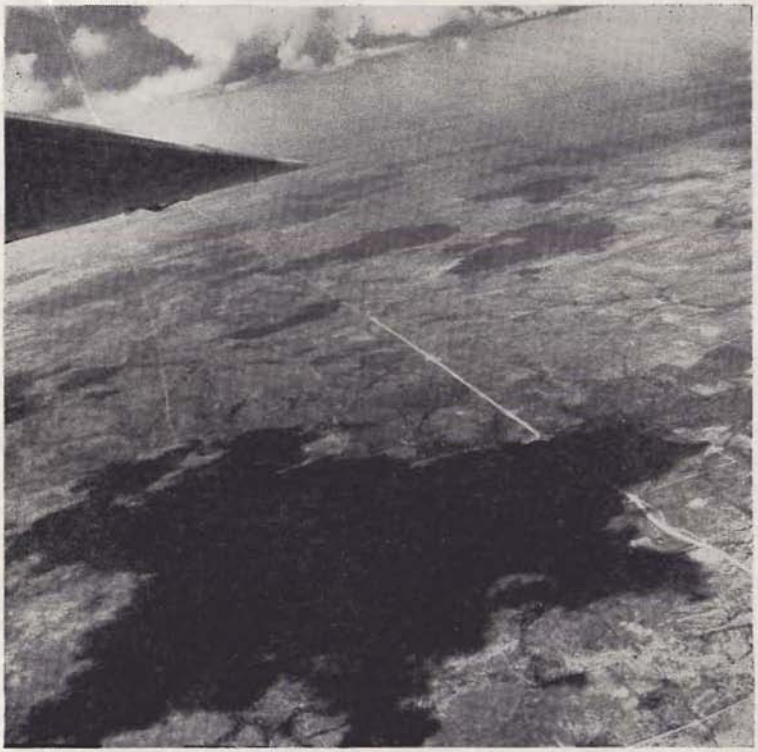
But this was exactly the advantage I had over the heavy boys, who needed much more in the way of large landing areas than I did; so, fatigue after nearly 8 hours in the cockpit notwithstanding, I flew on along a main road running north, lower over fields of cotton, maize, corn and fallow, until the time had come. At 400 ft. I turned into wind and landed in a large soft ploughed field running up to the outbuildings of an impoverished-looking single-storey wooden farmhouse standing amongst a few trees by the side of the main road.

* * *

It was after 7 p.m. and I had been over 8 hours in the air; I climbed rather stiffly out of my cockpit onto the soft and sandy plough, with a few old maize stalks sticking out of it, a warm breeze from the south, and a smell of earth and green growing things again brought back that feeling, known to all sailplane pilots, that the workaday world had once more taken over, and much organising and sweat lay ahead before my team could arrive and bear me and the Skylark off back to base. A couple of young men in jeans climbed over the fence ahead of me and came ploughing through the soft earth. There are not many sailplanes in Oklahoma and none had ever been seen in these parts, let alone one inhabited by an Englishman speaking a strange and nearly incomprehensible dialect; but in due course I got my needs across—a telephone and then help in derigging the Skylark and carrying the parts out of the field to the borders of the road before the onset of darkness.

Eventually, however, it was done. I had phoned Odessa and asked that Kitty, when she got my message, should ring me and say where the crew had got to; the wingtips and tailplane were stowed on the lawn in front of the farmhouse, on the very edge of the road. The heavier fuselage and centre-section, however, had us so exhausted by the time we had carried them over a quarter of a mile each through the soft earth and up a bank that, at the farmer's suggestion, we had left them in a small empty enclosed yard at the back of the farm, with a track to the road which the trailer, when it

The approaching front and the choice of routes (*Courtesy of "Flight"*)



"The road ran straight as a ruler . . . from horizon to horizon" (Courtesy of "Flight")

arrived, could easily negotiate. We went back indoors and, with typical hospitality, I was sat down with the family at a simple but enormous farmhouse meal, before which, as the visitor, I was bidden to say Grace.

After this, the farmer, his son-in-law and I sat smoking on the veranda whilst the womenfolk washed up (no use asking to help in this chore in an American farm) and put the children to bed, and we chatted on into the gathering darkness, lit by a naked electric bulb, of farm prices, horses, the ways of rattlesnakes, the price of things in England as against Oklahoma and all the things that come up at these casual and unexpected meetings of people from different worlds. Kitty had phoned; the team were 160 miles south of me so could be expected to arrive between midnight and 1 a.m. I could not wish to keep my host up so late and around 11 o'clock he asked if I would like to lie down for an hour's nap. I gladly agreed, said I would get up and wait by the roadside at midnight, and promised not to wake anyone when the trailer arrived, but pack up and steal silently away.

I was shown to the spare bedroom back of the house, washed some of the sticky dust off my face and hands, thanked my host for all his kindness, and as I dozed off heard his son-in-law go out into the yard at the back and return to the house, which sank into silence except for the occasional ping of a prowling mosquito in the warm darkness around me. At midnight I got up, tiptoed out of the sleeping house and sat down on the dry grassy verge of the road.

The road ran as straight as a ruler right

and left from horizon to horizon. The moon was nearly full and riding high, and opposite me was etched the rounded and rustling outline of a large tree from which shrilled the stridulation of a thousand crickets. From the farmhouse behind me came the occasional mutter of a half awakening child. Time passed on and I thought of many things. I thought how fortunate I was in this extraordinary sport of ours to have seen so many lands and scenes and met so many kind people. Of how two years before I had been faced with a similar but more uncertain wait in the Pripet Marshes in Poland; then, as now, Kitty had been thundering through the night to my aid—then with Ray and Harry, now with Gale and Bob. I thought of my various sailplanes, and where they were: the Scud still in England, a little anonymous now after more than 25 years; Hjordis a wreck in a hangar at Germiston near Johannesburg; the Minimoa in Iceland; the Weihe in New Zealand; my victorious Sky in Holland; and now my dear Skylark sitting in a field in Oklahoma bound for its new owner in Boulder, Colorado.

The surface wind still blew lightly from the south, but a light haze of high cloud was drifting from the north, and the moon was going out of focus. The horizon was lit up by the headlights of an approaching car, but it was a good ten minutes before it reached me, and swept trailer-less by and on and over the reciprocal skyline.

I mused on, on love, on hope and on despair. Looking at the fading stars I thought on the universe, and touched on the greatest question of all: What in Heaven's name is it all about? The crickets chirped louder than ever; they knew as much about the answer as I.

THE FRONT APPROACHES

The haze had thickened, a ragged cloud drifted across the moon, and a distant flash of lightning and mutter of thunder to the north showed that the front was on the march again, and coming my way. My mind touched on Bills of Exchange, the Bank Rate and four per cent Consols, by alliteration on my home at Kits Close, on Krushchev, on Christmas crackers . . .

A few drops of rain brought me round with a snap, and a glow of light to my right brought me to my feet. It was after 1 a.m.; this must be the trailer. It was. Ten minutes later, still cheerful after their 500-mile drive, and facing over 400 miles on the homeward run, my team drew up beside me.

Quickly I explained the form; we put the wing tips and tailplane into the trailer, then turned up beside the farm onto the track to the yard behind. As I laboriously undid the wire gate leading into it, the storm broke. A violent northerly wind brought with it a blinding cloud of dust, and as we drove into the yard and tried to unhitch we found it difficult to weathercock the trailer into the wind, and get her hoisted onto her legs. Then I led the way to the white fuselage looming on the ground—and as we got near I heard a cry of horror from Kitty. At the base of the rudder yawned a horrid jagged hole; the ply in the fin was gashed. Another shout from Gale, leaning in the streaming dust over the centre section, signalled a staring ragged panel in the fabric near one tip. I stood stupidly gaping. This was *impossible*—in an empty yard?—when I had explained so carefully, as is my wont, how delicately the Skylark must be handled on the ground.

THE CULPRITS

But now came more shouts and scuffles in the darkness and gritting wind, and round the corner of the trailer, in the light of Kitty's torch, came the flying shapes of a small calf and a pony, racing for the open gate behind me and freedom. Instinctively I shot ahead of them and closed it—I could not repay my host's kindness by letting the beasts loose, whatever they had done. But there was no more to be said. For some reason for ever unexplained, the son-in-law, when he went out after I had laid down, must have turned these two frisky animals into the yard where we had put the Skylark, and retired to bed.

Sadly we locked up our wounded craft, sadly we stole out onto the wind-swept road, sadly we drove away into the night, drove until the sky brightened, the sun rose again, the day's heat returned; alternately we drove and slept in the back, and about 11 a.m., exactly twenty-four hours and more than 900 miles after we had left it, my crew and I were back in Odessa.

How we needed sleep! But we were inexorably driven by the necessity to repair the ravages of the night on the Skylark. In this, Gale took the major brunt with willing help from others, since this is a field in which I am woefully deficient. Apart from

the damages we had seen, the paint was rasped by tongue and teeth, since dope has a taste irrisistible to cattle; but on the whole we were lucky. The next day the front had caught us up and there was no flying, so by the following and final day I was once more in the air, and put up a reasonable flight.

As for The Day, on the whole it has been worth while, for this was the only day in which the HP-8 lost first place, the RJ-5 being ahead of me by 10 miles, and the Skylark, with a distance of 298 miles, clocking an honourable second place by virtue of my extra hard-won 9 miles, and ascending to 4th place in the Championships, which it held to the end. But for the Oklahoman cow, it would have been quite a triumph.

But I am left with a serious social problem: I promised to write a letter to my host of the night on my return to England. What am I to say?

INTERPRETATIONS

by Chris Chapman

Reproduced from Southdown Gliding Club Newsletter

FOR the benefit of the newer members, who may be a little overawed and confused at the statements made by the clued-up solo pilots and winchdrivers, I am listing below translations of the commonly heard expressions, or the true meaning thereof:

WHAT IS SAID	WHAT IS MEANT
WINCH DRIVERS	
It was impossible to see the stop sign.	There were a couple of girls going by in shorts.
We got a bit of a snarl-up on the winch.	I forgot to ask the winder-on if he had ever wound on before.
GROUND HANDLING	
What are those fools playing about at down there?	Spoken by winch end referring to launch end and *vice versa*. (New members may join in this one).
LOCAL FLYING	
I ran into terrific sink—about 20 down.	I didn't realise the field was so far away.
The trouble with the Tutor is you're so darned exposed to the elements.	I can never remember which pedal to press in a turn.
That's quite all right, old boy, you can have my turn.	It won't be soarable for the next hour or so.
But the Tutor was miles away at the time.	I knew it was Bill by the red bobble on his hat and I thought: I'll frighten the so-and-so out of my thermal.
INSTRUCTORS	
You have to let the pupil try a landing by himself.	I didn't take over in time, but it won't take a moment to de-rig the T-21 and get it back into the field and rig it again.
CROSS-COUNTRY	
I picked a wonderful field right by a road with a farmhouse at one end.	I meant to land in the field the other side of the road and just missed the bus as I came over it.
I don't find cloud flying at all difficult.	When I come out and find the sun below me I know straight away which way up I am.
LOCAL SOARING AT	
I climbed up on the inside of the Oly and the Skylark and was soon looking down on them.	When they saw my flying they thought they'd be safer in another thermal.

A Day of Ups and Downs

by Mike Garrod

The East African Gliding Club, based at Nakuru in the Kenya Highlands, has been operating for about four years, but with only a few low-performance gliders progress has been slow. This story is about one particular day during February, 1960, when a local record was broken three times.

IT was hot! very hot! The ground was dry and dusty, the grass parched brown. It hadn't rained for eight weeks. Every five or ten minutes the windsock would suddenly leap into life and point in the direction of a madly whirling mass of dust, which would disappear aloft at an astounding rate. The sun shone down remorselessly out of a blue sky.

"A promising day," I mused to myself while towing the Grunau out to the far end of the runway. In spite of wearing the minimum of clothing I was coming out in a sweat just sitting in my car. In contrast, my African wing-tip holder strode along apparently unperturbed by the heat.

The usual trio had turned up to fly the Grunau: Tony Stocken (C.F.I.), Bill Sheppard and myself. Up to mid-day nobody got away, and the "Evil Spirit" proved to be my oxygen set. Tony contacted a thermal and disappeared aloft, wearing shorts, open-neck shirt and bush hat. The oxygen set lay on the ground!

Between circuits by the Cadet we searched the sky for the Grunau, but in vain. An hour-and-a-half after he had left he reappeared, and I wandered over carelessly to the stationary glider to ask him how high he got.

"Sixteen thousand feet," came his reply.

I must have nearly jumped out of my skin. "What? No!" I gasped. "That's the record, isn't it?"

It was, by 400 ft.

The prospect of a flight over 15,000 ft. spurred Bill and myself into greater efforts, but we failed miserably. The presence of an oxygen set in the cockpit seemed fatal. In desperation, as the cable tightened for my third launch, I chanted the words: "I'll be back in two minutes."

It worked! I released bang in a thermal and rose rapidly. The "Evil Spirit" tried to interfere with my good fortune, as my oxygen bottle, jammed against my right elbow, interfered with my stick movements. A change to a left-hand turn made matters easier, and the rate of climb steadied at five metres per second.

The three record-breakers, L. to R., Tony Stocken (in cockpit), Mike Garrod and Bill Sheppard.

It was just another thermal really, but the altimeter was reading abnormally. It wound up through 10,000 ft. like the second hand of a watch and charged through twelve to fourteen thousand feet in the time it took to get my oxygen mask on! It wasn't until sixteen thousand had been registered that the rate of climb showed any sign of easing off, and eventually dropped to zero with 17,200 ft. indicated. Glancing upwards, I noticed that the cloudbase was at least 1,000 ft. higher.

Mindful of the fact that Bill might yet achieve Gold C height, which I had achieved some years earlier, I gave up any idea of scraping up a few more hundred feet and pulled at the airbrake lever. Nothing happened! For the first time in my life I searched for a negative thermal and circled down in that until the brakes unstuck at 10,000 ft. My "Up and Down" lasted 57 minutes.

Tony came over and asked the same question I had put to him earlier.

"Seventeen thousand two hundred," I answered triumphantly.

"No, you so and so!" he burst out.

But my record was short-lived. We rushed Bill into the air, fully expecting him to be back in a matter of minutes. We watched his grim struggle at 600 ft. for almost ten minutes, and finally finding some stronger lift, he too disappeared into the dazzling, late afternoon sky.

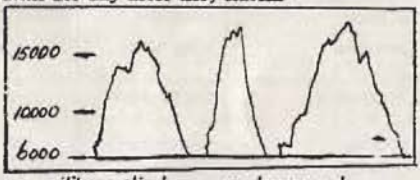
We waited anxiously for almost two hours, and began to make wild speculations. Tony murmured something about getting the trailer ready. Bill just wasn't anywhere to be seen. Then suddenly, as if by magic, he was in the circuit and down on the runway.

Tony and I walked over to the stationary glider and asked the inevitable question.

"Oh, only seventeen six!" came the modest reply.

Need I relate our reactions? Let it suffice that we celebrated the day's flying that evening at Bill's expense.

And the moral to this story? Well, one might say: "Don't count your chickens until the day after they hatch."



Three climbs on one barograph.

GLIDING SITES IN

Club	Name of Site	Tel. No.	Position	Height ft. a.s.l.	Lat. and Long.
ARMY; BOY SCOUTS; CROWN AGENTS; IMPERIAL COLLEGE; POLISH A.F.A.; SURREY; LASHAM GL. SOCIETY	Lasham	Herriard 270	Between Alton and Basingstoke	600	51.11 N., 01.02 W.
BRISTOL	Nympsfield	Uley 342	3 miles S.W. Stroud	400	51.43 N., 02.17 W.
CAMBRIDGE UNIVERSITY	Cambridge	Cambridge 56291	Marshall's, 2 m. E. Cambridge	50	52.12 N., 00.11 E.
CORNISH	Perranporth	Perranporth 3177	7 m. N.W. Truro	320	50.20 N., 05.11 W.
COVENTRY	Baginton	Toll Barr 3377	3 m. S.E. Coventry	270	52.22 N., 01.29 W.
COVENTRY	Edgehill		5 m. N.W. Banbury	640	52.05 N., 01.28 W.
DERBYSHIRE & LANCASHIRE	Camphill	Tideswell 207	8 m. N.E. Buxton	1,350	53.18 N., 01.43 W.
KENT; ROYAL ENGINEERS	No fixed site				
LONDON	Dunstable	Dunstable 63419	2 m. S.W. Dunstable	500	51.52 N., 00.32 W.
MIDLAND	Long Mynd	Linley 206	4 m. S.W. Church Stretton	1,500	52.31 N., 02.53 W.
NEWCASTLE	Carlton Moor	—	12 m. S. Stockton-on-Tees	1,200	54.24 N., 01.12 W.
OXFORD	Weston on the Green	—	10 m. N.E. Oxford	260	51.53 N., 01.14 W.
SCOTTISH GLIDING UNION	Portmoak	Scotlandwell 43	1 m. S.E. Loch Leven	400	56.12 N., 03.20 W
SOUTHDOWN	Firle Beacon	—	4 m. N.E. Newhaven	700	50.50 N., 00.07 E.
YORKSHIRE	Sutton Bank	Sutton 237	6 m. E. Thirsk	900	54.15 N., 01.13 W.
ABERDEEN	Dyce	—	6 m. N.W. Aberdeen	340	57.13 N., 02.11 W.
AVRO	Woodford	Bramhall 1291	5 m. N. Macclesfield	300	53.20 N., 02.09 W.
B.E.A. SILVER WING	R.A.F. Booker	High Wycombe 1494	2 m. E.S.E. High Wycombe		51.37 N., 00.47 W.
BLACKPOOL & FYLDE	Squires Gate	Southshore 43529	2 m. S. Blackpool	30	53.46 N., 03.02 W.
COLLEGE OF AERONAUTICS	Cranfield	—	8 m. S.W. Bedford	360	50.04 N., 00.37 W.
DONCASTER & DISTRICT	Doncaster Airport	Doncaster 56066	Eastern outskirts of Doncaster		53.32 N., 01.12 W.
DUMFRIES & DISTRICT	Thornhill	—	19 m. N. Dumfries		55.15 N., 03.50 W.
EAST MIDLANDS	Rearsby Aerodrome	—	Nr. Leicester		52.15 N., 00.14 E.
GLASGOW & WEST OF SCOTLAND	Bankhead Farm	—	1 m. S. Carnworth		55.44 N., 03.35 W.
HALIFAX	Ringstone Edge	Ripponden 3289	5 m. W. Halifax		53.39 N., 01.56 W.
HANDLEY PAGE	Radlett	Radlett 5651	2 m. S. St. Albans	290	51.39 N., 00.19 W.
LAKES	Tebay Gill	—	15 m. S. Penrith		54.25 N., 02.35 W.
NORTHAMPTON	Podington Aerodrome	—	5 m. S.E. Wellingborough		52.14 N., 00.48 W.
NORFOLK	Tibenham Airfield	Tivershall 207	15 m. S.W. Norwich		52.28 N., 01.05 E.
NORFOLK & NORWICH	R.A.F. Swanton Morley	Swanton Morley 274	15 m. W. Norwich		52.45 N., 00.55 E.
PERKINS S.A.G.C.	Polebrooke	—	4 m. S.E. Oundle	220	52.28 N., 00.22 W.
ROYAL AIRCRAFT ESTABLISHMENT	Farnborough Aerodrome	Farnborough 1800	Farnborough		51.15 N., 00.50 E.

THE UNITED KINGDOM

Description	*Aero-tows*	*Service or Civil*	*Days operating*	*Slopes*
3-runway aerodrome, some aeroplanes	Yes	Civil	Every day	None
Grass strip N.E.-S.W. on hill top.	No	Civil	Weekends and summer weekdays	N. & W.
Large grass airfield with single tarmac runway, aeroplane traffic.	Yes	Civil	Weekends and most weekdays	None
Runway aerodrome on cliff top	Yes	Civil	Weekends and summer courses	W.
Grass field, light aircraft	Yes	Civil	Weekends and some weekdays	None
3-runway aerodrome		Civil	Weekends and some weekdays	
Grass strip N.-S.	No	Civil	Weekends and some weekdays	W. & S.
Undulating grass field at foot of Downs	Yes	Civil	Every day	W.
Heather-covered hill-top	No	Civil	Every day	W. & E.
Heather-covered hill-top	No	Civil	Weekends and some weekdays	N.W. & N.E.
4-runway airfield	No	Civil R.A.F.	Weekends	None
2 grass strips N.W.-S.E., W.-E.	Yes	Civil	Weekends and summer courses	W. & N.
Undulating grass field on hill-top	No	Civil	Weekends	N. & N.E.
Heather field on hill-top	No	Civil	Weekends	W. & S.
Runway aerodrome		Civil	Weekends and summer courses	None
Used for testing		Civil	Weekends	None
R.A.F. active aerodrome	Yes	Service or Civil	Weekends	
Runway aerodrome, other aircraft		Civil	Weekends	None
Runway aerodrome, training flying			Weekends	None
Runway airport, Clubhouse, Bar	Some times	Civil	Weekends, some weekdays	None
Rough heather land	No	Civil	Weekends	Yes
Active aerodrome	Yes	Civil	Weekends	
Rough moorland	No	Civil	Weekends	
Smooth moorland, Clubhouse	No	Civil	Weekends	S.W. to N.W.
Runway aerodrome, test flying		Civil	Weekends	None
Rough moorland	No	Civil	Weekends	Yes
Runway aerodrome		Civil	Weekends	
Runway aerodrome, Clubhouse	Yes	Civil	Weekends	
Runway aerodrome, active flying club	Yes	Civil	Weekends and weekdays	
Runway aerodrome	No	Works		None
Active aerodrome	Yes	Works	Weekends	None

Club	*Name of Site*	*Tel. No.*	*Position*	*Height ft. a.s.l.*	*Lat. and Long.*
SHORTS, N. IRELAND	Newtownards Aerodrome	Newtownards 3327	½ m. S. Newtownards		54.35 N., 05.41 W.
SWANSEA	Fairwood Airport	—	Nr. Swansea		51.38 N., 04.05 W.
SWINDON	South Marston	Swindon 2684	Nr. Swindon		51.35 N., 01.45 W.
TAUNTON VALE	Dunkeswell	—	5 m. N. Honiton	840	50.52 N., 03.14 W.
ESSEX	North Weald? (subject to satisfactory completion of negotiations)		15 m. N.E. London		31.44 N., 00.20 E.
WEST WALES	Withybush Airfield		Haverfordwest		51.45 N., 04.45 W.
BORDER SOARING CENTRE	Crosby Aerodrome		5 m. E. Carlisle		54.50 N., 02.50 W.
SOUTH WALES	Eglwysilan		1 m. N. Bedwas		

NOTE—The above table is continued on next page

ROYAL AIR FORCE GLIDING & SOARING ASSOCIATION CLUBS

Every one of these Clubs is based at an R.A.F. Station. They all operate at weekends, and aero-tows are laid on.

Club	*Name of Site*	*Tel. No.*	*Position*	*Lat. and Long.*
BANNERDOWN	R.A.F. Colerne		Nr. Chippenham	51.34 N., 02.15 W.
CHILTERNS	R.A.F. High Wycombe		3 m. N. High Wycombe	51.37 N., 00.49 W.
CHILTERNS	R.A.F. Benson		3 m. N. Wallingford	51.36 N., 00.40 W.
CLEVELANDS	R.A.F. Leeming	Northallerton 440	Nr. Northallerton	54.20 N., 01.30 W.
EAST ANGLIAN	R.A.F. Duxford	Royston 2291	8 m. S. Cambridge	52.15 N., 00.15 E.
EAST MIDLANDS	R.A.F. Swinderby	Swinderby 241	7 m. S. Lincoln	53.15 N., 00.38 W.
EAST YORKSHIRE	R.A.F. Driffield	Driffield 2274	2 m. W.S.W. Driffield	53.59 N., 00.29 W.
FENLAND	R.A.F. Marham	Narborough 261	5 m. S. Swaffham	52.39 N., 00.35 E.
FOUR COUNTIES	R.A.F. Wittering		1½ m. S.E. Grantham	52.54 N., 00.40 W.
HOME COUNTIES	R.A.F. Hornchurch		6 m. E. London	51.36 N., 00.20 E.
MOONRAKERS	R.A.F. Upavon		3½ m. S. Pewsey	51.17 N., 01.46 W.
RED HAND	R.A.F. Ballykelly		20 m. N.W. Belfast	54.45 N., 06.25 W.
SUFFOLK	R.A.F. Wattisham	Needham Mkt. 237	2 m. N.E. Ipswich	52.08 N., 01.25 E.
WESSEX	R.A.F. Andover	Andover 2381	1½ m. W. Andover	51.13 N., 01.33 W.
WINDRUSHERS	R.A.F. Bicester	Bicester 501, Extn. 36	2 m. N.N.E. Bicester	51.55 N., 01.08 W.
WHITE ROSE	R.A.F. Finningley		2 m. N. Doncaster	53.32 N., 01.12 W.

NOTE.—Will Gliding Clubs (both Civilian and Service) please let us know if any of the above information needs revision, as we hope to publish a similar table each year in February.

UNITED KINGDOM (contd.)

Description	*Aero-Tows*	*Service or Civil*	*Days operating*	*Slopes*
Active aerodrome	Yes			
Active airport		Civil	Weekends	None
Active aerodrome, test flying		Civil	Weekends	None
Runway aerodrome	No	Civil	Weekends	None
R.A.F. active airfield		Civil	Weekends	None
3-runway airfield	No	Civil	Weekends	None
Active airfield	Yes	Service & Civil	Weekends and weekdays	All directions
Rough heather land	No	Civil	Weekends	Yes

Gliding Muse

by A. Klinge

In summer when round about 10,
The sunshine starts its warming
We see a few small clumps of Cu
Around the airfield forming.

We study parts of weather charts
Excitedly exploring,
Surmising where some rising air
Will supercharge our soaring.

We plan a flight way out of sight
But soon lose our elation—
The sun has passed, it's overcast,
With great precipitation.

Up and down,
To and fro,
Eyeballs glued to the vario.,
Circling, searching, seems eternal—
How I wish I could *see* a thermal.

A north-west wind upon the Mynd
Gives soaring to perfection.
How I despair—when I am there
It's from the wrong direction.

Twinkle, twinkle, Silver C,
How you stay away from me;
Got my height but what a laugh—
Didn't start the barograph.

A large Cu-Nim looks rather grim
But offers lift ecstatic;
I clearly see it's not for me—
I'm much too scared of static.

If I were brave I'd try the wave,
But I am just a floater.
I have no heart to fall apart
Rotating in the rotor.

Dunstable to Cranwell in a Kirby Cadet

by John Jeffries

The Kirby Cadet, of 40 ft. span, was produced by Slingsby in 1936 (with the spelling "Kadet") as a secondary training machine, a category which was first introduced in 1926 with the German Prüfling to enable "ab initio" pilots to reach the soaring stage. For many years the Cadet was widely used in the Air Training Corps as a primary solo trainer under the name "Cadet Mark I". But now, with an 130-mile cross-country to its credit, as described in this article reproduced from the "London Gliding Club Gazette", it has left these inadequate classifications far behind.

THE ranks of those who can recall with affection that one-time high-performance sailplane the Kirby Cadet Mark 1 are, alas, becoming sadly depleted. Even more sad perhaps is the increasing scorn with which such relics of the "bad old days" are regarded by the unfeeling new generation of self-styled pundits, and by the old hands who choose to forget. Personally, the Cadet symbolises the passing of the fun, sport and amusement era of gliding, so that I jumped at the opportunity to fly Peter Fletcher's version in the hope of recapturing something of the excitement of the past. To be a little more honest, I have to admit to engineering the opportunity by the well-tried flattery process—carefully camouflaged, of course. Perhaps the flattery was a bit overdone, because Peter was soon imploring me to fly the machine away just to prove once and for all that the performance of this Cadet was at least equal, if not actually superior, to that of the Skylark 3. I egged him on further by suggesting that the Long Mynd, a mere 120 miles away, was a task well suited to the machine. But even Peter was a little sceptical of such a suggestion and, falling beautifully for the bait, laid a wager that not half the distance could be covered. To impress me still further with the capabilities of his machine, he modified his flutter by allowing 60 miles to be covered in any direction. This was good because my navigational prowess is limited, and the whole five shillings might be very useful to help towards the retrieve. Thus morally fortified, we dragged the Super Cadet to the launching point.

Perhaps it might be as well to explain to those few who do not already know that the Cadet in question is named "It". This rather curious name is derived from its recall sign (which just proves its soaring ability). If, therefore, I refer to "It", I do not mean to be derisive. Anyway IT and I were eventually lined up for the second aero-tow of the day, after a protracted wait for cumulus to form. Donned in lightweight goggles and sitting on a lightweight foam plastic cushion, fully half an inch thick, the IT and I took the air.

The first part of the launch was a trifle hairy, not, of course, due to the superior handling of the machine, but to the fact that the wind was easterly and take-off was towards the hill. Surprisingly enough, the remainder of the tow was exceedingly smooth and pleasant and I completely forgot what I was flying. This was really rather careless because, on casting off in the first thermal we struck, I perceived that we were at a mere 900 ft. and only marginally within gliding range of the Club. Fortunately the thermal did its stuff and lifted us to 3,000 ft., albeit rather slowly. At this height I left to try my luck with another cloud before setting off, and after a rather embarrassing scrape at no great height and out of range of the site, achieved a more satisfactory rate of climb. Estimating a vertical height of 1,000 ft. from cloudbase (I hope not too inaccurately), we thundered off in true competition style in the direction of downwind, which by a strange coincidence, corresponded roughly with the intended track.

One lesson was very quickly learnt, and that was that if we were to remain airborne at all, the nearest source of lift had to be utilised whether or not it lay on course. Hence we pursued the sort of route that might well have been taken by a drunken fly, only we doubtless flew more slowly and frequently a little higher. The M1 appeared beneath us, disappeared and then reappeared. Woburn Abbey slid by at a good 15 knots, hotly pursued by a mess of unidentifiable aerodromes until, at long last, Edgehill hove into sight on the starboard tip about one Cadet-year away. This was something of a shock, since it should

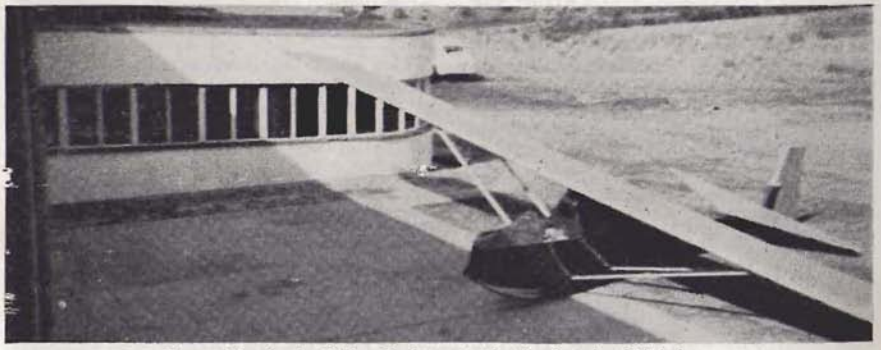
have turned up on the port tip, but then, when your life consists of a series of highs, very lows and shattering slows in between you just can't be too fussy.

Things now began to get really difficult. A sheet of rapidly thickening high cover was approaching from the south and thermals were becoming more and more dismal. Fortunately, during a perfectly miserable climb from an all-time low, a promising patch of cu started to form over the southern end of Edgehill, and as soon as I judged there was the remotest chance of reaching it, we left our thermal and pushed off at max. glide. Now the one really good feature about IT is that any form of speed chart, glide chart or computor is completely unnecessary, since max. glide, max. cruise, min. sink and stall all seem to occur at exactly the same speed. I will admit that the precise speed for these conditions of flight is difficult to determine, since the A.S.I. needle has long disappeared backwards off the scale; but if a single hair on your head moves, you are going too fast, and if you feel a breeze from behind, you may be a trifle too slow. No other indications of the correct speed can be expected. At all events, a final glide ensued, except that by a gnat's whisker it wasn't final and we were soon grinding merrily away again in ½ ft./sec. up, some 200 ft. above the ground.

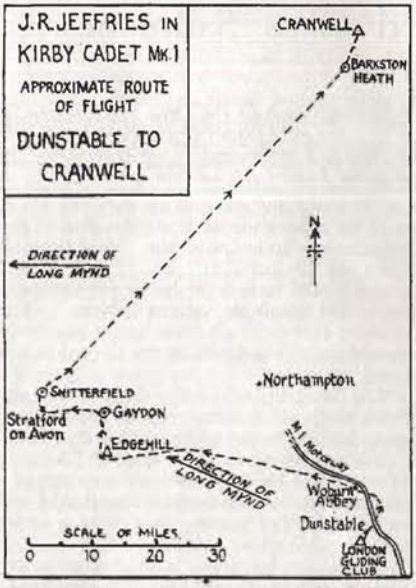
We slowly drifted past Edgehill, which was being rapidly consumed by a giant earthwork pincer movement, and on towards the end of No. 1 runway at Gaydon, where V bombers seemed to be two a penny. I couldn't help lapsing into the realms of conjecture (Heaven knows there was enough time) as to what would be our fate should a state of National Emergency be declared at the precise moment that we drifted across the end of the runway. Would we be escorted down by fighters with a stalling speed at least twice as great as IT's max. permitted, or would we be dispatched without ceremony with one well-directed shot! I was really quite glad when we cleared the airfield with a more comfortable height margin and the thermal gathered more momentum.

By now a bank of high stratus, which had been approaching rapidly from the south, had reached my intended track and effectively masked the sun. However, there was a "corner" to the cloud blanket and I pressed on in the fond belief that things might be better further west. The actual break back occurred at Stratford-on-Avon, but by this time I could see that the sky ahead was pure blue and not very inviting. Never mind: the river and the Memorial Theatre looked most attractive, and even though this was probably our final glide (apparently now dead into wind), the view was well worth the trip.

During the course of the glide a few new cumulus began to form to the north of track, and we eventually contacted lift at no great altitude over Snitterfield, achieved a quite acceptable rate of climb, and arrived at cloud base (I think) at no less than 6,700 ft.—the best height of the voyage. By now the clamp was well and truly overhead and all thought of the Mynd vanished, and the task was converted to a free distance in the direction away from the clamp, i.e., roughly north. But I had left it too late and, unable to overtake the clamp, was soon



Peter Fletcher's Kirby Cadet outside the London Club bar.



searching for a suitable landing field. As a last desperate resort I investigated a patch of shadow a lighter shade than the remainder which lay over the village of — ? Without daring to breathe, we slowly girated in zero, centred on it and, according to the altimeter, climbed in it until after an aeon we reached 4,000 ft. and hurried off to the nearest obvious lift. Since by now I had nothing but a purely academic interest in our whereabouts, serious map-reading didn't come into it. But because I thought I recognised a series of small lakes in the vicinity, I made some slight effort out of idle curiosity to check our position, and sure enough I was right to within the nearest 10 miles—we were somewhat north of Northampton, although what had happened to the M1 is anybody's guess.

The next cloud took so long to reach,that it was on the decay when we arrived, so we left again for the nearest, smallest wisp we could see. Unhappily we again were not over-blessed with height, so I kept my eye glued to the little cloud, hardly daring to look at the ground. Just to be difficult, the cloud sat on the far side of a reservoir, which from 900 ft. took on the proportions of the English Channel, and it was not until dead mid-stream that a welcome surge raised my spirits. Since at last we had reached the sunlight proper, the thermal was a marked improvement on what we had become used to, and in a matter of minutes we were looking down proudly from cloudbase.

Off once again, we pursued our roughly northerly course on the descents between climbs until I suddenly became aware that we were not only maintaining a northerly heading but also a northerly track. However, I was lost once again, so it didn't really matter. All I knew was that I was now going down-wind again, which was very satisfactory. Casually I glanced down at an airfield as it slid by at a snail's pace far below, and observed, I thought, that the windsock pointed towards us. Perhaps I had not seen correctly—I dismissed it from my mind. Another airfield hove in sight, and here gliding was in progress. Everything looked horribly uniform and, concluding it must be an R.A.F. club, we sailed over their winch in fine civilian style, observing also that we really were flying dead into wind. An Olympia was launched almost beneath us and began circling a few hundred feet below. Since we were at the end of a short cloud street, I elected not to join him and pressed on upwind until we found a really meaty piece of lift which rushed us up to cloudbase. Much to my unsporting delight, I saw that the Olympia had failed to soar and had landed, not once but three times.

Then I was on what was definitely my final glide over Barkston Heath, although I didn't know it at the time, still into wind—on toward a large aerodrome with parched-looking grass around the runway. The closer we got, the more convinced I was that this was Cranwell. There is, after all, only one aerodrome in the country that looks like Cranwell—Cranwell. The next cloud was a good twenty miles away with clear blue sky in between, so that there was really little hope of our journey continuing, so I amused myself by flying locally over the College buildings until finally we ran aground in front of the old control tower.

There followed a pleasant though rather distracting wait due to thunderstorms and constantly changing wind direction, during which I was royally entertained in the Mess until the retrieve arrived. The excitement seemed to have been too much for poor Peter who, after waxing very voluble during the loading-up operation, curled up in the back of the Land Rover and wasn't heard of again until on the outskirts of Dunstable.

Outlook for Standard Class Sailplanes

by Boris Cijan

Boris Cijan, designer of some famous Yugoslav sailplanes such as the Orao and Meteor, is a member of the Board of OSTIV. This article, which not only discusses the Standard Class but envisages an eventual One-Design Class for World Championships, is reproduced by permission from the OSTIV Section of the Swiss "Aero Revue".

THE Standard Class came to maturity in the F.A.I. World Championships which took place in Leszno and Butzweiler, and can now stand by itself. Of a total of 61 sailplanes at Leszno, 39 per cent were Standard Class, and of a total of 55 sailplanes at Butzweiler 63 per cent were Standard Class. At Leszno there were eleven different Standard Class designs and at Butzweiler twelve different designs, and of these five were sailplanes which had not hitherto been seen.

New designs are being built to the F.A.I. Specification and efforts are being made to minimize the fuselage cross-section but still keep within the requirements. Even so, one still has to stuff a 1.9-metre man into such a super cockpit, assuming the normal cockpit as that in the Weihe. The "Draft Specification for F.A.I. Standard Class Gliders" defines no limitations on cockpit dimensions and, for example, the Polish Foka was within its rights in competing in the Standard Class despite its low, narrow cockpit. But the F.A.I. Specification does recommend as follows:

> "Design and construction to be cheap, safe and easy to maintain and repair, in an effort to encourage soaring throughout the world",

so here is some sort of technical inconsistency. To what extent should one try to improve the performance and produce a racing machine only for World Championship purposes? The Foka which appeared at Butzweiler can, in journalistic jargon, be considered to be a "Super-Kite", but from the technical point of view it is certainly a positive effort to see what one can actually achieve. This positive effort must be superimposed upon the idea of the Standard Sailplane, and one could develop from the "Super-Kite" an "F.A.I. Kite" which would have a far better performance than, for example, the Olympia. The positive merits of all these super machines should have their applications to the simpler types.

The deviation which the designers of the Foka made in connection with the fuselage cross-section as far as the F.A.I. Specification is concerned must be rated as "Super". Where is the border between the design of a "Super-Kite" and a normal Standard Class sailplane? The answer is simply a more precise definition in the F.A.I./OSTIV Specification, but there is another question, Should one rush in with administrative rules and immediately make limitations on the fuselage cross-section instead of recommendations? People believe that the Open Class should be used for unlimited technical developments in new aircraft, and one tends to forget that there is no reason why such freedom of development should not be given to the Standard Class, and for this reason we should not rush in with modifications of the specification in order to clarify the difference between the Super and the normal types. Today we have in many countries very superior Standard Class sailplanes which are in every way consistent with the Standard Class idea. The Ka-6

KEY TO INITIALS: F.A.I.—*Fédération Aéronautique Internationale.*

C.V.S.M.—*Commission du Vol Sans Moteur* (Motorless Flight Commission of the F.A.I.).

OSTIV—*Organisation Scientifique et Technique Internationale du Vol à Voile.*

D.F.S.—*Deutsche Forschungsinstitut für Segelflug.*

and the Standard Austria which have gained design prizes, and the Breguet 905 Fauvette, the Zugvogel IV, Skylark II, the Pik-3C, the Italian aircraft M-100S and E/C 39, the Mucha Standard and American SGS 1-23 and many other 15-metre aircraft are already not only outstanding all-round club aircraft for high performance flying and training, but also outstanding contest aircraft. If one considers that, in the case of all these aircraft, there are still many improvements that can be made in performance, then the C.V.S.M. and OSTIV have achieved what was desired. The technical development must be encouraged and a few "Super-Kites" will stimulate and influence this development.

During the OSTIV General Conference in Cologne, a proposal for a monotype (one-design) sailplane was made by the Polish Aero Club. The idea was that everybody would fly under the same technical conditions in order that one could evaluate purely sporting performance. This well-known Olympic idea will come to pass one of these days. The introduction of a One-Design Class would mean, however, the immediate end of the Open Class. In Cologne we had several illustrative examples. Two outstanding Standard Class sailplanes—the Ka-6 flown by Jensen (Denmark) and Tandefelt (Finland)—operated in the Open Class and Jensen actually came 7th. This does give some indication that, from the purely sporting standpoint, the Open Class has lost its importance. If in addition we take, for example, Witek with the Foka as if he were flying in the Open Class, to which nobody could object, he could have been the absolute World Champion (Hossinger gained 5,102.9 points and Witek 5,201.9 points, although they were in different racing categories), but according to the F.A.I. requirements, the Foka was entirely within the requirements for the Standard Class.

In SAILPLANE AND GLIDING, April 1960, R. E. Schreder (U.S.A.) proposed that during the World Contests all competing sailplanes should be evaluated under the same points system, and that there should be only one World Champion, who would have the highest number of points, quite regardless of class of aircraft he flew. This suggestion is basically sound, not only from the technical but also from the sporting point of view, and it would be wise for the C.V.S.M. to give careful consideration to

the suggestion for the next World Championships. If they accepted it, it would be a further step forward in the direction of preparation for a One-Design Class. If we could gather a background of statistical information, it would ease the problem for the selection of the best design for a One-Design Class.

This automatically raises the question: When should the decision on a One-Design Class be expected? We know that the optimum aircraft is a function of the state of technical and meteorological development. If in the year 1938 the DFS-Meise (Olympia) with 15 m. span had a gliding angle of about 1:25, we now find that a present-day aircraft of the same span has a gliding angle of 1.35. One must therefore realise that a given optimum is only valid over a certain time interval. In the year 1957 it was publicly suggested by a number of people that it was too early for the first Standard Class World Championships to be held in 1958, but in fact it was not too early. Even in the year 1958, suitable new designs were at the starting line, and proved themselves as worthy performers in the World Championships.

In the year 1962 the percentage of Standard Class sailplanes will be at least as great as that at Butzweiler. We must not forget that designers of the existing successful Standard Class sailplanes can make many improvements and achieve much better performance without a great deal of effort or cost. Development will advance and new prototypes will be built, and all of this, of course, will result in greater approximations to the optimum solution and provide a wider choice for the future One-Design aircraft. It is far too soon for us to put any stop on development. Until we reach the final selection of a One-Design aircraft, we need a lot of time, a lot of preparation and a lot of hard work. It is hardly likely that it will be possible before the year 1968 to organise a successful and properly developed One-Design sailplane.

It would be a good thing if C.V.S.M. and OSTIV were to form a permanent committee which would study this whole problem for the future and at the same time would form an international jury for the Standard Class sailplane. OSTIV has already formed a permanent committee of international experts on airworthiness of Standard Class sailplanes and has completed with success the first work on the subject. Only the closest collaboration by the best experts from various countries in the area of interest of C.V.S.M. and OSTIV can solve this problem and all its ancillary aspects. By such work one will be able to devise the optimum conditions for world-wide soaring, and that means a lot of work and clear thinking and careful analysis and collection of the widest possible views and ideas. This new concept would then be quite easily agreed administratively, if it is worked on, on two fronts—scientific and sporting.

First Impressions

by Tony Goodhart

Britain's representative in the Standard Class tries out other Standard Class machines after the World Championships are over.

AFTER the World Championships were over, aero-tows were offered by the organisers so that pilots could fly gliders of other nationalities, and I hastened to accept invitations to fly the Polish Foka, the Austrian Austria and the Italian M-100. Unfortunately, time did not permit of flying the M-100; a great pity, as this clean-looking straightforward design by the Morelli brothers appeared to offer much in its favour as a good sensible Standard Class glider.

SZD Foka.—This and its open class opposite number, the Zefir, immediately caught the eye with their rakish lines and remarkably shallow fuselages. At first sight the fully reclined position looked most uncomfortable and unnatural, but proved, when one was installed and had agreed to lay one's head on the pillow provided, to be perfectly satisfactory—in fact, so relaxed as to be almost somniferous. The immediately important question however was what of the forward visibility? In the version flown so ably by Adam Witek, the moulded double curvature perspex canopy had been replaced by singly curved sheets very neatly welded together, and the visibility (only tried on the ground) appeared acceptable. The earlier version offered for trial flights, however, had a canopy which had been rather poorly moulded so that the

Left to right: *George Burton, Tony Goodhart (in cockpit), Toby Harrison.*

perspex had a certain amount of rippling with the result that visibility directly forwards was negligible—it was distinctly alarming not to be able to see the tug as one started to take off; however, once airborne one could quickly pull over to one side and look through less depth—in perspective—of perspex.

The compulsory-in-Standard-Class fixed wheel is well behind the C.G. even without pilot, so that on take-off the glider starts resting heavily on the skid; this presents no real disadvantage and has the distinct *advantage* that the skid quickly provides a good braking force on landing.

On tow, the Foka handles well and can easily be trimmed to no-stick load. Once released, it was necessary to trim back considerably in order to settle down to the circling speed of 70-75 k.p.h. (38-41 knots). At this speed, particularly when circling, one had the impression that one's feet were higher than one's head, and I think it would take several hours to become really accustomed to the fully reclined position.

The stall at about 60 k.p.h. (33 knots) was preceded by slight but noticeable buffeting, and was then quite remarkably docile without tendency to drop a wing; stalling off a turn was also quite gentle.

Rate of roll appeared similar to Skylark 2 and general handling entirely satisfactory. The rapid increase in speed when the nose was only slightly lowered was most impressive.

The instrument panel was away beyond one's knees, to allow forward visibility and room for the knees of specially long pilots; and virtually unreachable to set speed-to-fly scale. I believe this could be adjusted fairly simply.

The dive brakes on this prototype were not nearly effective enough, and had been considerably increased in area on the version flown by Witek; the approach to land was interesting in that, in order to see the ground, one had to side-slip hard and look out of the side of the perspex and then straighten up at the last moment. Once arrived on the ground, one quickly came to a halt on the skid.

I am forced to admit, however, that I would not relish the idea of trying to sneak into a small field with such marginal forward visibility, and even less so if it were raining. It would be very interesting to try again with the much better canopy as seen on the competition version.

The demonstration of rigging and unrigging of the aircraft showed that this matter had been given careful thought and presented no problem.

Altogether the Foka is a most interesting aircraft with good flying characteristics, an excellent flight performance, workmanship beyond reproach—and the less said about visibility the better!

Standard Austria.—My flight in this aircraft, the winner of the OSTIV Standard Class design competition, followed immediately on that in the Foka, and one was, of course, immediately struck by the good visibility forward, as well as in all other directions. The seat position is semi-reclined and the cockpit generally comfortable, with the instruments easy to reach.

Take-off and tow were quite straightforward, and after release the aircraft was easily trimmable to its circling speed of 70-75 k.p.h. (38-41 knots), though if anything it appeared to need a slightly higher speed for the same angle of bank compared with the Foka—this may have been due to the marked buffeting on approaching the stall which occurred at about 60 k.p.h. (33 knots) and was itself rather fierzer than desirable—but nevertheless easily recoverable from.

Rate of roll was up to standard, the machine generally handled as a good sailplane should, and one was quite unaware that there was an all-moving V tail behind one.

Trimmed to 140 k.p.h. (75 knots), the

Austria was still nice to fly and had apparently a very good gliding angle—I was assured that the curve in the handout issued by the manufacturers is an honestly tested one, giving best glide ratio of 1:34 at 105 k.p.h. (57 knots) and 1:28 at 140 k.p.h (75 knots) with minimum sink of 0.7 m/sec. at 70 k.p.h. (2.3 ft/sec. at 38 knots.)

The workmanship on the Austria is very good—the wing contour giving the appearance of being quite exceptionally accurate. The cockpit and nose is in fibre-glass with no skid, though I would prefer to see a small skid to take the brunt of landing in rough ground. For the same reason I would prefer a tail skid of the Slingsby type rather than the rather large tail wheel.

The rigging in 2 minutes and the unrigging in a few seconds over 1 minute were quite remarkably simple.

Comparison.—To compare the Austria and the Foka from the point of view of a prospective private owner is not easy. In the Foka, I liked everything except the forward visibility, whilst in the Austria the whole aircraft appealed, except for the minor points mentioned above. Performance-wise, according to the information available, the Foka has a slight advantage at high speeds. Price-wise it is not possible to comment, since prices were not quoted.

Since every flight should end in a normal landing, and since many of these will be in small fields, I believe forward visibility to be one of the major criteria in the ideal sailplane. I have been back-of-envelope sketching out a scheme for lifting the pilot's head and shoulders together with the rear portion of the canopy to give him a good view forward for approach and landing; however, this might be classed as an auxiliary lift device and therefore not permissible in Standard Class!

I have just started to build a trailer which will take the Foka, the Austria, the Olympia 460—or any other Standard Class sailplane; I am therefore at the moment open-minded on the subject.

CONCLUSION.—Two very interesting aircraft with fine performance—but (bearing in mind import duty) I am, at the moment, open minded on the subject of a new "ship". The inverted commas because, by the time this article is published, if ever, I shall have retired from the Navy and be thinking of things other than ships.

British Gliding Association News

Annual General Meeting

The Meeting will be held at Londonderry House at 10 a.m. on Saturday, 11th March. This will be followed by a meeting of Instructors at the Kronfeld Club at approximately 11.30. Sandwich lunches will be available as last year, if you let this office know in advance. At 2 p.m. there will be a meeting of the Secretaries, Managers and Treasurers at 71 Eccleston Square, in a room which has been made available to us by kind permission of the National Playing Fields Association.

Council News

The Council approved in principle the suggestions made by Chris Riddell in his letter to the Editor of SAILPLANE AND GLIDING, October issue, in which he suggests that to enter in the National Championships it will be necessary to have flown in competitions or rallies during the preceding year. Naturally a detailed scheme will have to be evolved and carefully studied, so that the competitions in 1962 will qualify pilots to enter in the 1963 National Championships.

Council discussed the paper on Handicapping that appears elsewhere in this issue, and thought that it should be tried out for one year. If Championships are more fun for League 2 pilots with handicapping, then it can be reconsidered for another year. It will be up to pilots to make their opinions known.

Addition to Operational Regulations

1. All pilots joining an affiliated club shall, before flying solo, sign a Declaration of Physical Fitness.

2. All pilots shall, before starting to give instruction in gliders, have their Declaration of Physical Fitness endorsed by their own Doctor.

3. All the details have been circulated to Club Secretaries. It is left to the discretion of each Club, but it is recommended that (2) above should apply to all solo pilots.

1961

BRITISH GLIDING ASSOCIATION

ANNUAL BALL

at

LONDONDERRY HOUSE
19 PARK LANE, W.1

FRIDAY, 10th MARCH, 1961
8.30 p.m. – 2 a.m.

Tickets £1 5s. 0d. (inclusive of supper)

Obtainable from the

B.G.A. Office
19 Park Lane, London, W.1
and your Club Secretary

(Presentation of Annual Awards)

New Gliding Clubs

The WEST WALES GLIDING ASSOCIATION has been affiliated to the B.G.A. They will be flying from Haverfordwest Aerodrome, which is about as far west as you can get in Wales. Gilroy Phillips is their C.F.I., and they have received their T-21 from Slingsby's and will be flying by January, weather permitting. Address of the Secretary: A. R. Squ.bbs, 36 High Street, Tenby, Pembrokeshire.

The R.A.F. APPRENTICE SCHOOL, HALTON, R.A.F. Halton, Aylesbury, Buckinghamshire. This school is flying from R.A.F. Halton and the C.F.I. is Flt.-Lt. B. B. Sharman. Membership is restricted to the cadets of the Apprentice School.

LONG MYND EASTER RALLY

THE Midland Gl'd'ng Club are holding their annual Easter Rally from Friday, 31st March to Tuesday, 4th April, 1961. Entries are l'm'ted to 15 visiting aircraft and entries will close when this number has been reached. All meals will be available at the club for visiting pilots and crews. It is regretted that accommodation cannot also be offered. Intending entrants should apply for entry forms and regulations to Lieut.-Col. G. Benson, Marston, Pembridge, Leominster, Herefordshire.

Special Instructors' Weeks

Lasham: March 1961

THE aim of these weeks is to improve the knowledge of Club Instructors and to raise the level of instructional technique throughout the country by discussion and the mutual exchange of ideas.

Courses will include talks by distinguished members of the gliding movement and will provide an opportunity of revising both theoretical and practical aspects of gliding.

The Courses are open to instructors and potential instructors from any Club, but it is particularly hoped that Clubs will encourage their professional and course instructors to attend in order to exchange the benefit of their experience and ideas. At the same time the courses are intended to help them reach a higher standard of technical knowledge which may be required for the proposed professional instructors' category.

There will be some flying each day, and a special effort will be made to give those attending an opportunity to fly as many different types of glider as possible.

The proposed dates for the first two courses are: Monday, 6th March to Friday, 10th March; and Monday, 13th March to Friday, 17th March, inclusive. These weeks have been chosen so that anyone travelling far may attend the B.G.A. Ball and Conferences and an Instructors' Week without the expense of a further journey.

The Course fee will be £2 10s., which will include temporary membership of Lasham Gliding Centre. Food and accommodation is not included in the Course fee, but will be available at the Club or at an Alton Hotel as required. Flying will be at the normal Club rates.

The proposed programme will include talks and discussions on teaching technique, practical principles of flight, cloud flying, cross-country flying and field landings, accidents and flying discipline.

Further suggestions for these Courses would be most welcome and should be sent to Derek Piggott at Lasham.

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at the following prices:

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PROJECT CARLTON

by Ian Paul

EARLY in 1954 the Newcastle Gliding Club moved to the R.A.F. airfield at Usworth, near Sunderland. This was the latest in a series of moves which had taken place throughout the life of the Club (founded in 1930), and it was realised that, whilst Usworth would provide a base for a few years, it would not be available permanently. Further, thermals formed the main source of lift, and these were severely curtailed by the sea breeze which usually arrived within an hour of the appearance of the first thermals. (Usworth is only four miles from the coast.)

A Sub-committee was therefore formed to look for suitable sites. Basic requirements were as follows:—

(a) The site should provide a good measure of soaring. This could be either hill or thermal (preferably both), but in any case the site had to be at least 10 miles inland to escape the worst effects of the sea breeze.
(b) There should be sufficient area available to give 1,000-ft. winch launches in non-hill-soarable winds, should the eventual choice be a hill site (1,000-ft. launches are essential, of course, on a flat site).
(c) Security of tenure was essential.
(d) The site should be within reasonable motoring distance of Newcastle.

Thus we set about searching for a large area of reasonably smooth ground located more than 10 miles from the coast and within a radius of 40 miles of Newcastle with, if possible, access to a ridge.

OBSTRUCTION

Several sites were found which fulfilled the basic requirements but which were not available for reasons of difficult access, grouse shooting or water catchment area. So many and varied, in fact, were the reasons advanced for not allowing gliding on land which appeared to be completely useless for any other purpose, that one would have thought we were proposing to make a landing ground for Martian invaders rather than trying to establish a local gliding club.

The search continued with negative results (apart from increasing frustration) until, in August 1958, we heard of a man who actually had a site and wished to start a gliding club. The man's name was Ken Saddington, and the site, Carlton Moor, was a few miles outside our original search area. A meeting and visit to the site were arranged, following on which it was proposed to join forces and develop Carlton.

A CHOICE OF SLOPES

Carlton Moor is situated on the top of a generally north-facing ridge in the Cleveland Hills at 1,200 ft. a.s.l. The level of the land immediately below the hill is 300 to 400 ft. The ridge extends to the east at heights of 900 ft. to 1,400 ft. for 4¼ miles along to the north-facing bowl at Ingleby Greenhow (1 mile wide). The east side of the bowl then continues in a northerly direction (W.N.W.-facing) for 3½ miles to Kildale, falling from 1,200 ft. to 900 ft.

Returning to the site, there is, on the immediate west side of the launching area, a ¾-mile face at right angles to a 290° wind. The line of the hill then resumes its westerly run for 1 mile at 1,000 to 900 ft. facing 330°. There is a gap of about ⅝ mile, and then a further 1½ miles of north-facing ridge to Ingleby Cross, where the line of the ridge turns south and faces west for 1½ miles (height 1,000 ft.). There is, in addition, a small ridge, base 900 ft., top 1,000 ft., facing 080° along the east side of the launching area, extending to the south and becoming progressively larger as the valley falls to 500 ft. west of Chopgate, where it joins a north-east facing bowl about 1½ miles wide, the top of which is at 1,250 ft.

There is no high ground to the west and north of the site for about 20 to 30 miles. To the south and east lies the remainder of the North York Moors, with the Yorkshire Gliding Club due south 13 miles by air and 21 by road.

An expedition was organised in October, 1958, to test the site. Launching was carried out from an area beside the Carlton-Chopgate road at 900 ft. elevation, the aircraft flying north and then turning west round the north point of the hill and soaring

Carlton Moor from the west, taken from 300 ft. The west face is in the foreground. The launching area covers most of the dark-coloured ground bounded by the top of the west face, the smoke from a heather fire and the right-hand edge of the picture. The Carlton-Chopgate road is visible, and beyond it the north-facing ridge can be seen extending to the east. The north bowl and west ridge at Ingleby Greenhow are just visible in the distance.

up the west (290°) face in a 15-knot westerly wind. The expedition was rated as highly successful.

The launching area on top of the hill (see map) rises from 1,200 ft. at the south and south-west to 1,340 ft. at the north end. Along each of the proposed launching runs there are several undulations; however, these do not present a hazard to flying operations. The hill top was covered with heather until a large fire removed most of it late in 1959. Whilst this has temporarily spoilt the beauty of the site and made it rather dirty, it has had a useful result in that we can now see all the rocks and bumps which must be dealt with. Three launching runs are planned as shown, and these are to be cleared, levelled and sown with grass.

The site is at an elevation of 300 ft. above the Carlton-Chopgate public road, and it was necessary to construct a road up the hillside to gain access to the hill top. In order to save money, it was decided that club members would build the road, and accordingly the membership was divided into four working parties, one of which visited the site each Sunday. Work was commenced in March, 1959, and by mid-June we had constructed over 1,000 yards of single-track road and could drive vehicles up to the site. The foundation of the road is broken sandstone with a top covering of shale, both these commodities being in good supply on the site. We were fortunate in that a tractor with trailer and a mechanical shovel were made available to us by local people.

A temporary corrugated iron shed was

erected to house equipment, and a camp for members was held during July and August 1959. Unfortunately the weather for the first week of the camp was very poor with much low cloud and rain; however, some soaring was done during the second week (before it became anticyclonic) and it was demonstrated that the 290°-facing slope worked in west and north-west winds and that the ridge to the east as far as the bowl at Ingleby Greenhow worked in a north-east wind. During a north-west wind a wave appeared, giving lift to about 3,000 ft. a.s.l. ¾ mile in front of the hill. Earlier in May 1959, a Skylark II was flown from Usworth to Carlton on thermals in a north-west wind, and showed that it was possible to soar the entire ridge from Kildale to Ingleby Cross with this wind direction.

Whilst discussing soaring possibilities, it is worth mentioning that the site provides good thermals, and some very interesting lee-wave clouds have been observed in a southerly wind.

Development work was held up by the winter but was resumed in March 1960. Added urgency was given to the work by the knowledge that our tenancy at Usworth was very nearly ended, and because of this an emergency scheme was put into operation to allow the club to move to Carlton as soon as possible. A 65 ft. × 19 ft. sectional wooden hut was purchased during the disposal auction at Usworth and was dismantled, transported to Carlton and erected by members working during the evenings and at week-ends. The process took three weeks. A fenced pen has been erected alongside the hut to house trailers and winches; the club aircraft will be stored de-rigged in the hut, the remaining space being used as a club room and dormitory.

Security of tenure is of great importance, and we have been able to secure a long-term lease of the site and of the access road.

Future plans include the building of a hangar 80 ft. by 60 ft. with a permanent clubhouse alongside. More immediate plans concern the provision of a water supply derived from a spring below the hill top and the installation of an electric generator.

We are grateful to all those within and outside the club who have made this project possible, and are particularly grateful to Ken Saddington, without whose help the scheme could never have started.

Skylark Success!!

K 3F," Mr. S. H. Georgeson of
eached a height of 35,500 feet
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)0 feet.

* ————————

YEAR FOR SKYLARKS!

* ————————

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British Gliding

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PUBLICATIONS

"AUSTRALIAN GLIDING" — monthly journal of the Gliding Federation of Australia. Editor, Allan Ash. Subscription 30 shillings Australian, 24 shillings Sterling or 3.50 dollars U.S. and Canada. Write for free sample copy. "Australian Gliding", 60, Church Street, Cabramatta, N.S.W., Australia.

"MODEL AIRCRAFT"—Official Journal of the Society of Model Aeronautical Engineers. Features contest winning model designs, constructional articles, photographs and reports of international and national contests. 1/6 monthly from any newsagent. Send for specimen copy free from "Model Aircraft", 19-20 Noel Street, London, W.1.

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SCHWEIZER 1-26 sailplane complete with open trailer, maintained under American certificate. £800 with basic instruments. R. Young Box No. 76.

SITUATIONS VACANT

COURSE INSTRUCTORS. Cornish Gliding Club, Perranporth. Vacancies for Assistant Instructors on courses between 10th April and 13th October .Apply:- G. Collins, 31, Boscawen Street, Truro. Tel. Truro 2887.

SITUATIONS VACANT—cont.

WINCH AND TOW-CAR DRIVER required for Summer months. Details from Lasham Gliding Society, Alton, Hants.

WANTED

IF you have an Olympia, or any other type of glider surplus to your requirements, contact Box No. 78.

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WANTED Olympia or similar sailplane. Particulars to:- John Whitehead, 136 Union Street, Aberdeen.

WANTED. Secondhand barograph as spare. Peter Scott, Slimbridge, Glos.

THIS GLIDING

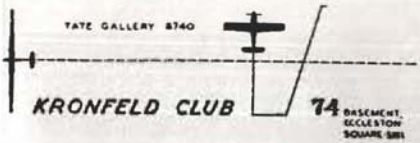
Best Stick to Paper

"The glider brought down about 100 yards of wiring, and an Electricity Board official said that power to about 120 houses was cut off. A thousand homes were cut off for a time while repairs were carried out to the damaged cables. The official said that if the wood and paper glider had been made of metal, the pilot could have been electrocuted when it hit the cable."—"*Scunthorpe Evening Telegraph*".

* * *

Uninvited Guest

"The House (Japanese Diet) was reminded of the incident last September when one U-2, carrying no national markings, made a forced landing on the field of a glider club at Fujisawa. The pilot refused to leave the aircraft and within fifteen minutes a helicopter arrived containing armed Americans in civilian clothes. They dispersed the crowd which had surrounded the machine and insisted that those with cameras should surrender their films. One Japanese was interrogated about whether the pilot had spoken at all, and the house of another was allegedly searched by Americans."—*Dennis Bloodworth, Tokyo Correspondent of "The Observer."*



FOLLOWING our most successful Dinner and Dance in October, the painting Exhibition and Competition held during the first eleven days of November was equally successful, the entries being the largest we have had since the Exhibition started three years ago. SAILPLANE AND GLIDING very kindly devoted a whole page of the last issue to this Exhibition.

For those members who are photographers rather than artists, we are holding a photographic competition and exhibition from the 1st to 10th March. There will be two classes, one for black and white prints not less than full plate in size and also colour transparencies. Full details and entry forms can be obtained from the Secretary at the Club.

The A.G.M. was held on the 19th October and about 30 members attended. After the Secretary's Report and the adoption of the Accounts, the following were elected to the Committee: Yvonne Bonham, Jill Walker, Ron Willbie, David Smith, Cliff Tippett and Mike Fenton. Hugo Trotter was once again re-elected as Hon. Secretary.

During the discussion following the formal part of the meeting, the questions of Group Membership, Overseas Membership and Country Membership were discussed, and as a result of this the Rules have been amended, so that Group Members can now be admitted subject to the approval of the Committee and also Country and Overseas membership will be 10/- per annum instead of the present subscription of £1. Details can be obtained from the Secretary. It is hoped that a number of gliding types from the more distant Clubs will join as country members, even though they only use the Club two or three times a year.

Starting on Thursday, 2nd March and continuing for the next six Thursdays ending on Thursday, the 13th April, will be a series of pre-soaring season lectures for solo pilots; full details of this series of lectures appear elsewhere in SAILPLANE AND GLIDING.

Finally, we would remind all members that their subscriptions are now overdue, so please send cash, cheques or gift tokens to the Treasurer at The Kronfeld Club, 74 (Basement), Eccleston Square, S.W.1.

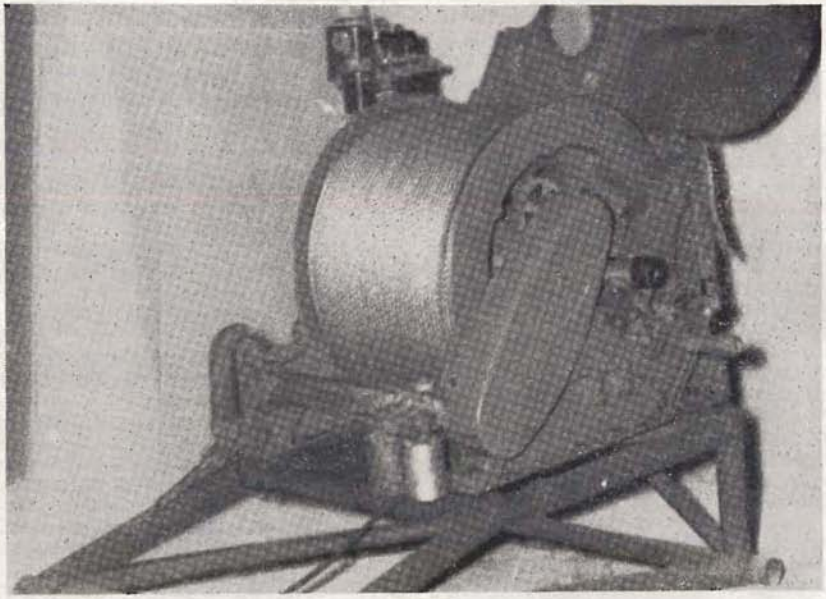
Wednesday Evening Lectures and Film Shows at 8 p.m.

Jan.	25th	Repeat of World championships in Poland film.
Feb.	1st	"The Berlin Airlift", Major P. A. Downward.
	8th	Films—"The Jet Circle" and "The Montague Motor Museum".
	15th	"S.A.S. Operations in the Omen", Colonel Tony Deane-Drummond.
	22nd	"Around the World on a Motorbike" by Russell Polden, with slides.
March	1st	Opening of Photographic Competition.
	8th	Photographic Competition and Talk by F. N. Slingsby with the B.B.C. Television film made in his works "Soaring in Sailplanes".
	15th	"Collision Experiments with Wire Barrage Weapons", Group Captain Kent.
	22nd	B.E.A. Film "Gateways to Europe".
	29th	Talk on Long Mynd Wave Safari, January 1961.

WORLD RECORD FOR "DICK" GEORGESON

A WORLD'S single-seater record for gain of height, subject to confirmation, has been set up in New Zealand by S. H. "Dick" Georgeson in a Slingsby Skylark 3F. Flying from the Canterbury Gliding Club, he gained 34,000 feet, beating the record height gain of 31,709 feet set up in Germany by Karl Bauer in 1959 in a cu-nim.

Georgeson reached 35,200 feet absolute altitude, which is short of the World record of 42,000 feet set up by W. B. Ivans at Bishop, California, just 10 years ago; but Ivans had to be towed to 12,000 feet to contact his wave, whereas the New Zealand wave can be contacted even from a winch launch from the plain below. Georgeson's previous best was 31,000 feet in 1958. Philip Wills, in the same New Zealand wave in 1954, set up the present British gain-of-height record of 28,200 feet.



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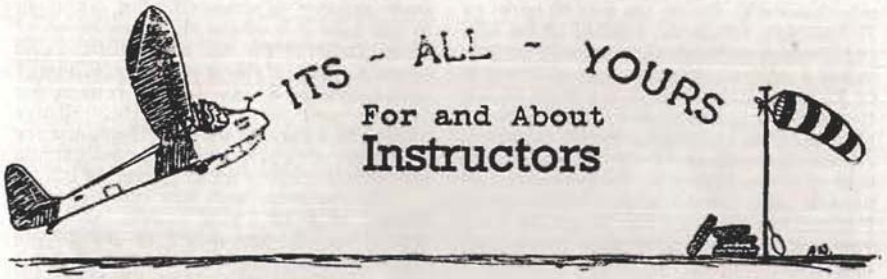


IN the October issue of SAILPLANE AND GLIDING (p. 102) I asked instructors about their ideas for reducing accidents. It is obvious from the replies that they have given a great deal of thought to the problem of broken gliders, and also that there is one point on which there is very strong general agreement. This is **the need for much firmer flying discipline until the pilot has obtained enough experience to be able to impose adequate discipline upon himself.**

The following contributions express this well.

PAUL MINTON, C.F.I. Imperial College Gliding Club, writes:—

"There is no doubt that at present the British gliding movement has never 'had it so good'. With modern training methods any fool can be blissfully floating round in a high-performance sailplane within a few months of joining a club—and from the accident statistics many fools do.

"In the past the discipline of gliding was enforced largely by circumstance. The effort required by each member was prodigious, and his progress was so slow that only the dedicated survived. A broken aircraft meant that someone in the club would have to mend it, and that others would be unable to fly. Those affected would not hesitate to inform the delinquent of their views on this, and other more personal matters!

"With the present highly skilled professional instruction and maintenance, many pilots achieve a high standard of superficial skill with very little real experience. Among these are some pupils who have not the imagination to foresee the consequences of their actions, and in my experience this is prevalent among those who have a natural aptitude for flying. Having been taught that flying is easy, and found it so, these pupils develop a false sense of security which is as dangerous as over-confidence. Due to lack of foresight they eventually get into a position where their natural ability is insufficient to save them, and there is an accident.

"I would suggest two actions which may help to overcome this problem. Firstly, while not discouraging the under-confident, the hidden dangers in gliding must be emphasised to those pupils who fail to 'visualise the scene'. A glider is no place for those who do not think quickly and accurately at all times. Secondly, it is no longer the case that the ability of the pilot matches the aircraft. An inexperienced pilot soaring in a high-performance sailplane has plenty of opportunity for getting into trouble, and must be briefed in great detail. A high standard of flying discipline must be imposed at all times until pupils have sufficient experience and self-discipline to be left to their own devices".

ALLAN PRATT, C.F.I. Newcastle Gliding Club, writes:—

"It is generally accepted that the majority of accidents occur to over-confident pilots whose judgment is not backed by experience. Until a pilot has proved his airmanship by consistently good flying in all conditions, he must discuss his flight plan with the duty instructor prior to take-off. As the duty instructor is generally in the air, this briefing is often missed unless the off-duty instructors take an active part in assisting when necessary.

"Briefing should always be aimed at improving ability and judgment rather than just detailing the circuit procedure to be used.

"At the Newcastle Gliding Club, first solos are done in the Tutor fitted with spoilers. Generally, a pilot with little

experience will, during the first 10 hours or 75 launches, follow the briefing to the best of his ability and thus remain accident-free. When a pupil reaches the stage of 10 hours or 75 launches solo, he is put back on the two-seater on a course of instruction aimed at improving his judgment and reactions. At the completion of this course pupils convert to the Olympia. From here on, the pilot is on his own with a minimum of briefing, but of course any dangerous flying results in a prompt grounding by the duty instructor.

"All accidents are caused by a combination of circumstances. If a pilot can recognise the beginning of a chain of events and take the necessary action, an accident is replaced by an incident [or avoided altogether.—A.W.]. Some causes of accidents are:—

"(1) While the pilot is unaware that anything is wrong, the preliminaries to an accident are usually all too obvious to ground observers. One can only assume that this is because the pilot has an inflexible attitude to his flying. This concentration upon what lies ahead must dull the senses to actual happenings. The answer to this can be a repetitive check on position, airspeed and sink throughout the approach.

"(2) Pilots returning to base after a high thermal flight fail to judge their approach correctly and turn on finals too high. This becomes dangerous if the pilot takes unplanned action such as 'S' turns. Pilots should re-join the airfield at winch-launch height and do a planned circuit.

"(3) When a tricky situation arises due to pilot error, too many pilots have the 'spot land at all costs' complex. In many cases an accident could be avoided by landing out or below".

W. B. Reekie, C.F.I. Norfolk and Norwich Gliding Club, writes:—

"The problem . . . is mainly one of overconfidence, as the immediate post-solo pilot still has a healthy fear and respect of his aircraft, whereas the pilot of, say, 5-20 hours' gliding experience, or 25-200 hours' powered experience, is able to relax more in the air as regards the actual handling of the aircraft, but because he has not developed at this stage the instinctive reactions of the old hand, may find himself in difficulties because of this relaxation.

"The more experienced a pilot is, the more I find he is willing to accept a briefing from another experienced pilot, although in this case it is obviously an exchange of ideas rather than an instructor-to-pupil briefing. Now, if this is so, how much more should a pupil benefit from a briefing for literally each and every flight. There should be a purpose for each flight, and the instructor should discuss this and explain any problems involved in achieving it.

"For example, even the most obvious things, such as being warned of being drifted too far downwind of the airfield when local-soaring, and of approaching with a sufficiently high airspeed in conditions of strong winds, should be mentioned. Most people will not resent this, even if it is repetition, and even those who do will probably remember the instructions in the air.

"I believe that an instructor who authorises a flight should and must give full briefing instructions, which after all need only take about three minutes. Other factors in achieving safety are, of course, giving frequent dual checks, but this is easier said than done. But in the case of pilots who are not in current flying practice, it should be essential".

George Collins, C.F.I. Cornish Gliding Club, writes:—

". . . All the problems referred to, in my opinion, stem from a lack of discipline, not in the sense of making more rules, but in the sense of inculcating to all pilots the need for self-discipline."

Roy Hubble, C.F.I. Kent Gliding Club, writes:—

"I feel that you answered the question yourself when you said 'When the leash is loosened'. If, as you say, there is a shortage of supervisory instructors, then surely these particular pilots should not be allowed to fly. Very 'ard, I know, but better surely than having bent aircraft.

"When a pilot goes solo, the leash of course is 'loosened' but should never be 'severed'. The supervisory control is more important than ever, and a rigid flying training programme, with suitably timed two-seater checks, should be adhered to, at least until the pilot is qualified to go on cross-countries.

"Most of the following are good old 'evergreens', but is there any harm in mentioning them again?

"(1) Low and slow turns on the approach (getting back to the launch point

at all costs).

"(2) Failure to deal adequately with cable breaks.

"(3) Insufficient pre-flight briefing and post-flight criticism.

"(4) Too few two-seater checks after having gone solo.

"(5) Insufficient knowledge of turbulence, curl-over and wind gradient.

"(6) Too early advancement to high-performance machines.

"(7) Wrong correction applied to check drift as aircraft touches down.

"(8) Over-confidence.

"(9) General lack of flying discipline.

"(10) Heads in the 'office' (not helped by poor visibility from some gliders).

"(11) Impossibility of simulating some of the flying characteristics of medium and high-performance sailplanes in the two-seater (in the majority of the smaller clubs anyway).

"To help in this business of a post-solo, training programme, I have instituted a system whereby every pilot has a Flying Progress Book."

[This Pilots' Progress lists every likely exercise in a small pocket-book. Each exercise should be signed and dated by the instructor when he is satisfied that the pupil is properly competent at it. The dating is important in that subsequent instructors can assess whether, for example, the cross-country check is still valid after some period off flying. Most record systems of this sort are difficult to maintain, but are undoubtedly a help in reducing accidents, particularly in clubs with numbers of different instructors.—A.W.]

It is all here and can be summed up in a few words. To have competent and safe pilots, you must give really thorough basic training, during which discipline is insisted upon plus adequate supervision of solo flying with frequent dual checks, until pilots have enough experience to be able through sound judgment to discipline themselves.

ANN WELCH.

Prospects for Inflatable Sailplanes

by D. Brennig James

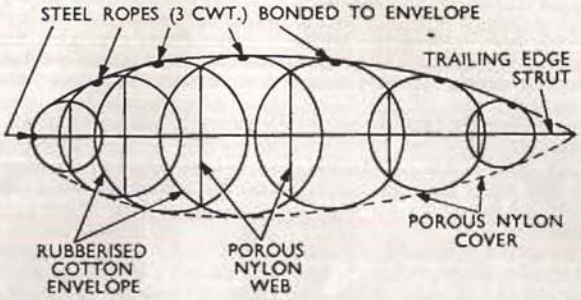
THE human race is about 50 million years old, but gliding is less than 50, so we are all pioneers whether we like it or not, and there is no excuse for the attitude that the whole thing is "buttoned up."

Gliding is an exacting sport and its adherents comprise that small section of the community who feel that the rewards balance the inevitable frustrations and sacrifices. Sailplanes are too expensive, too heavy, too bulky and too difficult to launch, and these practical disadvantages are the root causes of the defects of gliding as a sport.

What can we do about it? For the present nothing, not as long as we continue to fly current types of sailplanes.

Recently, while visiting R.A.F. Cardington, the work being carried out on inflatable aircraft under D. Perkins was seen, and what has already been achieved shows what exciting prospects lie ahead. The main technical problem in sailplane design is to construct a spar which will be light, yet strong enough to give a high enough aspect ratio to ensure a good performance. This spar must not fail either in compression or tension at its ultimate loading. Light materials strong in tension are plentiful, so that tension loads are easy to deal with; however, getting a good compression member and holding it so that it will not buckle under load is a major difficulty.

In the inflatable wing, tension loads are taken by thin steel ropes bonded to the surfaces of the inflated cotton envelope; compression strains are taken partly by the skin, the air filling, and by relief of stresses in the skin. The structure is designed to fail in compression in a pull-out in excess of 4G with about 50% strength in hand in tension. This wing is impossible to break, since at greater than 4G the wing-tips bend up to release the applied force, springing back when the load is removed. Working on this basis, one can build something like a Swallow with an unladen weight of about 50 lbs., costing about £300 and fitting into a valise. L/D would be about 30 with a stalling speed of 15 m.p.h., and minimum sink would be less than 1 ft./sec. These are roughly the dimensions and characteristics

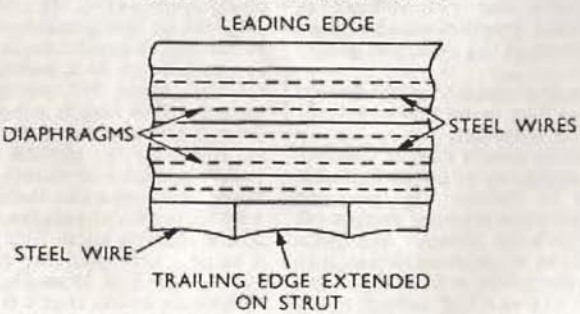


of the Perkins man-powered aircraft, which differs in having a low wing, undercarriage, and a 10-ft. diameter propeller.

A sailplane of this nature would have little peformance against the wind; however, the use of water ballast enclosed in span-wise waterproof compartments might remedy this.

The shape of the wing is generated by a series of circles inscribed within the section as shown in Fig. 1, the webs of porous nylon lying in the lines joining the intercepts. The envelope is of ballonet diaphragm fabric costing 30s./sq. ft., which consists of two layers of cotton with 45° between the thread directions bonded by a layer of rubber between them. These are joined up at a spanwise angle of 22.5° so that the envelope will not twist on inflation. Joints are lap-joint cotton-to-cotton, using KB65 rubber solution with $\frac{3}{4}$-in. overlap, and are made by coating three layers of solution on each fabric face and applying pressure to the bubble-free joint followed by gentle heat to bond. Good joints require considerable care and skill; their peel strength is practically nil, so that they must be designed to take all stresses in shear, the problem of the internal joint between the web and the envelope being solved by the use of woven tapes.

Inflation pressure is about 1 or 2 lbs. per sq. in.; dingny inflation valves and pressure blow-off valves are standard. Point loadings are through plywood panels bonded on with fabric patches. Steel ropes are taped on with nylon ribbon and rubber solution. An outer layer of nylon covers the dents in the section and gives a smooth section approaching the required profile. The trailing edge is of necessity a series of catenaries supported by small struts from the rear of the envelope (Fig. 2). Wing sections are about 20% thickness and usually symmetrical sections since the aircraft is light enough not to require large lift coefficients. The whole construction is suitable for home construction, one wing having been made by two men in 14 days; however, a great deal of skill and precision



is still required. When built, the envelope is inflated to 1.5 times working pressure; if it doesn't burst, you then bend it till it fails by folding; if by this time it has not exploded, it should be safe to fly the thing, A.R.B. permitting! This technique of light aircraft construction would apparently appear to be in its infancy; cotton could be replaced with terylene proofed with synthetic materials, or a terylene aircraft could be inflated by polythene or rubber "inner tubes." Glass fabric, despite its cost, would have the advantage of great strength and low elasticity so that stressed ribbons of this material might be used instead of steel ropes.

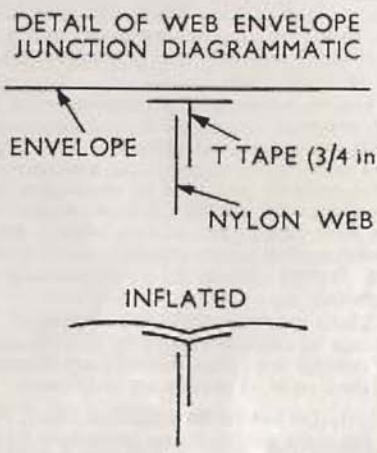
With these technical means at our disposal, it would appear more advantageous to consider the design of a totally different type of sailplane. With a stalling speed of 15 m.p.h., the human legs make a perfectly good undercarriage so that the pilot could take-off by running down a slope into wind. For this specification, a swept-wing tailless aircraft with a partially-buried pilot in the prone position would probably do well; alternate methods of launching would be to extend a bungy by walking backwards until one could not bear it any longer, auto-tow or winch launch using a light cable. Aero-tows at more than 40 kts. do not seem feasible, but the prospect of leaping from a high-flying aircraft and inflating oneself from a cylinder on the way down may appeal to some.

Instruments must obviously be light and rudimentary; the volume of the rude noise coming from the blow-off valve would give a fair indication of the rate of climb. Filling the envelope with oxygen would solve high-altitude problems; during competitions, of course, the contents would be analysed to ensure that they were not adulterated with hydrogen.

The prospects would seem to be that one could take one's sailplane in a valise to a suitable hill or cliff, inflate it from a built-in bellows, launch oneself by bungy or desperate leap, and slope-soar till a suitable thermal appears, go off cross-country downwind, land, pack one's valise and return by public transport. Continental touring would be cheap and easy since the valise would easily fit into the boot of a car. In Switzerland a train or cable car would be a convenient route to a suitable launching site, and one would expect that the annual race from the Jungfraujoch to Interlaken would be an amusing affair.

The next step would appear to be to institute an open design competition to the following specification:

Single-seater sailplane to cost £300 built by amateur construction; unladen weight not more than 75 lbs., excluding instruments and parachute. L/D max. must be better than 25. Pilot must be able to land or take



off using his legs, but must have the option of a safe belly landing. He must be able to rig, de-rig and launch single-handed, taking all his equipment with him when taking off. The aircraft must be safe and inherently stable so that it can be flown hands-off. Simple navigation instruments must be carried, with room for maps, luggage, and parachute which must be worn in flight. A suitable pump must be fitted for topping up the envelope during descent. Provision must be made for 150 lbs. water-ballast, readily jettisonable in flight; the aircraft must be able to withstand 4G pull-outs over its speed range. Speed-limiting dive-brakes must be fitted, or alternatively part of the pilot's body could be extended into the airstream to fulfil this function; design should take into account a reasonable degree of variation in the size and shape of pilots.

A prize of £50 might be offered for the best design fulfilling this specification, the contest to be judged by three independent judges to be named later.

DE-RIGGING

by R. C. Stafford-Allen

MORE and more people are doing more and more cross-country flying, and this is all to the good. However, many cross-countries end up in fields, and this means a de-rig. A fearful amount of damage can be done, and occasionally does get done, by careless de-rigging, and it is quite time that this sort of silliness was a thing of the past.

Firstly, before you go cross-country at all, you must know how to de-rig your aircraft, and you should, preferably, have done this under supervision. If the machine is a Club aircraft, you will be responsible for the thing until you hand it back to the Club on your return; and if you bring it back unserviceable, other members suffer while the damage caused by your stupidity is repaired.

There are some basic rules that apply in almost all cases of de-rigging, and all cases of damage arise from breaking one or more of these rules. The rules are as follows:—

1. Do not try **an** operation unless you are quite sure that you know how to do it, and that you have sufficient people to do the job safely.

2. Do put all pins, etc., back *into their own sockets at once*. Never put them into your pockets, or put them on the ground. In both cases they will get dirty, or collect fluff, and get mixed up. Pins must always go back into their *own sockets*. I do not care if they are interchangeable. Unless they go back into the same hole that they came out of, they will wear rapidly. The only way to ensure this is to put them back into the sockets *at once* when the component, wing, strut, etc., has been taken off. Then replace the safety-pin to make sure that the pin stays there.

3. Do make sure, before you take a component off, that *all* the controls have been disconnected.

Now to enlarge a little on these rules.

No. 1.—This should be axiomatic by now, but it is amazing how many people bring machines back with odd bits strained or broken with the excuse: "it slipped while we were de-rigging it". It is perfectly possible to de-rig a glider with completely unskilled labour; but to do it you must explain the procedure carefully to the people you have collected, and you must make sure that they *understand*. It is no use telling the average farm labourer to "draw the front spar pin". He just does not know what you are talking about. If you cannot make yourself clear to the folk who are offering to help, then *do not try to de-rig*, but wait for your crew.

No. 2.—This rule is the most disregarded of all. Pins will only stay a good fit if they always go into the same holes. This is because the pins and their sockets have, in use, settled down so that the mating surfaces fit closely over quite a large area. If you continually put a different pin into the socket, the surfaces of both pin and socket are continually settling down to new surfaces, and this soon makes the sockets oversize and the pins undersize. Also, observance of this rule is the only way that you can guarantee that you do bring all the pins back. There is no sillier sight on a

gliding field than a man scratching his head and saying: "we must have left it in the field".

No. 3.—There is no excuse for not observing this rule, but there seems to have been a rash, this year, of people trying to take the centre section off Skylarks without having disconnected the aileron rod. They seem to remember to undo the brake rods, because, before you can do this, you have to open the trap-door on the top of the wing; but the innocent little aileron rod, out in the open for all to see in the cockpit, gets forgotten.

Well, after all this, what can you do safely when you land in a field miles from anywhere? You can do a lot to make things easier for your crew. We will assume that you have not got a strong assortment of rustics around you. (If you have, and you can make yourself understood properly, then you can go ahead and de-rig; but do not say that I did not warn you!)

First, get the machine to a safe place to de-rig. This should be reasonably level, with the best and hardest ground that you can find, free of stones, etc., and as near as you can get to the place where the trailer will have to stop. Remove all necessary fairings, canopy, etc. With most sailplanes you can remove the tailplane single-handed with no difficulty. Whether you do this or not is up to you, but you can disconnect the controls, remove safety-pins, etc., so that the machine is ready to slip to pieces as soon as your crew turn up.

Do look after the parachute. If it gets damp, you are endangering the next bod who might have to use the thing.

Finally here are a few "beauts":—

The man who took the tailplane off a Kite and then moved it up to the gate of the field, bending the tailplane struts back and breaking the fitting on the fuselage!

The crew wandering about a field at dead of night plaintively crying for the "thing" that takes the pins out of a Skylark's wing!

The crew who took the wing off a Skylark and forgot about the tailplane!

The pilot who came and asked: "How long will it take to get another tailplane wingnut for the Oly from Elliotts!"

The man who went home with half the Prefect pins in his pocket!

To err is human; to forgive is . . . sometimes damned difficult!

Christmas Crossword: the Eight Egg-heads

EIGHT correct solutions were received to our Christmas Crossword. The first to be opened, and hence the winner, was from A. Klinge, CAPO 5055, Canadian Armed Forces, Europe. Egg-head Klinge writes: "Unfair to Canadians! Our only 'Underground' is a four-mile straight line and has no inner and outer circle. 'Whisky Galore' was re-titled 'Tight Little Island' in Canada—and moose (or mooses!) have antlers—not horns."

B	O	U	N	D	A	R	Y	L	A	Y	E	R	S	C
A	U	N	T	R	B	E	G	A	L	O	R	E	C	U
R	T	D	A	I	N	T	Y	S	P	I	N	L	A	M
O	S	E	R	V	O	A	C	H	I	C	K	E	N	U
G	I	R	D	E	R	I	B	A	N	K	W	A	I	L
R	D	G	Y	R	M	L	A	M	E	S	T	S	S	O
A	E	R	O	B	A	T	I	C	F	I	V	E	O	N
M	O	O	S	E	L	R	L	O	I	N	T	H	A	I
P	O	U	T	G	L	I	D	I	N	G	M	U	P	M
I	N	N	E	R	Y	M	U	L	C	T	A	N	D	B
G	A	D	P	O	R	K	L	T	H	I	R	D	R	U
G	W	O	W	W	K	I	L	O	M	E	T	R	E	S
O	F	F	A	L	N	O	V	G	I	L	I	E	N	S
T	U	R	N	E	O	D	I	A	M	O	N	D	C	O
T	L	A	I	R	B	R	A	K	E	B	A	T	H	S

We apologise to our Canadian readers and hope we have not precipitated another Boston Tea Party.

Many other entrants copied out the entire puzzle on plain paper, either because in their efforts they made such a mess of the printed version, or else because they wished to retain our December issue unspoiled. We commend their application!

The other seven egg-heads were: J. O. M. Wedderburn, Northallerton, Yorks.; John Howlett, Reading, Berks.; W. Anderson, Dorchester; Mrs. P. Worley, Woolstone, Glos.; John Goddard, Purley, Surrey; G. Collinsplatt, London; D. Sherman, Hayling Island. We are sending them Consolation Prizes of a copy of "On Being a Bird" autographed by the author.

Gliding Certificates

DIAMOND FOR GOAL FLIGHT

No.	*Name*	*Club*	*Date*
255	H. C. C. Greenway	Coventry Gliding Club	31.7.60

GOLD C CERTIFICATE

No.	*Name*	*Club*	*Date of Completion*
73	M. C. Fairman	London Gliding Club	4.9.60

GOLD C DISTANCE LEG

Name	*Club*	*Date*
H. C. C. Greenway	Coventry Gliding Club	31.7.60

GOLD C HEIGHT LEGS

Name	*Club*	*Date*
M. C. Fairman	London Gliding Club	4.9.60
H. E. K. Poole	Windrushers R.A.F. Gliding Club	28.8.60
H. C. Mackinnon	Surrey Gliding Club	7.8.60
L. N. Hoover	Empire Test Pilots' School	7.8.60

SILVER C CERTIFICATES

No.	*Name*	*Club or School*	*Date of Completion*
974	R. V. S. Gardiner	No. 634 A.T.C. Gliding School	30.5.60
975	H. E. K. Poole	Windrushers R.A.F. Gliding Club	10.10.60
976	J. R. Teesdale	Four Counties R.A.F. Gliding Club	25.9.60
977	T. Pentelow	Bristol Gliding Club	29.6.60
978	M. E. Rankin	Headquarters 2nd T.A.F. Gliding Club	23.5.56
979	R. G. Ludgate	Coventry Gliding Club	11.9.60
980	L. S. Phillips	Cornish Gliding & Flying Club	19.8.60
981	R. C. Stoddart	Newcastle Gliding Club	28.6.60
982	F. B. Reilly	Moonrakers R.A.F. Gliding Club	13.11.60
983	K. J. Bignell	Imperial College Gliding Club	19.6.60
984	L. A. Boyer	Suffolk R.A.F. Gliding Club	13.8.60
985	P. O'Donald	Cambridge University Gliding Club	20.9.60
986	G. Wass	Handley Page Gliding Club	26.6.60
987	K. A. C. Wirdnam	Kirton-in-Lindsey Gliding Club	30.5.60
988	J. Wingett	East Anglian R.A.F. Gliding Club	24.5.60
989	R. D. Lightfoot	R.A.F. Cranwell Gliding Club	17.8.60
990	M. Thomas	Moonrakers R.A.F. Gliding Club	2.10.60

Correction and Notes:—In the list of Gliding Certificates published in our last issue (p. 378), Mr. Wills' Diamond for Distance should have been given as No. 105, not No. 3. In case readers should think that numbers allotted for Diamonds indicate the total number of Diamonds earned, it should be explained that the numbers for Distance Diamonds began at 101, for Goal Flight at No. 201, and for Height at No. 301.

CERTIFICATES

Name	*Gliding Club or A.T.C School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
C. R. Delf	Norfolk & Norwich	K. J. Rosenfeld	East Midlands	D. Fraser	Chilterns
I. R. Sinclair	Fenland	N. W. Roger	633 G.S.	G. A. C. Garner	Cornish
K. H. Marshall	623 G.S.	R. Bradley	Wessex	J. P. Boneham	Derbyshire
R. J. Durdy	Doncaster & District	B. F. Wilson	Doncaster		Lancashire
		E. M. E. Foster	Surrey G.C.	J. R. Webber	624 G.S.
		J. K. Przowlocki	Polish G.C.	J. S. Stuart-Manteth	621 G.S.

Name	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*	*Name*	*Gliding Club or A.T.C. School*
C. Granville-White	Cranwell	D. L. Parslow	H.Q. 2nd T.A.F.	P. Wallis	624 G.S.
T. F. T. Holloake	633 G.S.			T. R. Vig	Moonrakers
G. F. Rock	622 G.S.	F. S. Sykes	635 G.S.	G. A. Mackenzie	Windrushers
S. A. Cooper	Moonrakers	S. A. Johnson	633 G.S.	G. Harrison	Derbyshire & Lancashire
F. D. Smith	633 G.S.	E. Y. Fitzakerly	Cornish		
R. K. Baker	633 G.S.	H. R. Monks	Kirton-in-Lindsey	H. E. Boulter	Norfolk
J. B. Cross	Coventry			J. E. Morris	East Anglian
S. H. Bettany	Coventry	R. L. Stanley	H.Q. 2nd T.A.F.	D. M. Dawson	East Anglian
C. F. Parkman	621 G.S.			R. E. Phillips	H.Q. 2nd T.A.F.
A. W. Maunton	Fenland	J. J. Jackson	H.Q. 2nd T.A.F.	A. E. J. Jefferies	611 G.S.
L. A. Walker	633 G.S.			J. W. Johnson	Doncaster
A. M. Skitt	633 G.S.	G. J. Bailey	Cranwell	C. A. Lagus	Wessex
P. Christie	East Yorkshire	B. N. M. House	621 G.S.	L. N. Hoover	Empire Test Pilots' School
J. H. Slack	Chilterns	D. A. Shingleton	Midland		
G. W. Carleton	H.Q. 2nd T.A.F.	T. W. Marlow	London	K. J. Bignell	Imperial College
		S. A. Stewart	London		
B. R. Beale	Oxford	M. T. Elston	Fenlands		
B. J. Milner	635 G.S.	A. P. Smith	621 G.S.		

Handicapping for British Contests

GENERAL REPORT OF B.G.A. HANDICAPPING SUB-COMMITTEE AND RECOMMENDATIONS FOR 1961 CONTEST FLYING

YOUR Sub-Committee's Second Report, dated 28th October, 1960, gave their Recommendations for League 1 of the 1961 National Gliding Championships (see SAILPLANE AND GLIDING, Dec., 1960, p. 371). This Third Report now proceeds to a more general discussion and recommends a revised Handicapping System for general contest flying during 1961 and for League 2 of the 1961 National Championships.

2.—Your Sub-Committee's basic approach to Handicapping was set out in Sections 1 to 4 of their First Report, dated 30th November, 1959 (see SAILPLANE AND GLIDING, Feb., 1960, p. 4).
This approach remains unaltered but, in proposing a system for 1961, the following additional factors have now to be borne in mind:-

(a) Active consideration is being given to Comparative Performance Testing on a quantitative basis, using a sailplane of known performance as the reference. The data available from such testing will, in due course, enormously simplify your Sub-Committee's task.

(b) Pending publication of recently completed performance tests on a well-known British type, and pending the growth of a sufficient volume of Comparative Performance Testing data, and the publication thereof, your Sub-Committee could, apart from anything else, be faced with obvious political difficulties were it to attempt, on present meagre evidence, any *individual* assessment and weighting for handicap purposes of all the main types in use in the U.K.

(c) Weather conditions are the overriding factor in any Handicapping system, and your Sub-Committee has ideas (not at present by any means unanimous!) for a system which will, to some extent take the variability of the weather into consideration. It would be premature to bring these ideas into use for 1961.

(d) In arriving at a handicap for a given type, some hold the view that one ought to be interested not only in the polar curve but in the whole performance capability of the aircraft as a "device for staying up and going places" in the hands of a skilled pilot of "standard perfect pundit" ability, entirely familiar with the type and capable of using its available performance to the limit.

3.—For 1961 it is suggested that the existing system of "Broad Categories" be continued, extended from three to five groups of aircraft, and the following list has accordingly been drawn up as objectively as possible, using the following data:—

(i) Performance data, published and unpublished, theoretical and experimental (where available).

(ii) Past contest results, endeavouring to discount (a) the obvious variations in pilot skill which may show up and also (b) the fact that "the best pilots get hold of the best gliders".

(iii) Aerodynamic "guesstimation" for lesser known types.

4.—On drawing up the five categories by the methods outlined above, it becomes apparent that the aircraft concerned follows (with few exceptions) a pattern which can be represented by the following formula:—

10% bonus for two seats (whether flown solo or two up).
10% bonus for side-by-side.
20% bonus for wing struts.
10% bonus for pre-1950 design.
10% bonus for span not exceeding 15 metres (this figure being extended to 16 metres for pre-1950 designs—where there are a number of gliders just over the 15-metre limit).

These bonuses to be cumulative, subject however to an upper limit of 40%.

The above formula may, therefore, be taken as representing the Sub-Committee's *general principles* in allocating a 1961 handicap to each type, modified, however, where this is obviously necessary.

The exceptions in the list are as follows:—

(i) The Kite 2, an immediately post-war attempt at high performance by using a thin strutted wing. The performance is quite similar to an Olympia, and this aircraft is only rated, therefore, at 20% bonus and not 40%).

(ii) The Swallow, a modern design small-span aircraft designed principally for ease and cheapness of construction. This is also rated at 20% bonus (and not 10%).

(iii) Three very elderly designs, the Petrel, the Gull 1 and the Rhönbussard, have all had their strict gradings on the above basis somewhat modified.

5. **Proposed List of Handicap Bonuses for 1961 Soaring Season**

CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
Scratch	10% *Bonus*	20% BONUS	30% *Bonus*
Jaskolka	Bergfalke	Gull 3	Gull 1
Olympia 403	Bocian	Gull 4	Rhönbussard
Olympia 419	Eagle	Kite 2	
Sky	Fauvette	Kranich	CATEGORY E
Skylark 3	Ka-6	Meise	40% *Bonus*
	Ka-7	Olympia	Eon Baby
	Olympia 401	Petrel	Grunau Baby
	Olympia 460	Slingsby T-49	Kite 1
	Skylark 2	Swallow	Krajanek
	Swift		Prefect
	Weihe		T-21b

PLEASE NOTE

(a) These are *broad categories*, and nobody is suggesting that all the aircraft in a particular group are of identical performance.

(b) The Sub-Committee will be happy to allot a Category to any bona fide entrant of a U.K. contest during the 1961 season whose aircraft type is not named in the above list.

(c) The Sub-Committee must obviously reserve the right to amend the Category of an individual aircraft in the event of that aircraft undergoing very substantial modifications.

6.—Lest it be felt that 40% is too favourable for, say, a Grunau Baby as compared with, say, a Sky, let the following "Free Distance" contest day be considered with Marking (D—x) where D=distance flown and x= 20 miles. Then for equal marks:—

If the Sky flies 160 miles and scores 140 marks,

The Grunau Baby has to fly 120 miles also to score 140 marks.

It will probably be agreed from this that the scales are not overbalanced in favour of the lower-performance aircraft.

7.—The Handicapping Sub-Committee exists to serve the British Gliding Movement, not to impose its will on it, and the Sub-Committee will, during 1961, look forward to receiving correspondence and criticism of its proposals. Letters should be addressed c/o the British Gliding Association.

DAVID CARROW, *Chairman*
ANTHONY EDWARDS
CHARLES ELLIS
H. RON WATSON
LORNE WELCH
ANN WELCH

The Gliding Ball

THE B.G.A.'s Annual Ball on Friday 10th March, at Londonderry House, promises to be one of the biggest and best yet.

The highlight of the evening will be when the Guest of Honour, the Rt. Hon. Julian Amery, presents Silver C Number 1,000.

Bill Savill and his Mayfair Music will play for dancing until 2 a.m. Other new attractions include a Cross-Country Lucky Dip, a "Sucking the Altimeter" Competition, a Driving Simulator (being loaned by R.O.S.P.A.) which tests your reactions and a hot dog and coffee bar. There are many prizes to be won.

On the Organising Sub-Committee are Yvonne Bonham (Chairman), Wally Kahn (M.C.), Barbara and Lionel Alexander, Barbara Carrow, Betty Fairman, Rika Harwood, Margaret Kahn, Frank Kinder and Beryl Stephenson.

You must not miss this gliding social function of the year. Tickets which may be obtained from any of the above, your Club Bar, or the B.G.A. Office, cost 25/- each, inclusive of Supper.

Y.C.B.

SPANISH HOLIDAY COURSES

THE Air Attaché in Madrid has told the British Gliding Association that there will be some places available for British pilots in Spanish gliding schools during 1961. Applications should be made to the B.G.A., accompanied by a statement from your C.F.I. giving details of gliding experience and qualifications, if any, and age. The B.G.A. will then be prepared to issue a letter of recommendation to the Spanish authorities. Documents required will be: (a) a medical certificate, (b) two letters of recommendation, and (c) four passport photographs.

The Schools are at:

1. Monflorite, 12 km. from Huesca near the Pyrenees; for C and Silver C certificate.

2. Llanes, in Asturias near the coast; for B and C.

3. Somosierra, 90 km. from Madrid on the road to France; elementary instruction to B stage.

LECTURES ON SOARING

The Kronfeld Club is organising at 74 (Basement), Eccleston Square, Victoria, S.W.1, a course of six pre-Soaring Season Lectures for solo pilots who are just reaching the soaring stage or hope to do so this coming season. The Lectures will be given by six different speakers who are all experts on their subject and will take place on Thursday evenings (beginning the 2nd March) at 8 p.m. as follows:

March	2nd	"Soaring Technique", by Derek Piggott.
	9th	"Navigation", by Ann Welch.
	16th	"Field Landings" by Lorne Welch.
	23rd	"General Meteorology", by J. Findlater.
April	6th	"Glider Performance and Instrumentation", by Frank Irving.
April	13th	"Competitive Cross-Country Flying", by David Ince.

The fee for the complete course is 15/-, or 3/6 a single lecture.

Registration Forms may be obtained from The Hon. Secretary, Hugo Trotter, or Mrs. Bonham, 44 Belsize Square, London, N.W.3 (Tel.: Swiss Cottage 3698).

Y.C.B.

Gliding in the Tate

PETER Lanyon, one of Britain's foremost abstract painters, is a member of the Cornish Club. The Tate Gallery has recently purchased one of Peter's paintings, called "Thermal".

In a note about this work Peter says:—

"As I have rarely done anything between leaving the ground and hitting it again (other than watch the stick dancing at will—I found out the other day you have to hold it), I don't know how I dared to call the picture 'Thermal'. The only consolation is that most glider pilots, however experienced, have never seen a thermal in the flesh. At least, like Bardot, you can now see a picture of one, though the measurements may be a bit more exciting than reality."

Peter went solo early last summer. People who know say that gliding has had a considerable impact on his work. So if you want to see a "thermal in the flesh"—or in the abstract—go to the Tate and ask for it!

Correspondence

DEUX AIGLES

Dear Sir,

I was interested to read the account of the Eagles and Glider in the same thermal mentioned in the article "Deux Aigles" (December 1960).

It is known that this bird may on occasions attack man-made flying machines, and this in the case of a glider could prove disastrous. To help any pilot who may in the future be faced with this problem, I tell below how a Flt. Lt. Harry Davis, ex C.O. 614 Gliding School and now of the B.E.A. Silver Wing Club, dealt with this situation.

Many years ago when flying a biplane fighter he was joined by an "enormous" eagle which looked at him with an evil eye. Quickly realising that his string and canvas aircraft was no match for the beak and talons of the bird, he started a turn on the outside of the bird. The eagle also turned in formation keeping its eye on the aircraft. Harry Davis then began to slow-up; so did the eagle, until at last the bird stalled, dropped a wing, and spun in.

The frightful horror of those few moments left their mark on Harry's nervous system. When telling stories to young glider pilots nowadays he finds difficulty in talking without his tongue in his cheek.

C. E. PASSMORE.

Sutton Coldfield,
Warwickshire.

A CRITICAL LOOK AT GLIDER DESIGN

Sir,

Just as thinking has changed in the field of military aircraft such that the designer has now to consider the whole concept of the military requirement, instead of producing an uncoordinated engine/airframe/armament/electronic/weapon, so has the time now come in gliding to consider the aircraft in the context of its complete operation.

The Fauvette has given us a lead towards the "light glider", and in designing our own new types, both for home and export consumption, may the designers please consider producing an aircraft engineered and fitted out for operation by a pilot + 1 crew, to be retrieved and auto-towed by a vehicle not exceeding 1,000 c.c.?

The design concept should include the trailer, and the provision of any wing or fuselage ground supports and lifting straps necessary to secure the aircraft whilst rigging by two people.

I think many private owners and Club members have lost sight of the advantages that this much increased ease of operation and mobility would bring:—

(a) There would be less reluctance to de-rig.
(b) You could take it home with you with a view to motoring off up-wind or visiting some other club next week-end.
(c) You could operate from many more sites and disused aerodromes.
(d) Gliding holiday-tours around other Clubs and sites would be simpler. Operating costs would be lower.
(e) Taking it abroad would be much easier.
(f) Gliding would cease to be a major cross-country furniture-moving operation!

May I suggest also that we market our aircraft in (a) kit form, (b) flying-shell form, (c) de-luxe form, and that every airframe be built to accept "do-it-yourself" installations of oxygen, radio, instruments, cockpit furniture, etc., which owners might buy year-by-year as finances permit. Every airframe to have built-in pitot/static, and ventilation systems, and tool kit, barograph and map stowages.

Finally, detail-design. There are some abominable design features in the way of maintenance and installations, incompatible either with foreign competitors, powered

aircraft, or the cheapest motor-car! I refer to hook installations, inaccessible pulleys and control cables, poor lubrication facilities, inadequate fuselage and wing drainage, unsafe canopy locks, damageable rigging fittings, impossible wheel-brake and/or wheel-dropping mechanisms, unsatisfactory control stops, suck-open air brakes, flimsy control levers, "rock-solid" skid/wheel installations (both main and particularly tail), wing tips without ground-protectors, safety straps that undo or fall off the shoulders or both, seat backs which collapse, and a level of cockpit discomfort far worse than the cheapest Dagenham flyer!

In the matter of pure Flight Safety, perhaps canopies and air-brake locks, coupled with good visibility and de-misting, are the items most worthy of attention.

R. B. STRATTON.

Moonrakers Gliding Club,
R.A.F. Upavon, Wilts.

WORLD CHAMPIONSHIP SAILPLANES

Dear Sir,

I have followed your past correspondence re World Championship Aircraft with interest and would like to submit the following points.

Excluding the remote possibility of the rules allowing changes of aircraft, wings, etc., it should not prove too difficult to produce an aircraft that would perform well in both strong and weak thermals. There are already several aircraft that point the way. Unfortunately none of them are in this country.

A suitable aircraft would require the following features:—

(a) Lift augmentation device on a basically high-speed laminar section. Perferably camber change *à la* HKS-3, but not necessarily with the differential camber aileron device which gave insufficient roll rate at low speeds. (Suitable for 18 metres upwards.)

(b) Basically a low-weight aircraft with water ballast tanks for strong thermal days.

The above are good for not only the conflicting requirements of changeable weather, but also the greater disparity between thermalling flight and optimum glide.

Camber change has a large range of variation, and can be also used to give a better high-speed performance if required. Water ballast can be jettisoned if one hits a bad patch or wishes to utilise weak evening thermals.

I would be happy to assist anyone requiring further details of camber change with a view to building. There are no patents on these devices.

GEORGE COATESWORTH.

H.Q. No. 1 Group,
R.A.F. Bawtry.

RED UMBRELLA

Dear Sir,

On the subject of early soaring flights, many readers may recall having seen an account by Dr. Heinrich Hoffman published in Germany in 1847 and in England a few years later, of a remarkable soaring flight carried out by a pioneer aviator, Robert, using a primitive, almost naive, flying apparatus.

Perceptive interpretation of the meteorological data conveyed by Dr. Hoffman's illustrated text reveals that the flight was made in the lift ahead of an advancing squall front. The use of this sophisticated soaring means on so early a flight would seem to indicate that the pioneers possessed a fuller understanding of the science of Soaring Meteorology than has hitherto been supposed.

Robert's flight was doubtlessly the first cross-country soaring flight ever made, but the distance achieved is not known. Hoffman is inconclusive on this point—"No one yet could ever tell where they stopped or where they fell, only this one thing is plain, Bob was never seen again."

The full report can be studied in "Struwwelpeter", published by Blackie and Co.

STEPHEN HART.

Stamford, Lincs.

CLUB AND ASSOCIATION NEWS

"DISASTROUS", "Foul", "Frightful", "Horrible", "Inclement", "Sodden" . . . these adjectives, used by contributors on their waterlogged airfields all over the country, tell the story of one of the wettest autumns in history.

On the other hand everyone seems to have made excellent use of the opportunity to fettle up their aircraft and equipment, so let us hope a good season lies ahead with a record number of soaring hours.

In this issue we are starting a "FORTHCOMING EVENTS" column. Would Press Secretaries please add a note at the foot of their news of any events of interest to which all are invited.

In this issue for the first time, we welcome The West Wales Gliding Association, who have their site at Withybush (Haverfordwest) airfield. Their Secretary is A. R. Squibbs of 36 High Street, Tenby.

The final date for copy (typed double spaced on foolscap) and photos to reach me at 44 Belsize Square, London, N.W.3, for inclusion in the April issue, is first post Wednesday, 15th February.

YVONNE BONHAM,
Hon. Club and Association News Editor.

BLACKPOOL and FYLDE

THERE was no flying between early November and mid-December owing to all C. of A. work falling due at the time. However, the weather was unflyable on every week-end except one; on this occasion the sun did manage to shine most of the day but water ski-ing (using the winch as the motive power) would have been the only use we could have made of the flooded aerodrome.

We would like to thank Tom Smith of the Avro G.C. for his generous help and willing advice, which enabled us to carry out most of the C. of A. work ourselves. It would be remiss not to mention the efforts of Shirley Clapham, Ron Parker, Sandra McKinnon, John Gibson, Ivor Stretch and Jack Aked, who turned up at the hangar practically every evening for three weeks. Also on the Clubhouse side (décor and catering) our thanks to Barbara Freshwater, Helen Torrance and Geoff Walker.

Stuart Hall is now our Chief Engineer in place of Gordon Bleasdale (assistant instructor) who, we are sorry to say, has had a year or more of ill health necessitating hospital treatment. Our best wishes to Gordon for 1961.

We are pleased to record a further group of first solos, as follows:—Mike Forshaw, Helen Torrance, Sandra McKinnon and Arthur Atkinson.

Excitement is rising now that the delivery date of our new Olympia IIb approaches.

The English Electric (Aircraft Division) Flying Club has recently become affiliated to our Club and have put on some excellent film shows at the Clubhouse for our mutual benefit. We are very pleased to welcome them as members and hope they will make good use of all available amenities.

J.S.A.

BRISTOL

With 1960 now behind us, we can report a reasonably successful year, although not, of course, producing such a prolific amount of flying as in '59. However, a good number of certificates were obtained including several gold and diamond legs and the Club height record has been well and truly broken.

The committee has been considering our aircraft requirements for the next few years and resulting from the deliberations a place on the production line has been booked for a Sling Type 49. It is hoped to follow this up in due course with a Swallow and then throw away the Tutors and the T-31.

On the private owners side, the construction of the Jones-Pentelow-Saint Skylark 3F is proceeding apace and by the time this report appears should be almost complete. Another syndicate has started constructing a Swallow from a kit and the yellow Skylark syndicate has plans for hotting-up the performance of their machine.

We have had plenty of opportunity for carrying out site development work during the winter and several important tasks have been completed. The underground tank for Tiger fuel has been finally cleared by the local authorities after many months of red tapery about the size of hole and amount of sand and pressure testing, etc.

In the workshop the woodworking half has been partitioned off, the roof lined with fibreglass, and a stove installed. Several improvements were made to the clubhouse in time for the Christmas party. One member has taken on the mammoth task of wire-brushing and repainting the whole hangar structure.

The members have now been supplemented by some 200 sheep who have been given the job of ensuring a good hay crop next year. They are steadily being trained to keep out of the way of the flying operations.

A.L.S.

CAMBRIDGE

This time of the year the weather tends to reduce our gatherings at the aerodrome to a purely social function. In November the airfield became water-logged and our flying came virtually to a standstill. However, this is not really alarming, since two good days in summer usually give us more flying hours than three months in winter.

Our plans for 1961 include two camps at the Long Mynd, one in June and one in September. In March, immediately after the end of term, there will be the traditional fortnight of "intensive aviation" at Marshall's, our home site. It is intended to hold six elementary gliding courses and three advanced soaring courses. We hope to enter teams for the Easter Rally at Swanton Morley as well as for the National

Bristol Club members Rosemary Storey and Tony Saint grouped around Lucy Barlow in the Club Tutor.

Championships at Lasham.

Let us now take a look at our small, but efficient, fleet of club-operated aircraft with which we hope to realise all these plans. Beginners are trained in "Bluebell", our T-21B, which has about 20,000 launches in her logbook. First solo flights are carried out in the Swallow which joined the fleet last May. This sturdy and versatile craft is also used for first aero-tows and often for Silver C flights.

From the Swallow our pilots graduate to the Olympia II, then to the Skylark II and finally to the Eagle. At present there is a move to make a Skylark 3F available. A new venture is the operation of our Tiger Moth which provided over 500 aero-tows since March 1960. The Tiger Moth has also proved a very sound investment from the financial point of view.

In addition to the five club-operated sailplanes there is one syndicate-owned aircraft stationed at Cambridge. This is a blue and white Swallow called The Penguin. It was built—complete and unabridged—from a kit by four members of the club in 15 months. The four members are Anthony Edwards, John Griffiths, John Deas and Stewart Waller. The Penguin had its first launch on 1st May 1960, and by the end of November it had flown 70 hours from 90 launches.

There are two outstanding achievements of the Penguin which are of general interest: During the 1960 National Soaring Week at Sutton Bank this aircraft scored 100 marks on every competition day and during a hill-soaring expedition to North Wales the Penguin started a thermal soaring flight of 75 minutes from an auto-bungey launch in completely windless conditions.

G.S.N.

CORNISH

FLYING has been much curtailed by the horrible winter weather, but there have been a few days of north-westerlies when it has been possible to make use of the cliffs. Alan Brook and Bill Lewis have been soaring the Avia whenever possible and the soaring ability of this aircraft has surprised many.

Peter Scott was the guest of honour at the Annual Dinner at Truro on 25th November and was elected an Honorary Life Member. The Chairman, Bernard Warmington, said that the past year had been significantly good, with important steps taken. The Club had acquired a new workshop, a resident engineer (Fred Breeze) and a Swallow, as well as a bright, comfortable tea hut. Pip Phillips had presented the Club with a Cup for the most meritorious flight of the year and this was presented to the C.F.I., George Collins, for his flight to Weston Zoyland on 6th June.

The C.F.I. and Fred Breeze are hard at it in the workshop on a Skylark IIIf kit, and present plans are to have it flying early in 1961.

We are all very pleased that Pip Phillips' Silver C has been confirmed. This is the Club's first Silver C to be completed entirely in Cornwall—the first of many, we hope.

Twenty-four Courses are being laid on for 1961, commencing on 10th April, and ending on 9th October, but excluding the weeks following Whit Monday and August Bank Holiday, which are reserved for Club flying only.

P.V.P.

COVENTRY

ALTHOUGH recent weather conditions have caused some interference with our flying programme, neither snow nor fog kept members and friends from the Annual Dinner and Dance held on 9th December. Organised this year by Elsie and Bill May, this social occasion proved as successful as ever. Another aspect of success was revealed when Mrs. Gregg, the wife of our Chairman, presented the annual awards as follows:

"The Coventry Evening Telegraph" Trophy (awarded to pilot making greatest progress): Doug Sadler.

"The Jimick Trophy" (best flight of the year): Ron Willett.

"The Founder's Trophy" (lady pilot making best progress): Sheila Hands.

"The President's Trophy" (longest cross-country flight in Club aircraft): Doug. Cunningham.

Ron Willett gained his award for a flight which he did about a month after soloing, when he took the Prefect to 5,200 ft. without a variometer and, even more unfortunately, without a barograph!

First solos have recently been logged by Hilary Stephens. and by Messrs. Thomas and D. Green, who now look forward to the 1961 soaring season as eagerly as any of us.

A Ka2 has been ordered by the club, and we are anticipating some opportunities of using this aircraft for advanced soaring training during the summer. P.M.

DERBY. and LANCS.

THERE is little flying news to report—the only wave so far was a north wind one of 27th November which Mick Kaye nibbled in the Club Olympia.

The conclusion reached after a season's operation of the Pfeiffer cable retrieving winch is that it is very useful on training days when only a single wire is needed. When there are a large number of machines waiting we can achieve a quicker launching rate by using a beaver to pull out three wires.

The latest addition to the fleet is Kite I "Gracias" rejuvenated by an enthusiastic syndicate and soon to be fitted with spoilers.

After spending the afternoon of 26th November categorising new instructors in miserable conditions, Ken Machin reduced us all to proper size with a witty account of the flight mechanisms and navigational powers of birds and insects—it's all been done before!

On 9th December we celebrated our 25th Anniversary with a Dinner Dance at the St. Ann's Hotel, Buxton. Philip Wills, the guest of honour, enlightened newer members about goings on in the early days with extracts from his first log book.

The Clubhouse now has a new roof—the old one is helping to fill in the notorious pond on the airfield—and the men's bunkhouse sports a new convector stove. So effective is this immense chunk of ironmongery that it has dispersed to the far corners of the room the insanitary huddle which formerly gathered round its predecessor.

P.N.

DONCASTER

INSTEAD of a water-logged airfield we now have an airfield logged lake. Cockpit checks include: periscope lens clear, aqualung working. Very little flying has been done over the past month both because of bad weather and the fact that the hangar has started to fall down.

The Tutor in the workshop is nearing completion. The wings and tail unit have only to be covered and the fuselage is jigged up for work to start. It is worth while to mention that by the middle of next year we will have three Club aircraft in the air and they will have cost us, or rather the K.F.T., about £700, two of them, the T-31 and the Tutor, being practically new.

This is almost entirely due to the long hard work, inspiration and outright slave-driving of Johnnie Johnson, whose efforts in the workshop have built up a first class team of "U bend 'em—we mend 'em" types. It is a sobering thought that the keenness and ability of one member has saved us several hundred pounds.

The social side is going well and several parties have been held, all successful.

M.C.U.

FORTHCOMING EVENTS

1st March-10th March	Photographic Exhibition & Competition — Kronfeld Club.
2nd March-13th April	Kronfeld Course of Pre-Soaring Lectures—Thursdays 8 p.m.
10th March	B.G.A. Annual Ball.
11th March	B.G.A. A.G.M., Instructors' Conference and Secretaries', Treasurers' and Managers' Conference.
31st March-5th April	Task Flying Rally at The Long Mynd and Swanton Morley. Informal Task Flying at Sutton Bank.
13th-22nd May	National Gliding Championships, Lasham.
5th August	Lakes Gliding Club Bank Holiday week-end "At Home".

DUMFRIES

WE still await the return of our T-31 without which our flying has been seriously curtailed. Also, owing to local "Foot and Mouth" restrictions, we have been unable to use our site for a few week-ends. However, we are more than encouraged by the results of the trials carried out with our new retrieving winch when flying our syndicate single-seater Tutor. Until now cable retrieving was carried out by means of our tractor, a stubborn beastie to start, and more than somewhat temperamental when in action. The route took a tortuous path along difficult terrain and all too often flying came to a halt while all hands dug out "the beastie", which had sunk up to its sump in a "boggy bit".

During recent trials the cable arrived back before the single-seater had completed its circuit, so we look forward to the day

when we can use both our aircraft and give it a full test.

The contractors are now putting the finishing touches to the hangar roof and by the New Year we hope to have transferred our attentions to the interior instead of the exterior and have plans for a comfortable bar.

R.W.R.

ESSEX

CONTRARY to our hopes in the last issue, we were not operational by December, mainly due to final negotiations which were outside our control. Our C.F.I., Jim Robinson, successfully passed his categorisation at Lasham.

Applications for joining have been so heavy that we have restricted membership for the time being. First choice for any new members will come from our Associate list.

We boast that we possess the most comfortable Clubhouse in the country! Come over and see for yourselves. Visitors from other Clubs will be made most welcome as well as any new Associate Members.

The Bedford chassis conversion has been successful and we hope that it may stand up to the strain of our launching programme for 1961!

M.G.R.

HALIFAX

Members of Halifax Club committee at the annual dinner. Back row, L. to R.: E. Pearson, D. J. Westerside, G. Senior, D. Marshall, R. Greenwood, G. Clark (treasurer). In front: F. Lees (secretary).

KENT

FLYING has been severely curtailed recently by the very wet weather which has reduced the airfield practically to a lake at times. On 2nd October Eckhart Bruns visited us, having flown his Spatz over from the Continent for the second time. He first visited us in August 1959. This time his machine had a more powerful engine, which enabled him to climb and not merely to maintain height. He was cleared by Customs, given a winch launch and was last seen disappearing in the direction of Lasham. Among other visitors by sailplane to Lympne since the Club started flying there in March 1959 have been Peter Wildbur, who arrived in the Southdown Olympia on Good Friday 1960, and A. Warminger from Swanton Morley in a Skylark III in September 1960. Bryan Jefferson landed a few miles short, but within sight of Lympne on a goal flight (from Camphill) in summer 1959. Apart from these few, however, no visiting sailplanes seem to have flown into Lympne while the Club has been there. We hope that we shall see more in future for, after all, the airfield is Gold C distance from a number of club sites to the west and north-west.

P.B.

LONDON

WESTERLIES have been rare and soaring has generally given place to building.

Among the seasonal crop of trailers the most spectacular is that built by the Jaskolka syndicate, rivalling Geoff Butt's Gothic trailer with an Early English Church design. It is nearly 6 ft. wide to accommodate the wing-root fairings on the fuselage.

Geoffrey Stephenson's 1959 Championship Skylark III is having a home built—of more or less normal design—by the new

owners, Fairman, Nixon and Downham.

John Jeffries plans to rebuild his Scud II. After his 133-mile Cadet flight we look forward to impressive performances in a really advanced machine—for 1932.

Another self-propelled winch is being constructed to assist the first of the line—"Lady Chatterley". We almost said "replace", since at time of writing "Lady C." has just exploded. However, a source of V8 engines has been located and the old girl should soon be in active service again.

M.B.

MIDLAND

THE 1960 M.G.C. Trogs' Party was held in the Clubhouse on 12th November, organised as usual by Marjory Hobby and her Trogs. It was a great success according to all accounts, and we were delighted to see members from other clubs in attendance.

Flying analysis for the year is as follows: Hours flown from site 1,900 from 6,900 launches. Of these, 6,100 are by winch and only 700 by bunjy—an appalling lack of Westerlies. 104 cross-country flights from The Mynd resulted in a total mileage of 4,483. Five Club Silver C's were obtained, 37 C's and 37 B's.

We would like to remind readers that we are holding our usual Easter Task-flying Rally at The Long Mynd in 1961, and we look forward to seeing many old faces (also those not so old, but frequent). Entry forms are available from Lt.-Col. G. Benson, O.B.E., Marston, Pembridge, Leominster, and entries will be limited to 15 visiting pilots.

What we hope will be a great step forward is the decision the M.G.C. has made to purchase a Tug, an Auster Mark 6, subject to a demonstration. This expensive project was brought about by a loan, raised within the Club, in a matter of three weeks, of £1,350. A remarkable response, and the Club's thanks goes out to those who contributed.

C.G.

NEWCASTLE

AMONGST the frightful weather which we have experienced during the Autumn, we had three week-ends when the wind blew from the North and provided us with hill soaring from dawn till dusk. Everybody made the trip along the North Ridge to Ingleby Greenhow and back again and although the wind strength was moderate most people found that they reached 1,400 feet quite easily on hill lift alone. All very encouraging and it kept morale at a high level in spite of the weeks of frustration.

Development of the site continues, with the plans for the new hangar almost complete. It is a happy thought to realise that we now have a permanent home with security of tenure and we look forward to Spring with those Nor'Easterlies with crops of Silver and Gold. Small prize for the first to reach Land's End from Carlton.

We welcome visitors from other clubs with or without aircraft and the Secretary will be pleased to arrange accommodation at a local hotel.

B.H.

NORFOLK (Tibenham)

IN appreciation of their help and efforts in connection with the Club we have asked members Welsley Key and John Gaze to become our first Vice-Presidents.

Thanks to sterling work by our Ground Engineers and Mr. Gilbert of Foulsham, our T-21b has completed its first C. of A. without being out of service for one week-end. Much to everyone's surprise on totting up, it was found that this aircraft has completed 2,800 launches in its first year. We consider this a tribute to the team, led by Ray Saunders, who maintain our tow cars.

The weather has been somewhat disastrous of late and has thus restricted flying for three week-ends running.

While not flying the Club has been pursuing a busy social season, the last Club House party being voted the best ever (thanks to the "Tom & Jerry" cartoons). Sixteen brave types risked the fog and supported our powered neighbours, the Waveney Flying Group, at their Sausage & Mash Supper at Beccles on 9th December. This really was a worthwhile evening with representatives from all flying Clubs and Groups in East Anglia.

The Club House has been redecorated in a variety of colours and a form of oil-fired heating is being installed by Secretary John Wilkins and Eddie Boulter.

We are pleased to report that Ground Engineer Joe Podolski has obtained his P.P.L. and can now help out Pete Crabtree and our latest U.S.A.F. member, Truman Keith, with the Club Tiger Moth on aero-tows. Now that we can provide dormitory and aero-tow facilities we are hoping that other clubs will visit Tibenham next season.

The Club Newsletter recently made its

first appearance in its new magazine style and any contributions from other clubs would be welcomed and published.

We are also pleased to welcome another syndicate sailplane, this time a Swallow, bringing the fleet at Tibenham to a Tiger Moth, T21b, Tutor, 2 Olympias and 2 Swallows.

R.J.M.

NORTHAMPTONSHIRE

FOR the most part this year we have been vainly striving to increase launch rate under auto-tow conditions which were comparatively new to us. All we successfully did was to raise the launch cost to an all-time high, mainly due to excessive cable wear.

The ideas of Tony Barrows, Ralph Hawkings and Chairman B. Sykes were combined, then applied with the help of other willing hands, to modify rollers and pay-on gear on a two-drum winch so that solid wire could be used. Now the 6,000 ft. of 11 S.W.G. Wire to each drum is laid out as the winch is driven to its launch position, reducing runway friction to a minimum.

With a reasonable wind direct on our long runway a launch to 1,600 ft. in the T21 is commonplace. Competitive spirit has arisen among single seater pilots leaving a record at the moment with Brian Brown, who reached 2,300 ft. in the Swallow before releasing.

Atrocious week-end weather has kept our flying achievements to these high launches and circuits, but even so training routine has added six more members to solo flying. On the other side of Club life, the prospects of securing a lease on our site now appears to be very real and near.

This has encouraged a burst of enthusiasm from Spencer Reynolds and four Clubmates, who have in a few week-ends made a transformation to the Kitchen, Bar and Club Room. Apertures are now fitted with doors that open and close by lock and handle. Paint and distemper has been applied to walls that a week or two ago stared back with a derelict expression.

Harvey Brittain, without scooping the Pools, is purchasing an Auster equipped for tug operations and has offered a launch service in return for hangarage. This, with the present winch, and the prospects of a second winch which is already under construction suggests that 1961 will be a year of rapid progress towards our aim for a large increase in membership for our own, and the R.A.F.A. Club, to whom our facilities have been made available.

D.W.W.

OXFORD

Of the much that has been written about the weather, we have added a lot which is quite unprintable for even Weston on the Green—a geographical "duck's back"—has been under water most week-ends since September and the last three months of the year contributed less than 200 launches to the season's total. Nevertheless we have again exceeded 4,000 launches and 740 hours, an increase of more than 200 hours.

The new Olympia Syndicate is bearing up very well despite a grand total of 13 launches during their first three months of ownership and the aircraft has been polished and repolished and repolished. It now reflects the pride of its admirers whichever way it is approached.

One of the most notable efforts has been made by two of our "Johnnies", Womack and Adams, who have designed a Retrieving Winch. A very practical approach has been made in that a Drum/Brake Unit is being developed and tested first and it is estimated that at full launching speed the drum can stop within 1½ revolutions.

A surprising collection of miscellaneous materials have gone into it, old bed-steads, pieces of domestic water tank, a small portion of Ford Consul, a slice of cable drum, a small section of a wrecked motor-cycle, etc., etc., but this belies its appearance which is most workmanlike. The result of its first trial is awaited with confidence and eagerness.

Another notable achievement by this crew is that in addition to all this work they have done remarkable things to the Stores. Not only can you now enter it, you also have room to walk around.

Finally, a bright thought for a cold, dull day. The Committee have agreed that we are getting too crowded at "pundit level" and if financial arrangements can be made another Skylark IIb will be added to our fleet.

A.S.

PERKINS

We are back in these pages once more with both good and bad news.

The good news concerns the Red Oly which was bought a few months ago from a Bristol Club syndicate, replacing our Tutor. We now have a performance machine with which we hope to do great things in the coming season.

The other news is that after being evicted by the Air Ministry from Polebrooke Aerodrome in 1958 we now find that the local council are planning to build a new Estate on our present site, Westwood, and that we cannot expect to remain here for much more than a year or so.

C.C.D.

SCOTTISH G. U.

The month of November brought the promised wave conditions and from the 13th-27th heights from 5,000-10,500 ft. were common. One of our regular visitors Martin Seth-Smith (Skylark II), reached 8,700 ft. on the 13th and 10,300 ft. on the 27th and with these flights has completed a fair sample of what Portmoak can offer in thermals, slope soaring and wave.

Early estimates of the 1960 flying totals show that we should expect about 4,000 launches and almost 800 hours which shows a reasonable increase over 1959.

A new sub-committee has been formed to organise the furnishing and decoration of the Clubhouse. Early offers of fittings, etc., include a "one-armed bandit". Other conventional items have been offered. It has been suggested that a carpentry and upholstery class be started in the workshop to refurbish some of the existing furniture.

The purchase of a Tutor from a private group at Oban has presented our transport department with one of the most difficult expeditions of the winter.

W.A.S.

SOUTHDOWN

Looking through the flying notes for November and December the words "mist, rain and low cloud" seem to make up most of the entries. A recent Saturday, however, produced some good hill lift and gave us an opportunity for test flying our second Olympia.

This splendid looking machine in its new colours of white and red has been rebuilt by Peter Staff, our Ground Engineer, and a very nice job Peter has made of it. We hope to make full use of this new edition to our fleet during the coming year.

P.W.

SURREY

Perhaps it is a good thing that Guy Fawkes is only celebrated once a year. This year, for the third time, we had a two-stage rocket competition with Frank Kinder producing masterpieces as usual. Juno Merfield produced the usual hazard by arranging that the second stage fired

SHORTS GLIDING CLUB

Shorts Club members with the Club Skylark on an airfield in Northern Ireland.
(Photo: C. A. Beck)

when pointing downwards, and back it shot right into the crowd! The bonfire was rather admirable in the shape—or rather misshapen wing of a T-21.

The new winch is doing a wonderful piece of work, producing launches up to and above 1,600 feet almost every time. Anita Schmidt, who pays us regular visits with her Grunau, has very nearly topped 2,000 feet! These days it is just not worth taking aerotows at twice the price for the same height.

Can trailers fly? Well, an Eagle trailer did on the evening of 3rd December when a tremendous gale lashed the whole of southern England. The caravan dwellers in the car park were rather startled to hear a roar like an avalanche and Bobby Cole's trailer, fortunately empty, proceeded to advance towards them. It crashed on its side and in short airborne hops crossed the car park before coming to rest against Tommy Thompson's car. The car was undamaged but the trailer suffered somewhat.

The Christmas Party, held on 10th December, was very well attended in spite of the freezing weather. Jill Walker presented her trophies for cross-country tasks, Ted Stark winning the Club Pilot's Trophy and Rocky Stone the Private Owner's Trophy.

Margaret Lowe and John Corbett have announced their engagement.

C.J.W.

WEST WALES

With 30 paid-up members all eager to get into the air, Gil Phillips, Arthur Squibbs and John Horner journeyed to Kirbymoorside on 9th December to collect our new T21b. The 640 mile journey was completed in 35 hours, driving through fog, ice, snow and rain. It must be recorded that John Horner joined the crew at only 10 minutes' notice, never having seen a glider at close quarters before.

Sunday, 11th December, was spent in rigging and creating the organisation. Our 125 h.p. Buick seems to perform very well and Withybush (Haverfordwest) airfield gives us plenty of run if the wind is light.

A.S.

YORKSHIRE

As I sit down to write of activities at Sutton Bank I can only recall one of the wettest and sodden autumns for many years. The summer was quite good but October and November have been waterborne.

Nevertheless, we have taken the opportunity to get ahead with our plans for better accommodation at Sutton Bank. It is hoped that we will be able to start building in 1961.

The last week-end in November saw the arrival of the Syndicate Skylark 3F. The aircraft had appeared on Television a few days before, and so most members feigned disinterest on arrival. It was surprising to note the number who were seen admiring the instrumentation later in the week. This is the first 3F to be based at Sutton, but we hope it isn't the last. It was flying some 200 ft. above the T21 in very light conditions and the following week-end we had it up for three hours in a very stiff wind. In the first eight days of ownership the syndicate had chalked up six hours.

Next Easter we are holding open house at Sutton Bank and we hope that visitors from afar will join us to fly informally in the tasks set. Club pilots will be limbering up for the Nationals.

Training has continued briskly in spite of the poor conditions and L. Southall, R. Paulson, F. Robson, H. Ermal, R. Hindle, K. Targ, Mary Beaumont and Sturdy Ward have all been awarded their C certificates. In addition D. Harker, M. McGreggor, J. Cochraine and Bob Whiteley have gone solo.

We are running Public Courses again this year and we hope that members of other clubs who are not running them would not hesitate to write to us to offer a hand at winch driving or P1. Their expenses are paid and they also receive remuneration.

J.C.R.

SERVICE NEWS

BANNERDOWN (Colerne)

DESPITE foul weather conditions and the frustration of having powered aircraft using the airfield on many of the few fine days that we have had, since the 1st November we have managed to get in 152 launches and clock 12 hours 45 minutes. During this time our youngest member, Roger Perrin, claimed his B Certificate, and so did his father.

In the past we have been much indebted to Harry Daniels for the loan of his Olympia, the use of this aircraft giving our instructors a welcome break. However, we have now received our own Olympia and so the fleet steadily grows. With a Sedbergh to come we look forward to the better weather, when we can get full utilisation out of our aircraft and anticipate some really competitive flying.

Our auto-towing has been particularly successful and we shortly will be able to increase the launch rate by the use of two tugs. The economy of this method of launching will be appreciated by many club treasurers who have to provision for the expensive winch cables. We are, in fact, still using the original wire on which we started the Club going in August and it cost a mere £3.

Local ridge exploration still progresses, but with conditions prevailing at the present time it is mostly the pilots' will-power which gets the green ball to rise and not the lift. Given a reasonable chance to spread our wings, we hope to report more daring exploits in the near future.

F.P.

CRANWELL

WE have not broken any records this term for hours flown. When the wind has not been too strong there has been thick fog, steady rain or low cloudbase. Lately, too, we have been restricted to about three hours flying in the afternoon by the early sunset. In spite of the difficulties of instruction under these conditions, however, a number of the junior entry are now almost ready for solo.

The section had its brief moment of glory during the making of the new film of the College. After a couple of afternoons spent in false starts and placing aircraft at random around the field, we finally provided a good five seconds' worth of film.

P.L.C.

CLEVELANDS (LEEMING)

PUPILS are once again rolling in after the catastrophe of losing our Sedbergh for a few months. She is now flying again. The Grunau is unfortunately suffering from glue joint deterioration and is grounded pending an inspection.

The M.T. section is looking healthier with the 15 cwt. mobile for auto-towing. Our mobile winch now has a mate to relieve its solitary struggles. Many thanks to Sgts. Tony Bobbin and Ben Cummin and Mr. Scott for services rendered in this field.

A Chipmunk relieved the strain on the

M.T. for the two weeks it was here. My! did that aircraft work hard for its keep! What we could do with a resident Chippy, after F./S. Jim Perry, F./Lt. Jones and Wing-Cmdr. Thomas showed what even a borrowed one could achieve. Up to 50 launches per day. Practically every solo member of the Club has been checked out for aero-tows.

F./Lt. Pete Lane, our C.F.I. up to a month or so ago, has been posted away. Best of luck in your future gliding, Pete. The Club extends a welcome to his successor, F./Lt. Dick Jones.

We also welcome to the Club F./Lt. Mike and Chris Lang and P.O. Barringer. Mike has taken over the job of Secretary and Chris's tea swindle goes down very well on the field. Mike Barringer adds his "B" Cat. to our 12-strong band of A.T.C. qualified instructors.

Congratulations to Air Chief Marshal Sir Theodore McEvoy, who borrowed the Olympia to complete his Silver C up at Sutton Bank.

Congratulations also to Chris Lang, Tony Eaton, John Wombwell, Dave Messer, Tony Morton and Nobby and Pat Smith on their B certs.; to Pete Cowell, Tony Bobbin, Paddy O'Dea, Jim Walls and Mike Lang on their C's; Pete Lane on his 8½-hour flight from Leeming to Booker for his Gold distance and Diamond for goal, and last but not least, to Jack Ramsden who gained his complete Silver C this year and has just capped it with a height climb to 23,000 feet in Cu. Nim.

The Club looks forward to plenty of ridge and wave soaring in the coming months in the hoped-for Westerlies.

R. McL.

EAST ANGLIAN (Duxford)

FLYING has been very limited owing to inclement weather and jet flying. Nevertheless we did the most flying of any R.A.F.G.S.A. club in October. The R.A.F.G.S.A. stats. for the year ending 31st October put our Club 4th in hours and launches.

Several pilots have been converted to the Baby and Maureen Dawson and Chas. Watson have converted to the Olympia. Jim Morris successfully stayed aloft to gain the last C of the year in the Tutor.

We welcome Sqn. Ldr. Clarke as the new Officer i/c Gliding, and hope he enjoys his stay with us. Welcome also to Bill Borman, our newest member, and Steve Warwick-Fleming, who has come back to us from Germany.

Several members went to Silloth to assist in the Wave Soaring Project and gathered valuable aero-tow experience in the Eagle, even though the weather prevented wave flying.

The main activity has been the re-opening of the Clubhouse after it was decorated by Pete Dawson and A. L. Whiffen, who spent many a night splashing paint about. The showpiece was the new bar which had many customers including the Station Commander who was favourably impressed. Maureen Dawson produced a magnificent buffet which included two pheasants presented by Bob Maynard. The evening was rounded off with a dance by kind permission of Pete Laflin's tape recorder.

A.H.W.

EAST MIDLANDS (Swinderby)

OUR absence from SAILPLANE & GLIDING during the past year has not meant that the Club has been inoperative. In fact we are able to report a record year for hours, launches and finance.

At our A.G.M. it was reported that for the year ending 31st October 1960 we had attained a total of 2,888 launches and 355 hours, an increase of 440 and 102 respectively, despite a long period when only one winch was in operation.

Several profitable cross-country flights have been made, notably Geoff Barrell's flight from Odiham via Benson to Holt during the Comps. Mike Johnson went from Swinderby to Leconfield and also obtained his Gold C flight. It is with regret we have had to say goodbye to Geoff, who did a splendid job of work as C.F.I. under difficult circumstances. We wish him every success in his posting.

In his place we now have Mike Johnson, who we are sure will do his utmost for the Club, and he has our full support.

Silver C height and distance legs have been gained by Don Austin and Joe Caruana, and Sigi Romrig just missed distance but gained the height leg. Altogether nine Height Legs were gained. During the year seven A and B certificates have been achieved mainly through the efforts of Mike Johnson and Sigi Romrig and the rest of the increasing number of instructors.

Our sincere thanks go to them and also

to Jack Ward and Jim Blundell, who have both done an enormous amount of work on the ground equipment and aircraft. Jane Austin has also been hard at work in the Clubhouse wielding the frying pan to good advantage.

There has been an increase in enthusiasm for soaring since we sent the Olympia to Carlisle for the wave soaring project and Mike Johnson and Pete Saundby came back from there with some very worthwhile flights in their log books. Now there is a scheme afoot to explore two west-facing ridges nearby with five-hours trips in mind and five hours will be something of an achievement in Lincolnshire.

May we remind you that people finding themselves between Newark and Lincoln are very welcome at week-ends, especially now that we hope to do even better in 1961.

L.E.N.T.

EAST YORKSHIRE (Driffield)

DUE to the inclement weather there is little to report for this issue. However, our accommodation is improving—the stores, Clubroom and glueing shop nearing completion.

The Grunau is undergoing a super major inspection and we expect it to be out of commission for about six weeks. We are indebted to our C.F.I. for keeping his finger on the pulse and obtaining a pair of Tutor wings for the Cadet, these being collected by Master Engineer Goode from Andover.

Finally, congratulations to Mr. Sykes on getting his A and B.

R.T.B.

HOME COUNTIES (Hornchurch)

AFTER many months of hard preparatory work put in by S./L. Hirst, S./L. Pattison, F./L. Taylor and several helpers we eventually started flying in the Spring with a T31 and a Cadet. These aircraft were supplemented later by a Grunau in May and a T21 from St. Athan in September. Up to the end of December we logged nearly 2,000 launches and 130 hours flying, using only a single-drum winch.

This, our first year of flying, has been most successful and A and B certificates have been obtained by Wing Commander Duckenfield, S./L. Harrison, F./L. Hardcastle, Sgt. Churchman, Ted Shreeve and "Kim" Kimbrell. Messrs. Wright and Lodge both stayed up long enough to get their Silver C's, and Pete Simpson made his Silver C height in the Grunau. Even though we have not yet had the chance to have a good crack at it, the site seems very thermic. The T31 reached cloud base at one time and the Grunau has done some quite commendable local soaring.

We soon discovered that our tractor was far too slow for cable retrieving even after "hotting it up" so we bought an Austin called Betsy which, drastically stripped, now carries out these duties perfectly. We are spending the wet week-ends refettling a small trailer-winch in order to have two cables and an increased launch rate during our second year.

Home Counties is now the nearest R.A.F.G.S.A. club to London and is within walking distance of Elm Park station. Our membership has been increasing steadily since we started flying and we welcome all new Service members who would like to join us at Hornchurch.

G.H.M.

MOONRAKERS (Upavon)

ON the 10th December the Moonrakers thoroughly enjoyed themselves at the Annual Party held in the Black Swan at Devizes. It was a grand gathering of gliding types and included one member who had flown in from Kenya during the afternoon.

During the party the Chairman, Group Captain Cooper, presented John Willie with the Pundits Pot and also expressed the best wishes of the Club members for John's forthcoming marriage on the 1st January. John is off to Sweden before Christmas and in the New Year will return with Boel (C class glider pilot), who has often flown with the Club and is admired by us all.

The day previous to the party a strong contingent of Club members attended the annual R.A.F.G.S.A. Meeting in London, and it was there that the Novices Trophy was presented by Air Chief Marshal Sir Theodore McEvoy, K.C.B., C.B.E., to Cpl. Tech. "Taff" Thomas. Not only has Taff managed his Silver C in nine months but has also done more than his fair share in the hangar.

Also on the list for congratulations are Snr. Tech. Jock Reilly who completed his Silver C with a five-hour flight in adverse conditions (to say the least) on Huish ridge and also Anne Cooper who, like her brother, went solo on her 16th birthday.

The statistics for the year gave the Club 6,393 launches and 896 hours. The launches

show a considerable increase and the hours slightly lower than the previous year. As the weather has been mentioned there is nothing more to say other than it has been deadly. The rain has been bad enough but even more frustrating has been the waiting for the airfield to dry out.

The only good thing that can be said for the period is that the supporting equipment is in a very good state of serviceability, thanks to Dick Stratton and his assistants. The Studebaker is now on its II Plus, the Jeep has had a Minor and the 15 cwt. now has a leak-proof roof.

Recently the T31 took to the air following a Major inspection; Jock McPherson proved to have a light finger for the spray gun and the result is a glider in black and yellow stripes. It certainly shows up well in the air but we hope that it is never mistaken for a drone target aircraft.

E.R.

PHOENIX
(RAF Brüggen, Germany)

AT the final reckoning the Club flew nearly 450 hours in 1960; launch total being in the region of 3,800, an all-time record in the eventful history of gliding at Brüggen. In all, a total of 20 ab-initios soloed in the 1960 season.

The only Silver C completed in 1960 was Steve Warwick-Fleming with his 80 km. cross-country to S'Hertogenbosch, Holland, in our 1941 vintage Weihe.

Since November Dave Parslow, Malcolm Simpson and Dave Johnson have been hard at it each evening working on the gliders and ground equipment. On 11th December we test flew the T31 newly arrived from England.

There has been a bit of a reshuffle amongst the more experienced members; Steve Warwick-Fleming was repatriated in December to East Anglia, and from St. Athan and Dunstable we welcomed the youngest Gold C in Britain, Jeff Jeffrey.

With a fleet of two dual gliders and four single-seaters and serviceable ground equipment, 1961 should be very profitable.

R.L.C.

R.A.F.A. (Podington)

THE Royal Air Forces Association, Eastern Area, Gliding Club is shortly to celebrate its very first Birthday, for it is barely twelve months ago since the formation of the Club. Already it is a lusty thriving infant with a membership of 23, nearly half the maximum figure of 50. Visiting the Club, meeting the members is an experience to be appreciated, for one is immediately aware of the enthusiasm existing.

Situated at PODINGTON AIRFIELD, three miles S.W. of RUSHDEN, this one-time American Base is proving ideally situated, being convenient to several large towns. By arrangement it is shared with the Northamptonshire Gliding Club, whose help and guidance, so unhesitatingly given, eased the initial formation difficulties.

Sunday, 28th August, marked the date of the Club's Press "Open" Day when gentlemen of the Press from nearly 50 miles radius were invited to come along and join in a day's activities. An invitation readily accepted. Commencing with a buffet lunch, partaken in the Clubhouse—the one-time Officers' Mess—a tour was then made of the hangar and workshops and the various equipment so necessary to a successful Gliding Club shown them.

A move was then made to the runway where the C.F.I., Flt.-Lt. Pearson, had everything "laid on". Under ideal conditions and ably assisted by his staff of Instructors and Ground Crew many launches were made by winch and tug, and soon the guests were in the air. Here the opportunity was grasped by the Press photographers to secure some good aerial "shots" of great interest.

Though formed by the Eastern Area, Royal Air Forces Association, Membership is open to any member of the Royal Air Forces Association or friends of the Royal Air Forces Association, and full details may be obtained from:—

The Area Secretary, The Royal Air Forces Association, Eastern Area Headquarters, 15 Saxby Street, Leicester. Tel. 58092.

WESSEX CLUB

IN spite of the November weather we achieved eight aero-tows and 138 winch launches. Ridge soaring was carried out at Inkpen. Low cloud base limited the use of the ridge to one aircraft. One B was gained in the month by S.A.C. Upton in a Cadet Mk II. Certificates held by Club members are as follows:—B 26, C 17, Silver C Height 15, Silver C Duration 14, Silver C Distance 14, Gold C Height 3, Gold C Distance 3, Diamond Goal 1.

J.D.

OVERSEAS NEWS

ACCRA

THE Accra Gliding Club faces a crisis in April when all its regular instructors expect to be taking their home leave or are being posted elsewhere in Ghana. Most of our experienced members will also be going on leave at that time and instructor replacement is something of a problem.

The drift to Europe this Spring is not unconnected with the Nationals in May and it is hoped that at least two gliders will be representing the Accra Club at Lasham.

Those of us who are coming are looking forward to the meeting tremendously and those who are left behind are consoling themselves with the thoughts of shorter queues for our club gliders!

P.G.B.

AUSTRALIA

AT the time of writing (early December) there have been 19 entries for the Australian National Soaring Contest which is to be held at Gawler aerodrome, near Adelaide, between 27th December and 9th January. Most of these entries have come from South Australia but six have come from Victoria and two from New South Wales. Several more entries are expected before the contest begins, including at least one from West Australia.

Among the higher performance machines will be a Skylark 2, Gull 4, Ka-6BR, LO-150, two BG-12s and the Australian-designed Altair. The rest consist of Kookaburras, Kingfishers, Grunau 2 and Grunau 4 trainers. The long-range weather forecast indicates cool weather up to the time the contest starts, very hot weather for a week or so then back to cool weather for a while, so the pilots should have a variety of conditions to compete under.

At long last Australia has a woman Silver C pilot. The successful young lady is Miss Mary Weaving of Alice Springs in Central Australia. She sat out her five hours last year in a Hutter H-17 and completed the event during November with a flight of 35 miles and a climb to over 10,000 feet. Several other Australian girls have one or two legs and there was a bit of keen rivalry to see who would be the first to complete the award.

The Alice Springs Gliding Club suffered a severe blow at the end of November when a terrific wind and dust storm unroofed the Club's hangar and severely damaged all four sailplanes.

The North Coast Gliding Club (normally based near Brisbane) is sending an expedition into central Queensland over the Christmas and New Year period armed with a Kingfisher sailplane. They hope to bring back some Gold and Diamonds from the vast open plains of that region. Several other clubs have planned gliding rallies at inland centres so, if the weather co-operates, there should be a few more Gold and Diamond badges in Australia by the end of the season.

A.A.

DENMARK: Members of the Birkeroed Flying Club, near Copenhagen, with their Rhönlerche two-seater and Rhönbussard. (Photo: C. A. Beck)

EAST AFRICA

THE Kenya gliding movement has been faced with a series of setbacks since its inception in 1956. After starting at Nairobi, the civil aviation authorities enforced crippling restrictions in the Nairobi Control Zone, and the Club moved 100 miles to Nakuru. In spite of the considerable inconvenience created, the Club had a very good period until March 1959, when the T-21 was virtually written off. As a result the membership dwindled to leave only a handful of keen solo pilots.

For a full year the two remaining gliders, a Cadet and a Grunau, were kept flying most week-ends. A number of C licences were achieved as well as one Gold height leg. In March 1960 the Club acquired on loan a T-31 from a small inactive group at Kitale, and after some weeks of repair work instructional flying was resumed. Club membership has now started rising again and several people have now gone solo, one being Tim Riddihough, who normally flies Hunters.

With the arrival of the T-31 it was obvious that our launching equipment was inadequate. A combination of altitude, temperature, light winds and the T-31 was too much for our well used V8 and a search was started for something that could offer more power and reliability. The result was a 1933 seven-litre Rolls Royce which cost a mere £30. The first launch with this huge monster resulted in the first soaring flight by the T-31, but much of the credit was also due to Tony Stocken, who only had an altimeter to indicate rate of climb. A local Tiger Moth owner has agreed to try some aero-towing, so our problems of getting a fair launch may soon be completely solved. M.P.G.

U.S.A.

SOARING activity was at an all-time high in the United States during 1960. This is borne out by the large number of cross-country miles flown during the Nationals (39,740) and other contests and total F.A.I. awards approved: 1 Diamond C, 19 Diamond C legs, 11 Gold C, 49 Gold C legs, 81 Silver C, 326 Silver C legs and 337 C badges.

S.S.A. expects to reintroduce the A and B badges in 1961, tying them into a new basic training programme as achievement awards. Each will have a specific list of requirements; essentially the A will be for solo flight and the B for a private glider rating.

New S.S.A. President for 1961 is Paul F. Bikle, well-known soaring competition pilot whom many readers will remember from his participation in the last two World contests. He was recently elected to the Soaring Hall of Fame of the Helms Athletic Foundation, a national shrine in California.

Another Technical Symposium on Soaring has been scheduled by S.S.A. for September in Los Angeles. Papers from other countries would be most welcome. Co-ordination is in the hands of Fred Matteson, 841 Seale Ave., Palo Alto, Calif. As for the 1959 Symposium, papers presented will later be published in SOARING magazine and perhaps in the Swiss AERO REVUE.

The Southern California Soaring Assn. is planning a month-long wave soaring expedition at Bishop, Calif., in April. Towing facilities are expected to be available throughout that period and perhaps some sailplanes for rent. More of those elusive altitude diamonds will no doubt be picked to complete some badges and build on others. L.M.L.

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