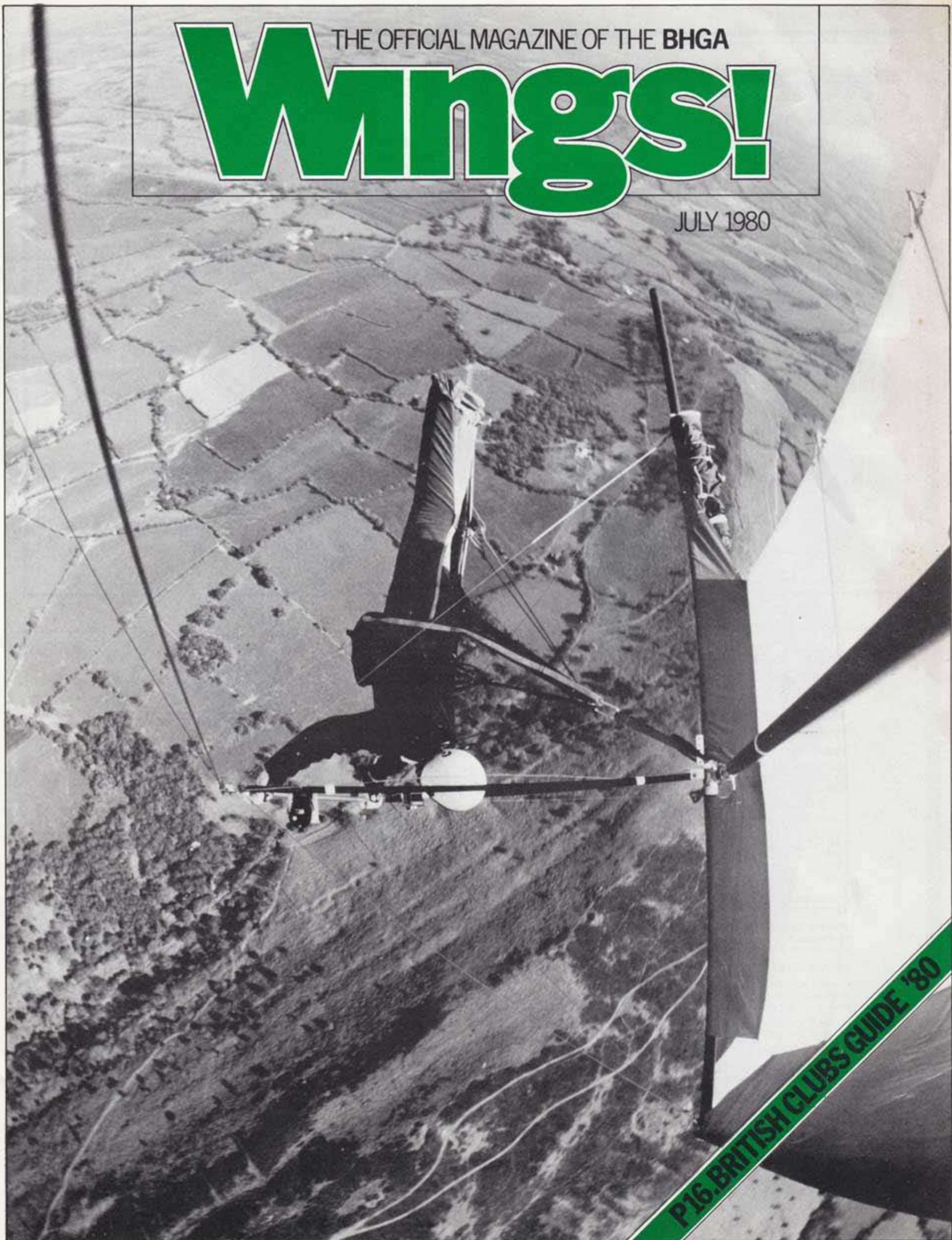


THE OFFICIAL MAGAZINE OF THE BHGA

Wings!

JULY 1980



P16 BRITISH CLUBS GUIDE '80

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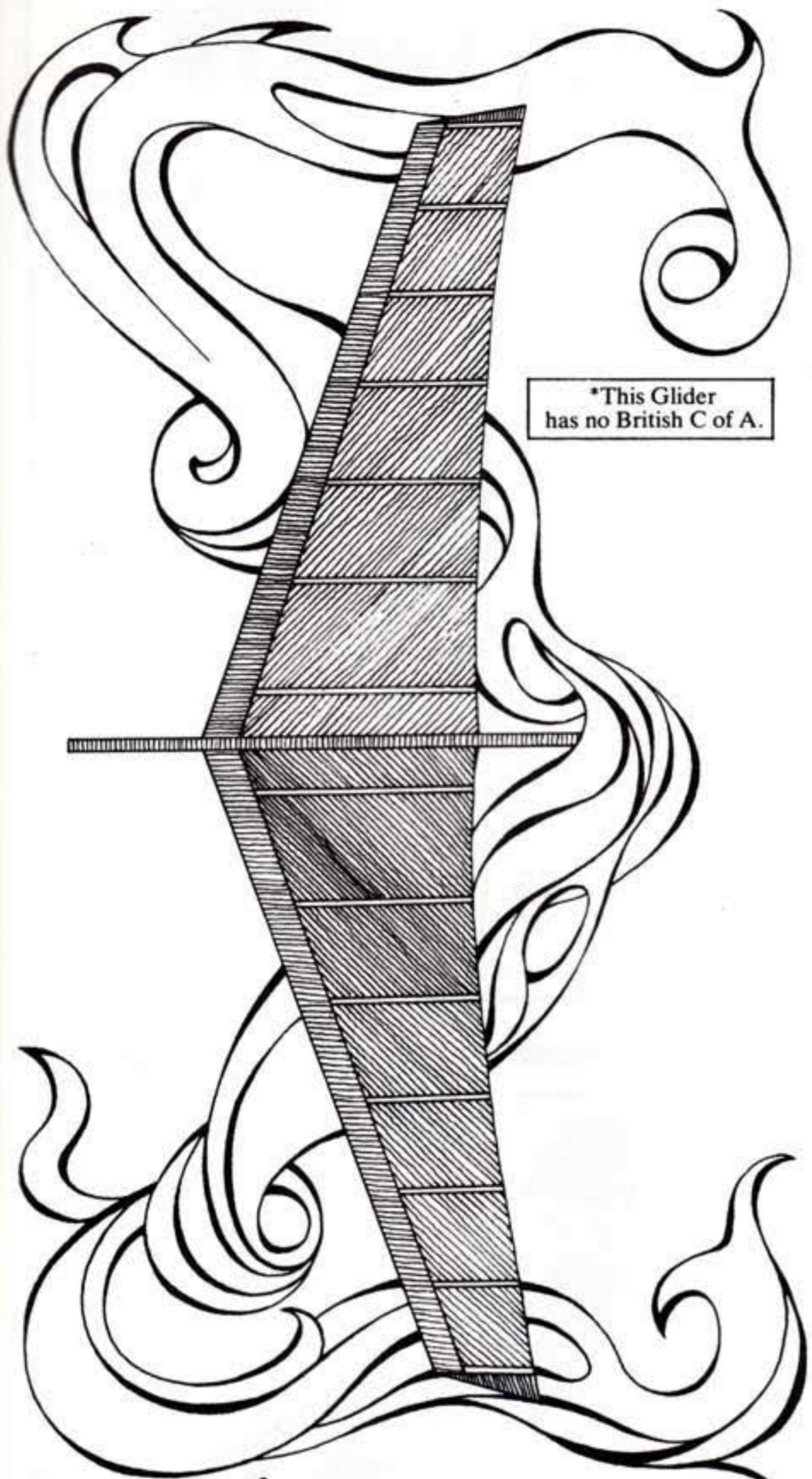
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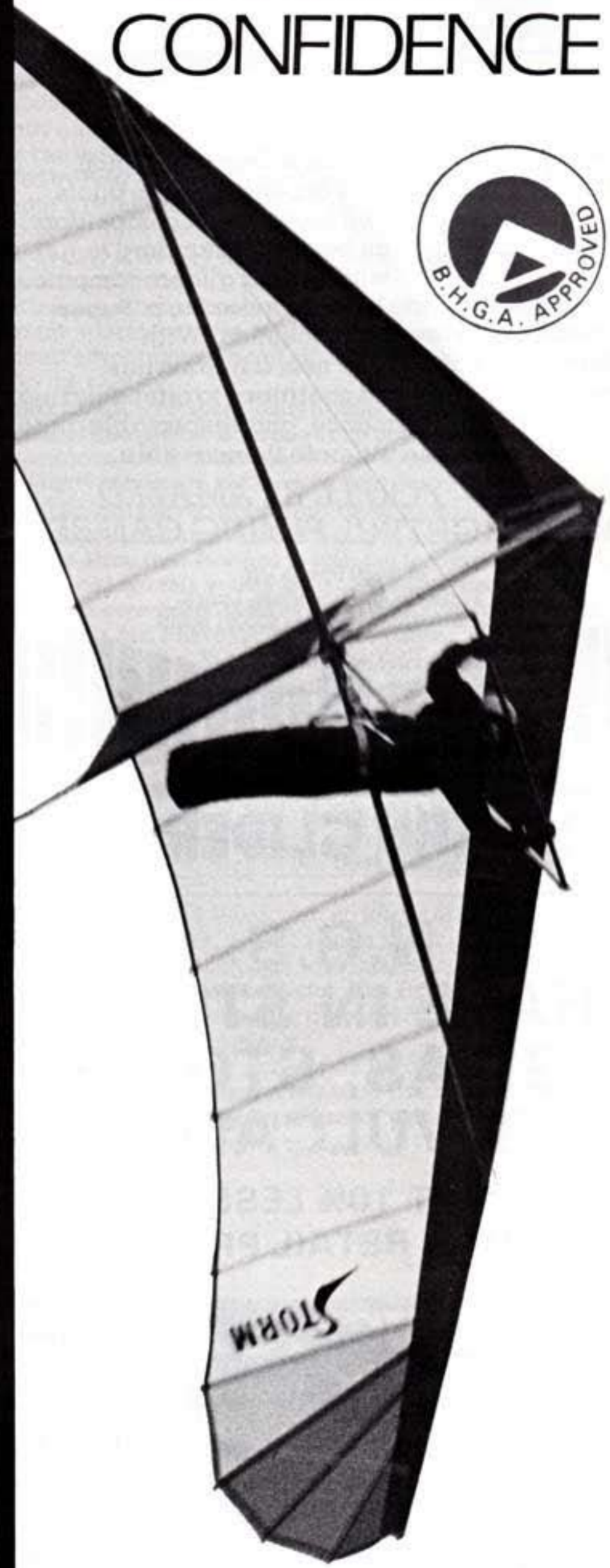


Photo John Wadsworth

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Wings!

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Photo: Gerry Young

WINGS! may be obtained regularly by joining the BHGA, or on a subscription of £10 pa in the UK. *Wings!* is published by the British Hang Gliding Association. The views expressed in it are not necessarily those of the BHGA Council, its Officers, Members, or the Editor.

Contributions are welcome. Articles should be typewritten if possible. Photographs and cartoons should be accompanied by the appropriate captions, and any material which is to be returned should be accompanied by a stamped and addressed envelope.

The Editor reserves the right to edit contributions where necessary.

If members or subscribers change address, or copies of *Wings!* do not arrive, please contact the Membership Secretary at the Taunton Office. In all correspondence give your full name, address and membership (if applicable). If you, your club, or any local hang gliding activity get written up in a local paper, national paper, or magazine, please send a copy to the Taunton Office for the BHGA Press Cuttings collection. This applies to the UK only.

Editorial

Cynics have said *Wings!* isn't so bad, but of course it wont last. One day "he'll blow up" under the pressure, and there will be enough people around saying "I told you so" when it happens. After seven editions of *Wings!* the cynics may have a case.

This edition is late. I'm sorry it's late, but too many factors combined to bring about the delay. The Post Office is still munching silently on three of the most important pieces the magazine should have carried this month. It's a disgrace that a vital power meeting, hosted by **Paul Baker** and **Dave Garrison** early in June, should go by without a definitive account. It's also journalistically wrong not to have news from the Lachens XC. Both accounts were lost in the post, 14 days after they were sent. That means it's almost impossible to plan the magazine.

But a much more important factor is that there was *no response at all* to my appeal for three hard men to plan through what could be the most adventurous time of all on *Wings!*, to see if we can take it out to the public.

Unlike any other responsibility in hang gliding, *Wings!* can make or break the Association. If we don't make enough money for overseas competitions, we just don't go. We can appeal to the Sports Council for aid in Training, or in Development. But *Wings!*, which eats up more than half the members fees, could bankrupt us.

All the changes brought about this year were to try and make the magazine attractive. Not just to you, but to fliers elsewhere, and of conventional aircraft as well as hang gliders. Now we have to find out if we've succeeded. If we haven't, we will learn *before the end of this year*. So far, I have taken these initiatives, with the invaluable help of Ian Butcher. *But I am not competent to both edit and be the business manager.* . . . and I have failed, as you know, in getting any of you to help with the job.

It seems to me to be the most exciting of jobs, and I can't understand why none of you have picked it up. If we succeed, everything in hang gliding will work easier from clubs trying to make their case for the use of hills, to schools having a regular flow of pupils, to manufacturers having a more solid base to sell to. It will be something measured, seen in our bank balances, either growth or we've lost the game.

But losing will mean *Wings!* can no longer afford to go on as it is. This edition is 32 pages, against a norm for the past three issues of 36 pages. I can easily fill 36 pages with interesting material, and it was painful cutting back some articles, like Frank Taryjanyi's 70 mile Sky-Trike XC. But I can see the choppers on the horizon, and unless we expand *we have to contract*.

Please discuss it in your clubs, or on the hill. If *Wings!* is going the way you want it to go, and that's what I've heard on the hill, then think about how we're going to keep it going that way. Because if you don't. . . it won't.

Brian Milton

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ST. HILAIRE DU TROUVET (GRENOBLE) DALES HGC OUTING

Does your club organise outings? Thanks to the hard work of Secretary Pete Anstey and the back-up of an enthusiastic membership, the Dales club transferred its base from the fells of Yorkshire to the French Alps this Spring Bank Holiday.



More than forty club fliers, wives, friends and children invaded St. Hilaire, the scene of the 1979 World Championships, for a week at the end of May for mountain flying, socialising, wine-soaked rasps-ups and corporate bonhomie which may well have done more for Anglo-French relations than the efforts of all the Common Market Commissioners put together.

Two minibuses and a selection of private cars transported the participants across France in varying degrees of comfort. We were

booked into half a dozen "Gites", which is French for "Self-catering chalet", and after some initial confusion all settled down to find that the arrangements were very good; the fabled French plumbing being hardly more eccentric than the British variety.

St. Hilaire offers two fake-offs: the Northern one is a mellow grass slope offering a descent of 2,300 feet to the valley floor, while that to the South is a ramp of bowel-slackening abruptness a couple of hundred feet higher.

During the week every pilot flew, even though the weather was often less than kind. Pete Anstey, John Stirk and Jim Brown enjoyed some spectacular thermalling on the first day, comfortably "aceing-out" the locals, while Geof Marsden-Jones distinguished himself by being the first lemming to brave that daunting ramp.

Halfway through the week our numbers were reinforced by a contingent from the North Yorkshire Sailing Club who had hair-raising tales to tell of their adventures en route, followed by disappointing days at Chamonix, a hundred miles or so further North.

The whole expedition was a success for the Dales fliers, and with our first genuine mountain flights logged, there was much talk of returning at a more favourable time of the year.

With hindsight we would probably have organised the travel arrangements differently: the mini-

be refused if he asked, and he was given a mild reprimand from the Captain.

Peter Green, a Chief Petty Officer serving on *HMS Bulwark* happened to be in the area sightseeing when the event took place, and took the accompanying photograph on an Olympus OM2 with a standard lens and colour film.

The story and photograph appeared in the Gibraltar Chronicle on the 2nd and 5th of June respectively. It was front page lead.

buses seemed to be a good idea at first, but probably the trip could have been done at about the same cost using shared private cars. This would have been more comfortable, allowed more flexibility on the journey, and would have been kinder to the gliders. Seven kites on top of a Transit tend to chafe against each other quite apart from making the bus a pig to handle.

The chalets were very well equipped, and convenient to the flying sites. At a cost per head of around eight pounds per week they represented excellent value. The address to write to is: M. Michel Raibon, Gites de France, St. Hilaire du Touvet, Isere, France.

If all this inspires your club to launch an expedition then I hope you enjoy it as much as we did. I am sure it will not be the last Dales Club venture of this sort.

Noel Whittall

WELSH WELCOME

Tredegar

Martin Hann, Secretary of the South East Wales HGC, says that due to the recent severe overcrowding at Tredegar (which is known locally as Abertysswg), and the increased possibility of mid-air collision it has been decided to show a sign giving the maximum number of gliders in the air at any one time. Martin goes on . . . "Without being officious, we will simply ask anyone seen to be taking off when the maximum number are in the air to pack up and leave. We cannot allow the sort of incident that occurred at Devils Dyke."

GLENSHEE, SCOTLAND

This site hosted the Scottish Open Championships in 1978 and '79, and will do so again on 4-7 July, 1980. It offers thermal and wave lift and many Scottish pilots have made their first XC flight from the Cairnwell. There have probably been more XCs from here than from all other Scottish sites put together.

Unfortunately on Sunday 18th May, while I was busy teaching beginners elsewhere, a number of inconsiderate pilots put our continued use of the site at risk. One landed on the road, forcing a car to stop. Another was encouraged by an experienced Scottish pilot to make his third flight ever with a 1500ft drop in gusty thermic conditions.

Chairlift access to nearby Cairngorm is still impossible because of Colin Bissett's death there two years ago, although I have been negotiating with the operating

company. It only needs a minor incident for the same thing to happen at Glenshee, which, as well as losing an excellent site, would affect my livelihood.

I therefore require *all* pilots to check with me before taking the glider up the hill. Intending pilots should hold Pilot 2 or, failing that, have had three hours soaring and some experience of mountain (1,000ft at least) flying.

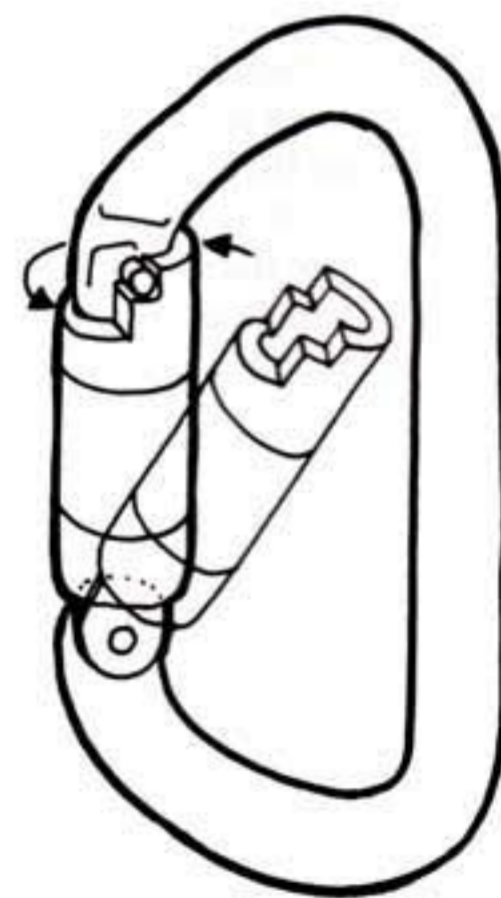
Sensible pilots will be made very welcome.

Gustav Fischnaller

NEW KARABINER TYPE

Clogwyn Climbing Gear Ltd., have just brought out a lightweight adaptation of their industrial 'Twistlock' karabiner. This looks like being ideal for Hang Gliders.

It has a B.S. of 2500kg. But the gate has a quarter turn spring loaded locking sleeve, which automatically closes and also extends over both ends of the gate when closed. It is very easy to work even with thick gloves on and it will not work tight in use like some ordinary screw-gate karabiners. These are available from most good Mountaineering shops and before long at the Hang Glider outlets for around £5.50.



THOUGHT

Hang Gliders extract energy from thermals. How many Hang Gliders can join a thermal before they all stop it working?

Dave Weeks

HANG GLIDERS DO IT. . . AGAIN AND AGAIN AND AGAIN

Tony Fuell (Brighton)

GIBRALTAR FLIGHT

A unique hang gliding flight from the top of the Rock of Gibraltar took place on June 1st, 1980 when Ian Coppinger, a Royal Naval Petty Officer serving on *HMS Bulwark*, launched himself from the top of the cable car building.

The flight took 5 minutes, and he landed in Catlan Bay waist deep in water to cheers and claps from people sun-bathing on the beach.

He didn't have permission to do the flight because he knew he would



STOLEN WING £75 Reward

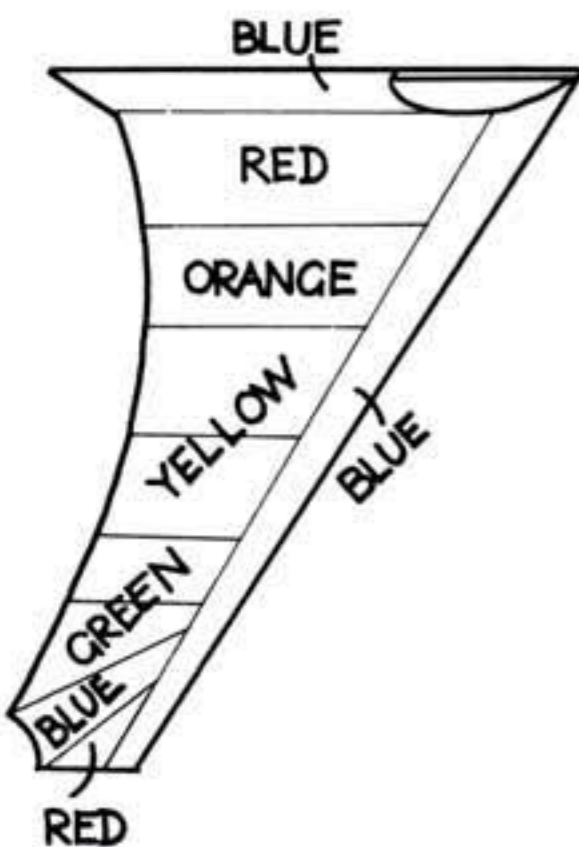
Mike Peachey, a London pilot who flies on the North Downs, has had his Superscorpion C stolen from a barn, in Woldingham, where he had stored it, along with a number of other hang gliders which their owners have now removed.

Mike says he had spent a month away from the barn, making a transport device to fit his MG Midget. He discovered his loss, from Warren Barn Farm, on June 7th, and says it could have been stolen 2 or 3 weeks earlier, for all he knows.

The colour scheme on Mike's glider is shown. It was in excellent condition, its previous owner having only a motorbike as transport, and therefore its been little flown. But when stolen, it was in a new red bag, and didn't have a control bar (I think Mike means the B-bar for flying the s/s seated — ed) which he still has.

Mike is offering £75 reward for information leading to its recovery, if still in one piece. It isn't insured.

If you see the stolen hang glider, Mike's home number is 01-351-0165, and his work number is 01-629-7666.



HORSES ARE NERVOUS

It will help if you do your best not to give horses or ponies an excuse to misbehave. I used to ride myself, in the days before hang gliding, and although they are attractive lovable animals, they have very small brains and are quite unpredictable. A hang glider in close proximity might be ignored for a fortnight. On the fifteenth day it can provide a marvelous excuse for a frolic.

The British Horse Society has asked us, very reasonably, to do our best not to provide excuses. Their members want to stay in control.

If any of you are still occasionally flying an original rogallo, remember please that their flapping sound can disturb animals.

David Bedding

HANG GLIDERS DO IT IN SELECT CIRCLES (Anon)

MAY MEMBERSHIP

The big increase in fees that this years AGM has had an obvious effect on the BHGA membership figures, which have dived down to (just) below 4,000 after two months above that level. An extra £3.50 is proving hard to swallow, though where the former members went isn't yet know. New membership is also way down on the average for this time of the year, and the only solace is to look at the "renewed" figures, which are not totally bad. On average, the figures for next month should show we're holding our ground, but if we're not up to average, there'll be a further drop. We'll see.

May	1977	1978	1979	1980
New	140	160	150	98
Renewed	123	159	216	195
Didn't Renew	146	104	103	172
Total Membership	3302	3401	3648	3999

BLERIOT CUP CHALLENGE TO VOL LIBRE

Sir,
Because of what your nation is doing to good English lamb, because of Agincourt, because of Waterloo, because of the extraordinary things your so-called Golden Delicious are doing to our honest Cox's Orange Pippins, because of the EEC Farm policy and those butter mountains, because of garlic, because of some of the nasty things your M Giscard d'Estaing has been saying in private about our lovely Mrs. Margaret Thatcher, we say . . . ENOUGH!

You, sir (that's all of you) have cast a stain on our escutcheon, and the only way we can remove it is by a duel.

Hang gliders, sir, at 10 paces!

We resolve that, flying British hang gliders, we shall send a team of eight trusty pilots to France in August to fly against eight such pilots as you shall find, flying French hang gliders, and that at Lachens Mountain, in a cross-country hang gliding duel, we shall remove that stain from our escutcheon.

So, sir, look to your hang glider!

Bleriot knew a thing or two when he left France and set out for England, you know.

I have the honour to be, Sir, Chairman of the BHGA Competitions Committee.

Brian Milton,
June 6th, 1980

WHEN HANG GLIDERS DO IT . . . THEY WEAR A CRASH HAT AS A PRECAUTION

BHGMF

Competitions Committee Meeting

As the result of a letter circulated by John Hudson before the 4th (Dales) League Competition, there was a meeting on Saturday, May 23rd, between the BHGA Competitions Committee, and interested members of the BHGMF. John Hudson was a member of both, and at the meeting were representatives from Hiway (John Ievers, Chris Johnson), South-down Sailwings (Ian Grayland), Solar Wings (Mark Southall) and Flexiform (Hughie McGovern). An invitation was circulated to all BHGMF members.

The general theme of the discussion which lasted for more than two hours, was how each group could help the other. Among the subjects discussed was the always-live issue of British teams and British gliders. Winning was all very well, as one speaker said, but not if the manufacturer who benefited wasn't British. One conclusion was that we should challenge the French in the Bleriot Cup, each flying hang gliders from our respective country. In return, the manufacturers said they were willing to help sponsor British teams which flew British gliders. The competitions committee was to look at the organisation of a competition between manufacturers, much like the 1976 Birdman competition.

VOL LIBRE REPLIES

The French replied to the Bleriot Challenge with phrases like "the detestable arrogance of the British" and rude noises about our "trembling jellies, extraordinary haggis's and unspeakable baked beans". They claimed no Englishman had ever been ill from eating French food, especially snails and frogs legs, while hundreds of French school-children go through agonies at the mere sight of English food. They accepted the challenge, but not the stipulation that they must fly French gliders. "Whatever we fly" they said, modestly, "we will beat you."

Wings! Wishes it could bring you the exact text of the French riposte, the gallic humour, the panache, the style of our French "cousins". Not only was the original French letter a model of brilliance, but the translation, an exercise which tested the teeth of the Bristol Housewives Register French Group, had to be read to be believed. History, it was certain, would have been made . . .

Alas, the editor posted it to Brighton and that was the last seen of it. It's understood that, along with Tony Fuell's lost account of the Wellesbourne meet, and Bob Harrison's graphic diary of the Lachens XC, the French Bleriot riposte has gone to feed some dreadful monster in the British Post Office, and may be regurgitated at some future date, with a triumphant flourish, as if there was no delay in the first place.

INTERNATIONAL DRAW RESULTS

1st £450 Ian Davidson, Ross-shire. 2nd £100 W. Rottman, St. Albans. 3rd £50 Martin Barron, Preston. 4th £50 John Doherty, Preston. 5th £40 Dave Lewis, Grays. 6th £30 C. Taylor, Kendal. 7th £20 Nick Maufe, Nottingham. 8th £20 M. Matthews, Ross-on-Wye. 9th £10 R. Kenward Bucks. 10th £10 C. Cook, Wincanton.

MAY 500 CLUB RESULTS

1st D. Aldridge £50.20. 2nd R. Worth £25.10. 3rd R. Hayward £12.55. 4th C. Rolls £7.53. 5th D. Coles £6.27. 6th B. Williams £6.27. 7th R. Turnhill £5.02. 8th K. Cockroft £5.02. 9th K. Moloney £3.77. 10th R. Stevens £3.77.

£125.50 Prize Money, and a like amount for BHGA funds.

Percy Moss
Treasurer

XC LEAGUE TABLE At 15th June 1980

Club	Name	Average			
		1	2	3	
Dales	Robert Bailey	59.3	35.8	26.7	40.6
N. Yorks	Pete Hargreaves	18.0	10.6	68.4	32.3
Dales	Bob Harrison	8.0	16.0	40.3	21.4
Dales	Dave Harrison	8.0	50.8		19.6
Pennine	John North	15.9	10.5	29.5	18.6
Northampton	Sandy Fairgrieve	20.2	20.4	14.3	18.3
Dales	Pete Anstey	7.6	11.7		6.4
Dales	Jim Brown	11.0	7.6		6.2
Pennine	John Hudson	15.9			5.3
Mid-Wales	Rod Lees	14.6			4.9
Pennine	Pete Kavanagh	12.0			4.0
Pennine	Dick Brown	9.8			3.3

Please note a change of address for your entries: 3, St. Johns Road, Leeds 3, Yorkshire.

This League is run on a national basis, entries from 'Down South' wouldn't go amiss. Don't forget to include your O.S. map references as these are essential in calculating your distances. Details of other information required are given in *Wings!* March 1980.

HANG GLIDERS DO IT WHEN THEY'VE GOT THE WIND UP (Anon)

NEWS EXTRA

THE FIGHT TO SAVE A 45FT. SITE

Terry Aspinall
Secretary, Suffolk Coastal Floaters

We have a site at Felixstowe, the only one that'll take a SE wind, which is 45ft. ASL. It's a few hundred yards long, and I can hear you say, nothing special, but in this area it's our Rhosilli. To hear we were going to lose it, just like that, without warning, was a terrible shock. The committee of the Suffolk Coastal Floaters decided to fight the ban locally first, before calling in BHGA.

We first got in touch with the Sports Development Council Officer at Felixstowe, John Blackall, for advice. He was very helpful, setting up a meeting with two members, the Chairman and Secretary, of the local Suffolk Coastal Council. Three members of the club, Dave Taylor, our Sites Officer, Peter Bowden, our Felixstowe Rep, and myself, met them one evening.

What they told us was shocking. They knew nothing about hang gliding, but they had simply banned it because one person had complained. They were said to be worried that we might hit a member of the public on a public beach. We talked to them for two hours about hang gliding. These were the main points we made:

— All members of the BHGA were covered for £500,000 third party risk.

— We needed a SE wind of 18mph off the water, and few people sunbathed in these conditions.

— As far as we knew no member of the public had been injured by being hit by a hang glider.

The Councillors still weren't convinced, so as a last gesture we offered to stop flying during July and August, the major holiday months, until 6 o'clock in the evening. That would mean we would miss the worst of the summer crowds. At this, they became more enthusiastic, and agreed to put up a motion lifting the ban at the next Council meeting. A flying demonstration was arranged for the town's mayor, Mr. Clarke, who was very impressed, and who was the strongest in arguing within Council for the ban to be lifted.

Two months later the Council met, and Peter Bowden and I attended. During the discussion I was asked to explain once again the requirements and conditions for hang gliding. One councillor had in front of him a paper from the chartered surveyor's office in which it was stated that the minimum requirement for hang gliding was a steep cliff, 150ft. high. I told him the highest cliffs in Suffolk were only

60ft., and on these I could show him a hundred logged hours of flying time. Another councillor went on about a parascending accident after being towed behind a car. I tried to explain the difference between parascending and hang gliding, but he still wouldn't vote for us.

Most members asked if we could let them know when we next flew so they could come and see for themselves. Remember, this was two months after they had banned us.

Finally, a proposal was made and seconded that we be given one year's trial period, with no flying before 6pm during the two busiest holiday months, and that the Suffolk Coastal Floaters agree to police the site. This motion was passed with a few abstentions.

Saving a site can be done at local level. But it does involve a lot of hard work, time and money. If anyone wants to fly Felixstowe 'cliffs', please phone Peter Bowden on Felixstowe 3825 at home, or 78308 at work. I have to say it's not worth the trip if you live in Wales or Scotland. I'm sure your garden sheds are much higher.

STEYNING OPEN

The Steyning Bowl Open Championship is to be held on August 2nd and 3rd (Saturday and Sunday). Entries are invited for two classes — Intermediate (Pilot One) and Advanced (Pilot Two). Trophies will be awarded to the first three in each class.

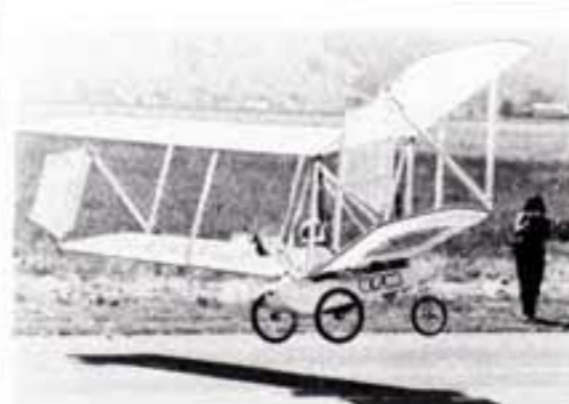
Other attractions will include manufacturers' displays, powered hang gliding display, grand raffle, disco and used glider mart. Entry fee £3.00. Please send fee and stamped addressed envelope to Jeannie Knight, 10 Spring Gardens, Washington, Pulborough, West Sussex, to arrive before the end of July.

HANG GLIDERS DO IT IN THEIR THERMAL UNDERWEAR

Wiet Van Banning,
Tilburg, Holland

NOTE FROM EDITOR

Would R.G. of the Thames Valley HGC, who has written to *Wings!* about the League bringing hang gliding into disrepute because of Mick Mahers accident, please identify himself? Anonymous letters are for poison pen writers. Let's know who you are and we will publish your letters.



SUN-POWERED FLIGHT

On April 29th, 1979, a builder, designer and pilot named Larry Mauro made a half mile flight on an aircraft which was totally powered by the heat and light from the sun. Called a *Solar Riser*, the aircraft was built by UP, a special Easy Riser with a clear top wing in which 500 photo-electric cells were inserted. The flight lasted 90 seconds, at a speed of 20-24 mph, and an altitude of 30-40 feet.

The Solar Riser project cost 40 year old Larry an estimated \$50,000. His aircraft has a 30 foot wingspan, weighed 125 lbs without the pilot, and 290 lbs with Larry on board. The motor was a 3HP electric, with a 41 inch propeller. Wing area was 175 feet.

All these details are included because, while the Solar Riser was fully covered in American hang gliding magazines, this historic flight never really generated publicity over here. Larry says in his press release that the FAA — the American CAA — grounded him at an air show because "they didn't believe what they saw". He also says he didn't get the power from the photo-electric cells that the manufacturers claimed he would get. They were shop-bought cells, not "state-of-the-art", and as they improve, then so will the performance of a sun-powered aircraft.

This seems to be an area where money would be available for British research.



HANG GLIDERS DO IT
SOMETIMES, BUT SPEND
MOST OF THEIR TIME
BOASTING ABOUT IT.

HANG GLIDERS GET UP
HIGHER
Keith Jennings, Oxford

CLUBMANS MERE 80

Friday September 5th - Sunday September 7th. The format will be much the same as last years very successful meet, when the five events attracted over 150 entries. This year we are expecting over 200.

EVENT 1: Cross-country open over all three days.

EVENT 2: Distance KO over Saturday and Sunday.

EVENT 3: Timed Precision Flight over Saturday and Sunday.

EVENT 4: The Club Shield over Saturday and Sunday.

EVENT 5: 'Bog Rog' Trophy over Saturday and Sunday.

The Club Shield is currently held by Northumbria who tell me they will bring it with them but have no intention of letting anyone else win it. A team will comprise four nominated fliers in the Timed Precision event who must have been members of the club for at least three months prior to the event. The combined score of their individual best flights will count for the Shield.

A 'Bog Rog' is a glider with a nose angle not exceeding 90° which has neither sail battens nor deflexors.

Entrance Fee is £5 which covers you for any or all events, together with your Camping/Caravanning. Pay on arrival.

In addition to manufacturers shops and static displays we hope to put on shows of towing, parascending and power flying.

Weather permitting we will have a barbecue and/or a disco on the Saturday evening. If you want to be near the facilities, toilets, water etc., pick your spot in the central area when you arrive. If you want a quieter location stick to the perimeter of the field to the right of the gate as you enter. No one must set up to the left of the gate please.

Manufacturers requiring plots please contact Barry Blore. There will be a small charge this year (the whole thing is costing us a bit more) £25 for a single plot approximately 10m x 10m. £40 for a double approximately 20m x 10m.

Bob Mackay

P.S. Nick and your wonderful team of ladies — I'm counting on you to 'bail me out' on the scoring again! (free food and drink, free cosmetics, free anything).

HANG GLIDERS DO IT
HORIZONTAL

David Morgan, Tenbury Wells

HANG GLIDERS DO IT
WITH OTHER PEOPLE'S
HUSBANDS (Anon)

MILL HILL — IT ISN'T REALLY OVER

Tony Fuell, SHGC Chairman

The take-off area

You will probably be aware that Frank Taryjanyi's prosecution was dismissed in the High Court, thereby bringing into question the legality of the Adur District Council's byelaw. While the matter has yet to be discussed by the full council, the Recreation Sub-Committee decided at its meeting on May 27 that it would recommend to the Council that steps be taken to enforce the policy of banning hang gliding. This despite the fact that, by dint of some heroic last-minute efforts by Johnny Carr and Jeannie Knight, a letter had been sent to every member of the Committee reaffirming the Club's willingness to control the site, and referring to the continuing waste of public money that the enforcement of this policy was causing. Adverse comment on the decision was also given in the Brighton 'Evening Argus' and on Radio Brighton.

Nevertheless, the Council take the view that the byelaw is still valid as regards taking-off and landing in the Pleasure Park, and therefore it is possible that flyers *might* be prosecuted, although this seems unlikely until the amending byelaw is out of the way. The Council have written to the Club saying that the byelaw is out of the way. The Council have written to the Club saying that the byelaw should be amended in a way which specifies the minimum height that a hang glider can fly over the park — a height below which a hang glider would be "a danger, nuisance or annoyance to other persons on the ground". *They have had the sublime cheek to ask the SHGC our opinion on what this height should be.* (We propose to reply appropriately!).

In the meantime, the Police have said that they will not become involved in the matter until the legal situation is clarified. Our advice is that the byelaw as it stands is unenforceable.

The Landing Field

The whole situation is complicated by the fact that the landing field below the hill, which has been used by SHGC since the very beginning of the sport, has recently changed hands. The new owner is Mr T Draycott, of Summersdeane Farm, Truleigh Hill. Mr Draycott has a big farm, and is subjected to a good deal of difficulties in his agricultural operations by the thoughtless behaviour of the general public on the South Downs Way. He is not anti-hang gliding as such, but is a bit concerned about the effect it will have on his plans for the productive use of the land below Mill Hill. He has also been unlucky enough to have come up against a couple of aggressive hang glider pilots who have not improved his image of the sport . . .

(and, incidentally if WE catch up with those individuals, they will wish they had never been born) . . . However, he is prepared to give us a trial period to see whether we can co-exist amicably PROVIDED HE GETS NO FURTHER AGGRAVATION.

Here are some points to bear in mind if you intend to fly at Mill Hill:-

- (i) Do not allow your family, children or dogs to enter the lower field.
- (ii) Only land down there if it is absolutely essential. De-rig *every time*; do not drag your glider over the fences.
- (iii) If cattle are in the field, land as far away from them as possible.
- (iv) Do not use the fields near the road, and DON'T DAMAGE THE FENCES!

Mr Draycott will be around from time to time to check what's going on. He is easily recognisable — he drives everywhere in a new, white Range Rover, and has the build of an ex-Rugby forward. If you see him, for heaven's sake BE PLEASANT! He is a nice man, if treated right.

Spread the news around as much as possible to other hang glider pilots. If you see any person, hang glider pilot or not, causing damage to the field, the fences, the crop or anything else, try and stop them. Hang gliding is inevitably going to get blamed for anything that happens there, so it's up to us to make sure that no damage occurs. It would be nice if we could persuade Mr Draycott that the presence of hang gliding is a positive asset to his farm, rather than a disadvantage. And if, through an unavoidable accident, any damage DOES get caused, let the Club know IMMEDIATELY so that we can take steps to rectify it.

MILL HILL is the Southern HGC's prime South Westerly site, at Shoreham, in Sussex.

ITALIAN XC

Four places have come up at the Lariano Triangle XC Competition at Lake Como, in northern Italy, between July 7th-13th. Each day, from Tuesday to Saturday, pilots are taken from their hotel to the top of the hill, to take off after 10am and spend all day flying XC. Cloudbase in July is said to be around 2,000-2,500 metres, with light thermals between 100-600fpm, and general height gains of about 1,000 metres. The local record is said to be 20kms, but there are great possibilities for XC as the Lariano Triangle is the jumping off point for the longest sail-plane flights from Italy over the Alps. Organised by DELTA CLUB COMO, the competition is by invitation only. The four British pilots selected to go, on a total budget of only £400 — the local club pays for hotel and food — are the following: **Richard Iddon, Richard Brown,**

Mark Southall, Mick Maher. All will be flying British hang gliders, and Solar Wings has sponsored BHGA at £75 a pilot (total £225), while Southdown Sailwings has paid £75. The remainder comes from competition funds.

RULES FOR HANG GLIDING AT BISHOP HILL

Draft agreed at SGU/SSA Meeting — 1st June 1980

1. Site only to be flown by pilots having S.S.A. and S.G.U. approval who must either:-

- (a) Hold B.H.G.A. — P.2 rating, or
- (b) Be reasonably experienced, and under the supervision of a B.H.G.A. Observer.

Only one pilot in category (b) to be in the air at any one time.

Each pilot intending to fly to first report to S.G.U. duty instructor each day flying is to take place, give his name, show P.2 card, or be vouched for by the Observer who will supervise him and give such details of his glider as S.G.U. may require for recognition purposes.

2. Listening watch on agreed S.G.U. -R/T frequency to be maintained by hang glider pilots while on the hill.

3. Within S.G.U. A.T.Z. only one hang glider to fly at any one time between hill top level and 1,500ft. Q.F.E. (approx. 400ft. above ridge top), not south of Pinnels Buttress, to prove ridge lift, or while climbing or descending. Not more than four gliders at any one time between 1,500ft. and 2,000ft. Q.F.E., but these may proceed south of Pinnels.

4. Within the S.G.U. A.T.Z. launching is limited to either:-

- (a) Any point on, closely adjacent to, or directly above, the zig-zag path up the bowl north of Pinnels Buttress, or:-

- (b) Pinnels Buttress itself, but in this case a right turn into the bowl must be made immediately after launch.

5. Hang gliders must not launch if a cockpit glider is nearby or approaching.

6. Within the S.G.U. A.T.Z. all turns to be made with moderate bank angle.

7. Normal ridge soaring rules applicable to cockpit gliders to be complied with by hang gliders wherever possible. If not possible then hang gliders to maintain steady heading and speed when cockpit gliders are near, until these have manoeuvred away. This does not preclude 'wing wagging' (small angle turns in opposite directions back onto same heading) to attract attention if felt necessary.

8. Flying to take place in V.M.C. only.

NEW BHGA TRAINING OFFICER

The BHGA invites applications for the fulltime post of Training Officer, a post held since early 1977 by Keith Cockroft. The job has been done up to now on a freelance basis, with a fee being earned for services. Remuneration in the region of £5,000 p.a. The job is what you make it, but it has been looking after registered schools, monitoring standards of training, advising BHGA Council on all training matters, and writing the textbooks that have established BHGA training schemes. *Interested?* Write to Chris Corston for an application form for the job, at 167A Cheddon Road, Taunton, Somerset.

GROUSE MOUNTAIN TEAM

The BHGA is sending four British pilots to compete in the 1980 World Invitational Championships at Grouse Mountain, in Vancouver BC, in Canada, in July. These will be fully backed, financially, by BHGA competition funds, on a grubstake basis.

The official team members are **Graham Slater, Bob Calvert, Robert Bailey, and Mark Silvester.** John Fennell, who has obtained private sponsorship to go to Grouse, is providing help to the team, and Mike Robertson (Mike the Dentist) may also go.

THIRD FATALITY

On Sunday, June 22nd, a 22 year old Army soldier on leave from Germany, Ernest Warne, was killed in a hang gliding accident, apparently while training, on a 100 foot hill near Market Harborough. to fly, and when the accident occurred, it was at 10 minutes to 9 in the evening. He was flying a Falcon 3, which has been tested and considered airworthy. He is said to Mr. Warne, who lived in Kettering, had apparently travelled around the country that day to find a place to fly, and when the accident occurred, it was at 10 minutes to 9 in the evening. He was flying a Falcon 3, which has been tested and considered airworthy. He is said to have been learning prone. The wind was smack on the hill, at 8 mph. Just after take-off, Mr. Warne was seen apparently trying to find his stirrup, the kite stalled, turned approximately 180 degrees, and hit the hill from an estimated height of 15 feet. The pilot died from head injuries that were described as "massive." "massive."

Two members of the Northampton Club were on the hill at the time, both Pilot 2 rated. Thomas Yeomans, one of the Clubs committee members, has been giving evidence to John Hunter about what happened, and a full report will emerge in due time.

The death was the third this year, and apparently the first ever to occur in training.

Brothers-in-law-IV

After the bitterness at the Mynd and Sutton Bank, it's a pleasure to be able to report a success story in the field of cockpit/hang glider relations. The Scottish Gliding Union (SGU), Portmoak and the Scottish Sailwing Association (SSA) have just concluded an agreement which allows hang gliding in the Portmoak ATZ, under certain restrictions.

All was not always sweetness and light, though. The odd dirty trick was employed and tempers occasionally rose.

Bishop is Scotland's answer to Rhossili, and rather more. It's a 700ft. hill, steep, basically west-facing, though with NW, SW and S faces. It is fronted by Loch Leven which gives it smoothness and all but kills thermals. Wave is generated in NW winds by the Ochils, and the wave forms obliquely to the face. Wave rotor is not unknown. Portmoak is famed in CG circles as a wave site, and Dave Benton, flying a Nimbus in May this year, took the CG height and height gain records, which had stood since the sixties, with 36,000ft. over Kinloch Rannoch, 100kFs IAS and zero ground speed. Wave contact by hang gliders seems a lot more chancy, and of perhaps 2,000 flights witnessed, I've seen only four contacts. None of these went anywhere. At least one 13-miler was done in thermal over the back by Henry Heggie but this was terminated by the sea.

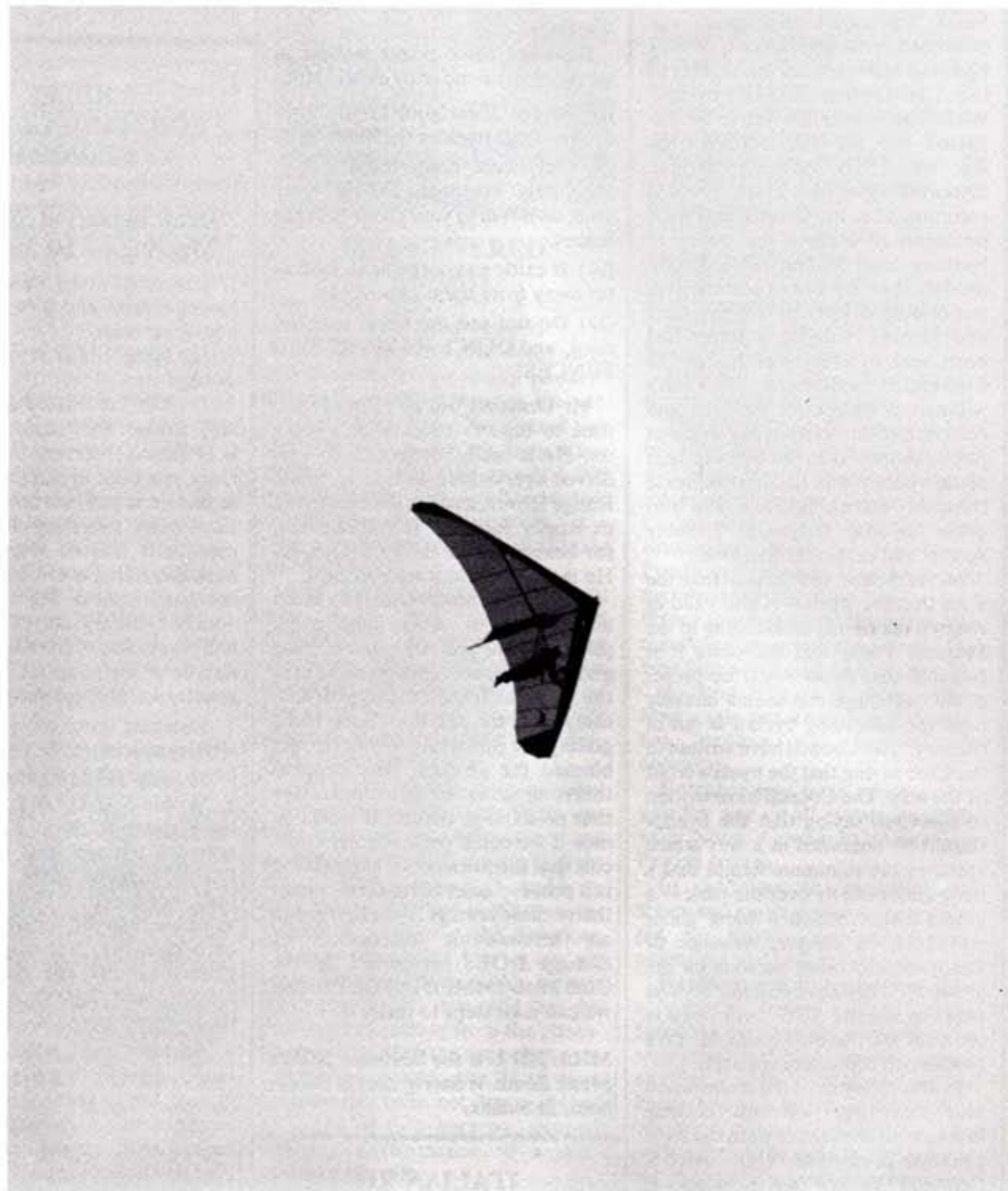
The beauty of Bishop for HG is that it is an easy place to graduate from Pilot 1½ to Pilot 2½. Below that, cockpit gliders frighten you. Above, the site gets boring, and you'll learn very little about thermalling compared with other sites but for getting into a new machine, tuning and aerobatics, the strong lift band and the easy top-landing area are unsurpassed.

The SGU is no mickey-mouse organisation. It owns 183 acres, 11 club gliders and two tugs. Thirty gliders belonging to members are kept there. A new winch is under development which will reel the cable back to the launch point after release. In their best year, there were 15,000 take-offs and the current figure is 10-12,000. A far cry from 1936 when Andrew Thorburn soared Bishop in a Falcon 1 from a bungee launch. Andrew, now 70, still flies a Bocian and a Pik 20 and his stories of forty-second training flights in the thirties are very reminiscent of hang gliding in the mid-seventies. They've been there a long, long time, and they were and still are understandably annoyed at us upstarts coming along and interfering on "their" hill. They tolerate us, amicably enough on the whole, but they'd really prefer that we "went elsewhere".

First Flights

I first flew Bishop in July 1978, and by November I was getting good solid reliable air-time there. There were some nervous moments though, and in February 1979 I wrote to the new CFI, Andrew Wood, describing something approximating to an air-miss. It's rather a shock to see a canopy 20ft below you. There was no reply. Meanwhile, in October 1978, Robin Lailaw, Secretary of the SSA, had written to Andrew suggesting a meeting. Two SSA initiatives, little SGU response, and the meeting didn't happen until August, 1979.

In the meantime flying had continued with little interference to the SGU operation until Easter 1979 when Len Gabriels demonstrated his winch near Dundee. The wind got a bit fresh for this and we all, thirty or more, trooped off to the NW face of Bishop, many without gliders and begging flights. The sky filled and the SGU began to see a real threat. Numbers like that had never been seen



Ian Trotter, Hiway Vulcan, taken at Bishop from a cockpit glider by Malcolm Shaw.

before (nor have they been since, for that matter) and although the NW face is well outside the Portmoak ATZ, we still limited their flying severely.

Nevertheless it took three months, ten months from Robin's suggestion, to get the first meeting which, unsurprisingly, achieved very little apart from the two sides making their stances plain:

"Go away!"

"Shan't!"

One of the SGU people said he knew of 22 W-facing sites suitable for us and agreed to give us a list. It never appeared.

Phantom Hang Glider

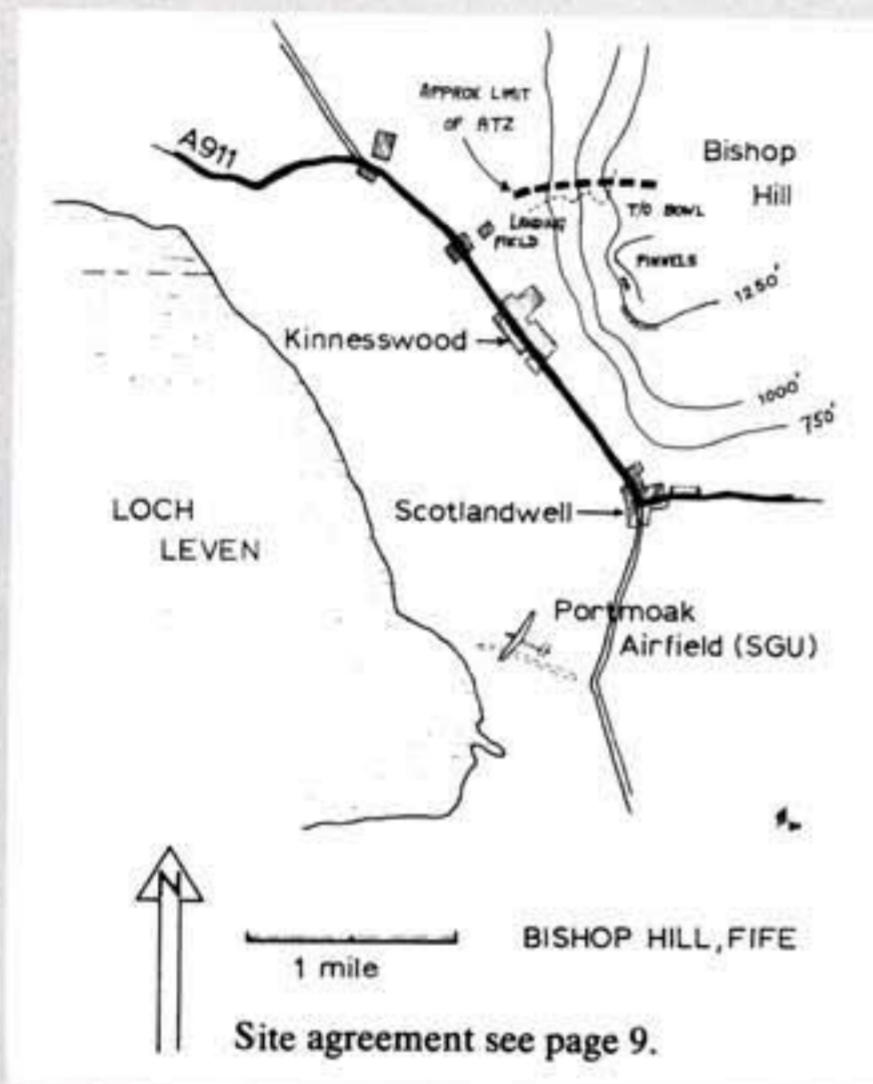
Flying continued, with various people doing their little bit, probably contradicting each other, to try to keep flying safe and relations friendly. I usually had a drink at Portmoak after the day's flying, in a generally friendly atmosphere. It must have been about this time that the phantom hang glider made its first appearance. This machine regularly takes

off from the SW bowl near the trees, is seen by SGU members, though they can't remember the sail pattern, and has never been seen by hang glider pilots. It was probably also about this time that the only real "dirty trick" occurred. A prominent SGU member approached the owner of the farm through which we gain access and suggested to her that, unless she banned hang gliding, she would be morally responsible for any accident which might occur. She declined the responsibility and we continued flying.

Another meeting was held on 19th October, 1979. I'd resigned as Safety Officer over another matter, so I wasn't there, and reasonably happy to miss it. The big guns were coming out though. John Hunter was supposed to be there but didn't make it, Bill Scull of the BGA attended, as did George McRiner of Edinburgh CAA. This meeting discussed some safety proposals I'd drafted back in April (before the first meeting). Dave Walker, Chairman of the SGU, remained adamant that HG should stay out of the ATZ, thus effectively

The other Bishop

by Ian Trotter



preventing our using the hill in westerly winds.

Magic Day

The following day, a Saturday, was make-or-break time. Three of us turned up on a beautiful Bishop day and checked in at Portmoak in the usual way, to find Dave Walker, Andrew Wood, Bill Scull and Martin Grant (then Safety Officer, now tugging at Lasham) mulling over the previous night's meeting. I made my usual fudging polite compromise between "We're going flying!" and "Please can we go flying?" Andrew gave a flat "No". Bill Scull and Martin Grant, masters of discretion both, withdrew. We were in an impossible position. The result, if any, of the meeting hadn't been promulgated, and, for all I knew, the SSA had reached no conclusion. If we accepted Andrew's ban, we preempted the whole point of all the meetings. And we'd already wasted two hours of brilliant soaring. So we defied him.

It was a magic day. I took off from Pinnels deli-

berately in front of a CG just establishing (unlike the Mynd, Sutton and Frocester, the field's at the bottom of the hill) and gave him loads of room, demonstrating an L/D, in a Superscorp mark you, which Andrew refused to believe we had. Their CFI Dave Walker came screaming in downwind, air-brakes out in his Libelle, supposedly checking our lookout. Brian Spreckley — now a National Team member — was doing spins at the South end of the hill, deep in the ATZ and just outside the circuit — hardly the normal traffic pattern that the SGU was trying to get us to conform to.

Later, several friendly pints were consumed. We all agreed that flying had been safe, which the HG side had been asserting all along, and the chat got round to such exotica as fitting transponders to CGs so that they could fly IFR airspace. It was *make* rather than *break*, though a very close-run thing. The SGU now played down the safety considerations about operational freedom and the opportunity to finance their club, no easy task, by getting plenty of time on the hill.

The Right Direction

On 14th November, 1979 (note how things are speeding up), Dave Walker wrote to Robin Laidlaw with his draft rules (only he didn't call them 'draft') and saying: "We are therefore willing to experiment with a much reduced amount of hang gliding for a trial period, under controlled conditions . . ." This was it. We were at last rolling in the right direction. He also referred to banning HG from the ATZ under ANO Rule 34 but Robin was ready for that one, having been briefed by Paul Bridges and Gerry Stapleton.

Bishop has always been a Lomond HGC site. The club is in decline at the moment: McDougal's involved with a lady, Heggie's rarely seen, Alan Keddie crashed in and broke his thigh, though Docherty still storms around. At the Lomond AGM in March, 1980 I suggested that, since the SSA had been negotiating on Bishop for over a year, the Lomond club should formally accept this, by inviting the SSA to take over the site. The meeting declined this proposal, but it didn't do anything else either.

A feeling was emerging that the SSA representatives were more politicians than pilots, so a meeting of regular Bishop pilots, from various clubs, took place, recommending that HG be limited to Pilot 2 or pre-P2 in the care of an Observer. This was a unilateral move, restricting ourselves, since we were sceptical of progress in the SSA/SGU negotiations, and it was ratified by the SSA. published in *Wings!* and copied to the SGU.

This copy, together with the Mynd and Sutton Bank stories in *Wings!* spurred the SGU into action. Also, Dave Walker was retiring after nine years as Chairman and he wanted to tie up loose ends.

Final Agreement

Another meeting took place on Sunday, 25th May 1980, with Andrew Wood, Dave Walker, Graham Smith (SGU Safety Officer), Robin Laidlaw, Bill Anderson (SSA Chairman) and myself. Ron Docherty who was there by chance was invited by the SGU to represent the Lomond HGC. Dave fairly drove the discussion along, and we all wanted an agreement. We got one, but the SSA side caved in over two major points. We accepted reluctantly P2 *only*, which prevented the people to whom Bishop was most valuable, those at P1½, using it. They also refused us the only really safe T/O in the ATZ, Pinnels Buttress, forcing us to use the top of the zig-zag path, where visibility is severely limited. T/O can be bumpy and the T/L area is stuffed with rotor. A droll note was injected by the incorrigible Ron Docherty, who explained that he couldn't be bothered with bits of paper, like P2; he just wanted to fly. This, of course, was why the SSA hadn't invited him. Nobody took up the obvious point about enforcing P2 on a prominent (almost the only) member of the local club.

Three days later, by a happy coincidence of scheduling, there was an SSA Committee meeting which refused to ratify the restriction to P2 or the loss of Pinnels, so back we went the next Sunday.

This time the SGU compromised. We got P2 modified to allow one pre-P2 pilot in the air at a time, no explicit qualifications, under the care of an Observer. We also got Pinnels, subject to an immediate right turn, and we didn't lose the right to T/O and soar up from low in the zig-zag bowl, which I'd half expected.

So there we are. It's been a long haul, to a satisfactory conclusion. The numbers restriction isn't onerous: these numbers are typical. Dave Walker and Robin Laidlaw, in particular, deserve everybody's thanks. They had no easy task and their determination to sort it all out finally bore fruit. What intrigues me personally is what's going to happen when Ron, as he inevitably will, goes flying without either P2 or an Observer!

Old Age Pensioners Hang Gliding Association

Punterama, to use a Northern phrase, believes that hang gliding is just for young men. George Worthington, from the USA, isn't exactly young, and we have our share of cheerful hang gliding pensioners in Britain. There was a stroy current a few years ago, when the first BHGA Chairman, Martin Hunt, was musing about forming an OAP HGA, about a 72 year old former Air Commodore who terrorised other flyers by soaring up and down without taking the blindest notice of anyone else, signalling his intention to make a 180° turn by ringing vigorously on a bicycle bell.

Three of our pensioners have written about why they came to fly hang gliders, and what keeps them here. For Bob Robinson, from Darlington in County Durham, it's a lot to do with spending part of the last War in a POW camp, and his obsession with jumping over fences. . .

. . . It was May 16th, 1979. My 65th birthday. My wife and I were about to enjoy our first week of retirement in our caravan, hidden away in the Lake District. All my life I have been obsessed with jumping or flying over fences. It goes back to 1942.

I used to sit and gaze through tangled masses of barbed wire and elevated sentry boxes around my temporary home — Stalig IVB, Mullberg-on-Elbe. I had a GI friend there, to whom I'm still writing, and I remember asking him one day why the brainy guys in the camp, who were able to build a receiving set and hear the news from London, weren't able to build something to fly us over the perimeter wire. It was only 15ft. high.

The day I retired, and to my wife's astonishment, I joined Roger Middleton's Cumbrian Hang Gliding School near Keswick. My wife thought I was a nut case.

The fun began when I tried to convince my wife and myself that I would make Pilot 1 by the end of the week. Big deal. I was in for a shock.

The first day went well. We spent the morning doing blackboard work under Roger's watchful eye. afternoon, site conditions ideal. OK, we all go on tether ropes. A pupil on each wing, Roger on the nose and off we go. I really leave the ground, I'm actually flying, all of 20ft. in the air. I'm five feet higher than that impenetrable wire of 38 years ago, and it's marvellous.

I'm not sure how long these thoughts lasted, but I came back to earth with a bump. Someone was yelling — "Move that bar to the left! now pull in! push out slowly! NOT TOO MUCH" — bang. . . I must have clouted the only clump of rocks in the whole of the Saddleback range.

The following day the weather was hopeless, and the day after wasn't much better. By the end of the week the CFI was sadly repaying most of his school fees to those pupils who had to return home.

I was one of the lucky ones, able to make use of my van at weekends until I was able to complete the full course. This was almost six months to the day after I started. By November, the school closed altogether.

I was privileged to buy the school glider I was taught on. Being a novice, I've still got my wheels on. I hope to gain further experience from the North Yorks Sailing Club. . . **Bob Robinson**

Ray Lidston, on the other hand, another Northerner, from Blackpool in Lancashire, just didn't

like all the nasty cracks people make about retirement. . .

. . . I had been accustomed to walking many miles daily when I was a younger man. But at the age of 64 I found I just had to rest up, after walking for only ten minutes. On hearing that "Ray could potter in the garden now", and realised with horror that it was ME they were talking about, I looked around frantically and finally decided to take up hang gliding as an alternative to pottering. After belting like mad down hill all day with a tethered glider, like a cartoon character, although horribly stiff within the very first minutes, my whole system was soon shocked back into action.

Before I was 65, not only had the Northern School of Hang Gliding (and my instructor Paul Frain) had kittens, but I had my own glider. It's a Skyhook Sunspot, weighing about 60lbs, which I continually carry in the customary manner. I am now a young, content, nearly 66 year old youth sailing peacefully (most of the time) on the wind.

All you 60s odds and sods can take up hang gliding. It's a fountain of youth. . . **Ray Lidstone**

Our third pensioner, Jack Donaldson, from Croydon in Surrey couldn't stand the thought of spending an old age playing golf. He came into

hang gliding by way of the chairmanship of the Surrey Land Yacht Club. . .

. . . A few years ago when hang gliding became more generally known, and was occasionally seen on television, I eyed the sport with envy and regret. I was approaching senior citizenship, which was a good excuse, and thought there was no fool like an old fool, though a future of old man's golf really stuck in my gut.

A year or so later I went on a land yachting course. The decision, I must admit, was tinged by the fact that they also did hang gliding, not, of course, that I would ever contemplate doing hang gliding at my age.

Following the land yachting I did try three tethered flights on a hang glider, frightened myself half to death, and confirmed I would never do it again.

Still mumbling excuses, with aches and pains and bad weather, it took over a year to get my Pilot 1, by which time I was an old age pensioner, but very pleased with myself.

I'd like to thank all those kind people who helped me up the hills. I'd also like to issue a warning that if you see me around in a clean-looking Harrier, trying to top land, KEEP CLEAR. . . Remember, there's no fool like an old fool, enjoying himself. . . **Jack Donaldson**

Mr. Average hang glider pilot is just past 30 years of age, married, one kid, generally works for himself or in an independent type of job. Bob, Ray and Jack are obviously not average. May they have many years of flying and die at the age of 105 during experiments with their mistress's daughter and a new form of prone/supine harness. Come to think of it, may that happen to the rest of us as well. Ed.



Bob Robinson, in his Skyhook, all ready to do 'wheelies'.

The Celtic Cup 80

Ireland V Wales at Aberystwyth 24th & 25th May

by Bob Mackay

It all started as a friendly challenge by Bob Mackay to Roy Hammond, Chairman of the I.H.G.A. The idea was a friendly competition in which everyone would fly, the top five scores in each task counting for the cup. This year in Wales, next year in Ireland.

The weather was kind and the whole competition was held on Constitution Hill, Aberystwyth. It's about 300ft. high, with steep cliffs on the seaward side, a café at the top and a cable railway to take the gliders up. Its only disadvantage is that there is no beach directly below take-off, the escape route being Clarach Beach, half a mile to the north.

Unfortunately the boys from Cork could not make it, reducing the Irish strength in depth. This factor soon began to tell as the second and third rounds were completed. The figures speak for themselves but tell very little of the spirit and camaraderie that developed. For me it was all summed up in one moment when there was a break in competitors coming to the line. I turned to see Pat Lavery rigged and nearly ready — he flies a lot in Wales and I wasn't sure which team he was competing in. He is actually an Irishman. I turned and shouted to him, "Are you flying for Ireland Pat?"

His eyes lifted across the blue sea to the distant horizon. . . "Jaysus, it's a bit far, Bob!!"

FINAL SCORE

WALES 8940 IRELAND 7970

With conditions so uncertain the individual competition was awarded to **Rod Lees** on the first day scores only.



ROUND 1 (Wind N.W. 12-16mph)

Transit lines were set approx. 300yds apart. Alternate passes (out and back) scored 50 points. 360s in between 15 points. Only four pilots attempted 360 which did not seem to pay off. The most successful flights were made at or slightly below take-off height (300ft.). Time allowed 6 minutes from take-off.

Country	Name	Glider	Passes	360s	Score	Team
Wales	J. Bowyer	Vulcan	9	0	450	2115
	R. Lees	Cutlass	9	0	450	
	A. James	Cyclone	8	1	415	
	P. Parsonage	Atlas	8	0	400	
	D. Wood	Cyclone	8	0	400	
	P. Merton		8	0	400	
	H. Smith		8	0	400	
	M. Pingle		8	0	400	
	A. Benn		8	0	400	
	G. Cato		8	0	400	
	P. Harding		8	0	400	
	N. Edwards		7	1	365	
	M. Asquith		7	0	350	
	C. Hopkinson		7	0	350	
	M. Gladwin		7	0	350	
	R. Hegerty		7	0	350	
	D. Moodie		6	0	300	
	D. Bedding		6	0	300	
Ireland	I. Kibblewhite	Sigma	9	0	450	2145
	M. Leslie	Sigma	9	0	450	
	M. McManus	Atlas	8	3	445	
	T. Wilde	Sigma	8	0	400	
	P. Molloy	Atlas	8	0	400	
	T. Dean		8	0	400	
	S. Parker		8	0	400	
	P. Lavery		8	0	400	
	J. Stafford		7	2	380	
	R. Gillham		7	0	350	
	I. Kirker		7	0	350	
	N. Koumarios		7	0	350	

ROUND 3 (Wind W.N.W. 12-14mph)

On Sunday morning it was cloudy with some rain with little or no wind so we had a film show in the village club. (Len Gabriels had brought his own personal view of the '78 American Cup.). We emerged to find the sun shining and the sea breeze developing. It was Constitution Hill again but this time the transits were only 50yds apart. Providing a 540° (scoring 50 points) was completed you got 25 points out and 25 points back. If you did not make the 540° then you only got 25 points. Unfortunately the wind started to drop to about 10mph and the sight of Mark Leslie beating the cliff about 150ft. below take-off with two sharks tracking him below, was too much and the task was stopped. Time allowed for task 4 minutes.

Country	Name	Glider	Passes	540s	Score	Team
Wales	P. Parsonage	Atlas	15	7	725	1800
	P. Pingle	Cyclone	14	6	650	
	M. Asquith	S. Scorp	11	3	425	
Ireland	P. Lavery	Cutlass	13	6	625	1525
	T. Wilde	Sigma	12	6	600	
	M. Leslie	Sigma	6	3	300	

The wind backed further round towards west and continued to drop. We decided to set a distance and spot task to Clarach beach about 1/2 mile to the north of take-off.

Score at the end of Round 3: Wales 6790 Ireland 6220.

ROUND 2 (Wind N.W. 14-18mph)

Same course but with the increase in wind speed it was safe to increase the points for 360s to 25. This transformed the task, pilots working up height between passes and putting in multiple 360s. The sun shone the wind blew and after completing his task each pilot joined the others free flying about 400ft. above. Time allowed for task 6 mins.

Country	Name	Glider	Passes	360s	Score	Team
Wales	A. James	Cyclone	3	20	650	2875
	R. Lees	Cutlass	3	19	625	
	J. Bowyer	Vulcan	3	16	550	
	N. Edwards	Emu	3	15	525	
	P. Loyns	Cyclone	5	11	525	
	M. Asquith		4	12	500	
	M. Pingle		6	6	450	
	D. Wood		5	8	450	
	P. Parsonage		3	12	450	
	P. King		1	14	400	
	P. Merton		4	8	400	
	P. Harding		4	8	400	
	H. Smith		5	4	350	
	R. Heggerty		2	8	400	
Ireland	M. McManus	Atlas	3	17	575	2550
	T. Wilde	Sigma	3	15	525	
	J. Stafford	S. Scorp	5	11	525	
	P. Molloy	Atlas	4	11	475	
	I. Kibblewhite	Sigma	9	0	450	
	M. Leslie		5	8	450	
	P. Lavery		5	7	425	
	I. Kirker		6	1	325	

So we finished the first day with Wales just in the lead with 4990 points to Ireland's 4695.

Individual totals:
 R. Lees Wales 1075
 A. James Wales 1065
 M. McManus Ireland 1020
 J. Bowyer Wales 1000
 T. Wilde Ireland 925

ROUND 4 (Wind W-WNW 5-10mph)

Arriving over Clarach Beach you had to pass over the target, fly on as far as you could, turn and land on the spot for a maximum 500 points. 3 minutes were allowed to gain height on the cliffs then you had to break for the half mile flight to Clarach.

Country	Name	Glider	Mark	Spot	Score	Team
Wales	M. Asquith	S. Scorp	3	Yes	500	2150
	R. Lees	Cutlass	3	Yes	500	
	A. James	Cyclone	3	Yes	500	
	D. Wood	Cyclone	2	Yes	350	
	M. Gladwyn	Cyclone	3	—	300	
	P. Merton		3	—	300	
	T. Williams		2	—	150	
	M. Hann		2	—	150	
	J. Bowyer		2	—	150	
	P. Harding		2	—	150	
	D. Moodie		1	—	50	
	T. McKenzie		—	—	—	
Ireland	M. McManus	Atlas	3	Yes	500	1750
	I. Kirker	Sigma	3	Yes	500	
	P. Molloy	Atlas	3	—	300	
	S. Parker	Atlas	3	—	300	
	I. Kibblewhite	Sigma	2	—	150	
	T. Dean		2	—	150	
	T. Wilde		2	—	150	

Three valuable XC tips from Mick Pollard

If you've ever left the ridge on a cross-country flight, then wind direction on landing is more than normally important.

It's helpful to carry something with you which will enable you to accurately determine the wind direction on the ground. Although a compass will guide you to the same wind direction as the take-off site, it isn't as reliable as something on the ground giving the true wind direction.

The information you need can be gathered from swaying trees or corn, ripples on water, or best of all, smoke. However, in the absence of a compass and these indicators, you are left purely to guesswork. A downwind landing of only 5mph will definitely result in, at least, a smashed control frame.

Taking the guesswork out can be done by dropping a smoke bomb, but this is a bit suspect from the safety aspect. A simple solution is offered in the following — full credit for which goes to Don Partridge of Bishop, California, who introduced me to the idea.

The idea is that you carry with you a long tapered ribbon which you throw out at the appropriate moment. It floats to the ground and settles narrow end downwind, giving you the correct direction of the ground wind.

To make the ribbon you will need to sew or glue strips of 'Ripstop' nylon, scraps of which may be obtainable from a parachute manufacturer or sailmaker, to form a strip at least 20ft. long, tapering from eight inches to half an inch. Use a heated knife run along a straight edge to cut the material.

Turn and glue back the wide end to form a blunt point — leaving a two inch straight in the middle, to which you glue a strip of wood as a stiffener, and a few lead shot or strips of Multicore solder. The weight you use must be just enough to make the ribbon fall slowly to the ground. If you use too much weight then it will fall in a heap and be useless. You will also need to attach a nine inch piece of tape to the weighted end, to be able to pull the ribbon from your pocket, or you can have the 4in. x 4in. container sewn to your harness.

To operate, pull the folded package from your pocket or container so it unfolds and streams behind you. Drop the ribbon at a height where you can safely do a 360 after it has landed. This will give you time to set up an approach in any direction.

This next tip is also one picked up in the States, cribbed from George Worthington.

Anyone who has done any hitch-hiking will know how difficult it is to get drivers to stop. A simple solution for persuading someone to give you a ride after landing on an XC flight is to cut a 2ft. x 2ft. piece of ripstop and print on it in large letters the words DOWNED PILOT. Curiosity should do the rest.

Finally. . .

If you have made your record breaking flight and have been unlucky enough to break a leg (because your direction finding ribbon landed in a tree?) and you are just too far away for a passing motorist to read your riveting DOWNED PILOT sign, then you could be in a lot of trouble. It could be eight hours or more before anyone even starts to look for you, let alone find you.

In this situation, avoiding shock and cold could mean lasting the night out till the search party finds you. Carrying a sleeping bag with you would be somewhat impractical, but there is a simple and cheap alternative, called the SPACE BLANKET. This consists of a tough silvery material which will reflect about 90% of body heat when tucked around you. It comes folded in a package, 3in. x 2in. x 3/4in., and it can be obtained from any mountaineering shop, costing out £1.50.

Not only is it good for keeping you warm, but it's also an excellent light, and radar, reflector which will help searchers find you. It can be used as a makeshift tent, signalling mirror, and (wait for it), a solar still, if you have crashed in the desert with no water!

If you buy one of these blankets, keep it in your flying suit and forget about it, then you won't find yourself in a situation thinking, "That article by Mick Pollard was a good idea", when you need to keep yourself warm.

In conclusion, the total weight of the ribbon, DOWNED PILOT sign and space blanket is 3 3/4oz. This isn't going to detract too much from your min. sink!

Mick Pollard
Safety Officer N. Wales Club

Mick has been flying hang gliders for five years, the past three as Safety Officer for the North Wales Club (Manwing).

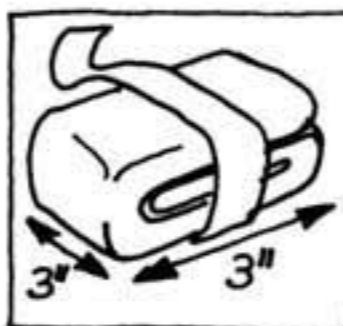
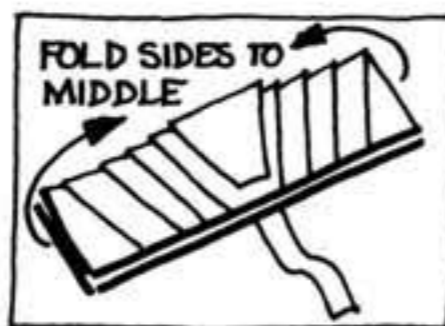
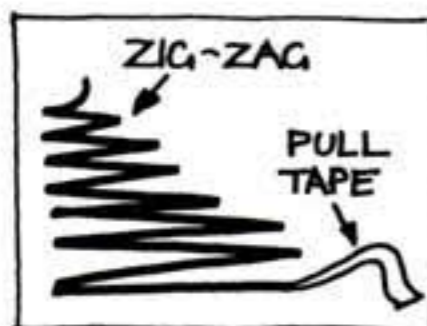
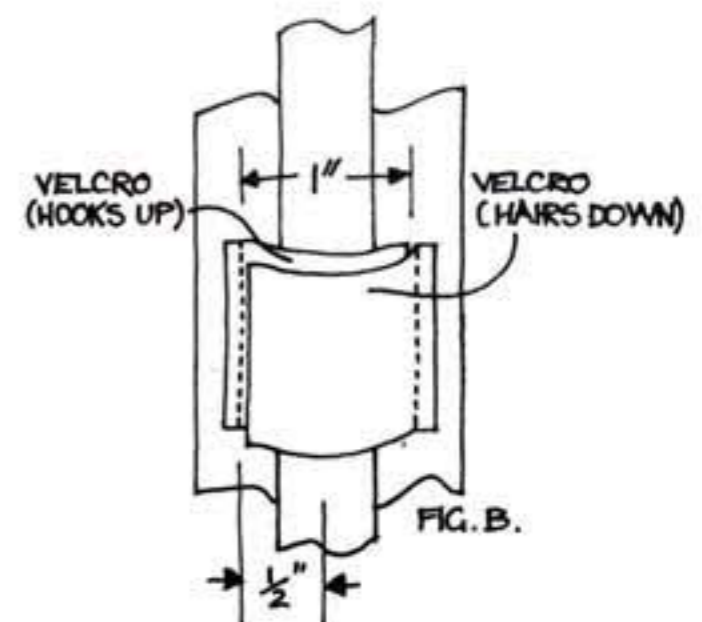
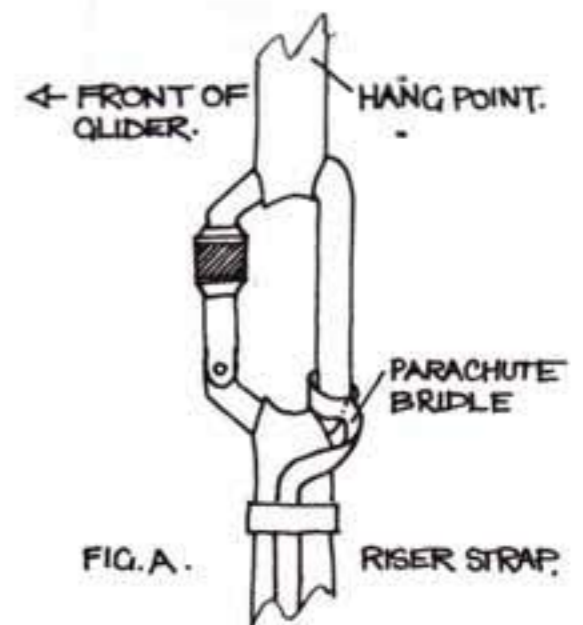
He currently flies a Flexiform Vector, and has accumulated 133 flying hours. Best XC to date is 25 miles in the Owens Valley. He'll be trying for league entry next year.

Karabiners Dave Weeks

Whilst seeing no harm in the advice given about karabiners and harnesses, I would recommend the use of a UIAA (International Standard in Climbing) certified karabiner. The minimum requirements for this karabiner is a breaking strain, end to end, of 2,500Kg, and most significantly 800Kg across the gate and opposite side. So much for those weak pins.

What is, however, more important, is the way the parachute bridle is clipped in. This should be done as per illustration (A), so that the gate of the karabiner faces forward, gate opening to the top. In the event of a development, no direct pull across the gate will occur as the bridle is likely to slide up the long side of the karabiner to the harness end.

On the subject of bridals the neatest way I have found to attach it to the riser strap with velcro is as follows. Stich one piece of velcro at one end 1/2in. from the centre of the strap fig B (1). Cut off leaving 1in. Now take the opposite piece of velcro and switch it just outside the first piece again cutting it to about 1in. fig B (2). Place the bridle under the first piece of velcro, then close the second piece over the top fig B (3). Four or five of these spaced out down the riser strap will keep the bridle secure yet will pull out when deployed.



Tip stalls

Following an increased number of accidents in the Peak District caused by tip stalls, I get the feeling that a great many intermediate pilots fail to understand the relationship between washout, billow shift and tip stalls.

Take the following accident report from an intermediate pilot, who crashed his glider on the top of an extremely rocky cliff site.

"This was my first flight with my new Vario, just after take off I noticed that I had forgotten to switch it on. I let go of the bar with one hand to turn it on.

"At this point, the glider started to turn, I applied opposite weight shift, but the glider carried on turning, if anything faster than ever. At this point I was pointing back, low over the top of the hill, and decided to complete the 360, crashing into the rocks on top of the hill as I came round into wind."

After further discussion with the pilot, and other, more experienced witnesses, it turns out that the glider had tip stalled. The pilot, by applying opposite weight shift, made the situation worse. He was lucky to escape with minor cuts and bruises, and a big repair bill. Other pilots who have made the same mistake, like Chris Corston, were less lucky.

To understand what happens when a glider is tip stalled, look at the following diagrams.

1. The pilot stalls his inner wing by flying too slowly in the wind gradient close to the hill.

2. The inner wing drops, pilot initiates opposite weight shift in an attempt to turn glider away from hill. This causes a billow shift which reduces the washout on the inner wing, increasing the severity of the stall, making the glider turn violently into the hill.

Returning to the original accident report — what should the pilot have done? There were 3 opportunities to avoid the accident:-

1. Ideally he should have switched on his vario and his brain before take off. Forgetting to turn on the vario indicates that he had not prepared himself for flight, either mentally or by checking his equipment.

2. He should have concentrated on flying his glider and maintaining his airspeed, particularly as he was flying close to the hill.

3. Having failed on the first 2 counts — he then failed to recognise the stall, and take the appropriate action.

The correct action is quite straightforward.:

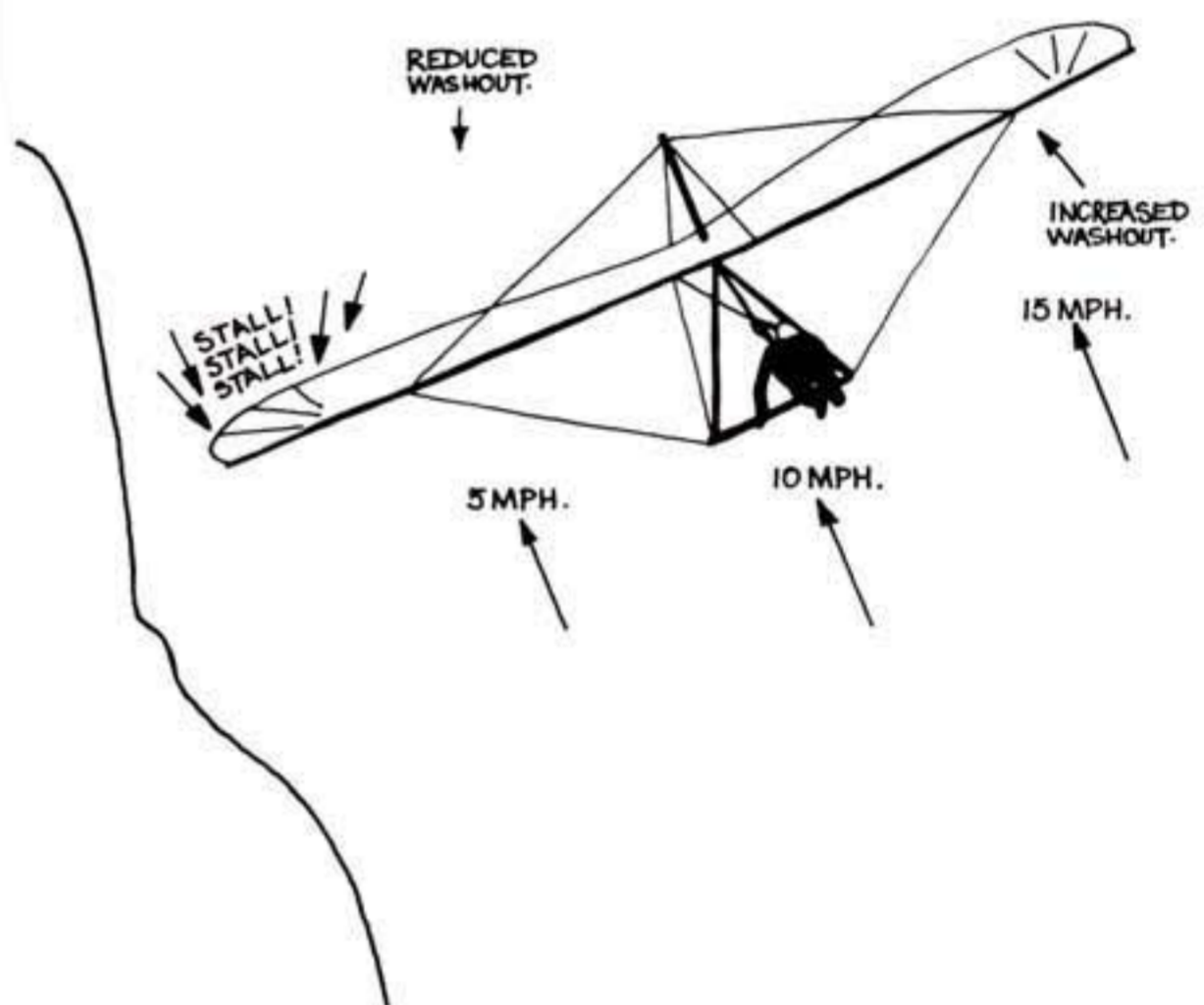
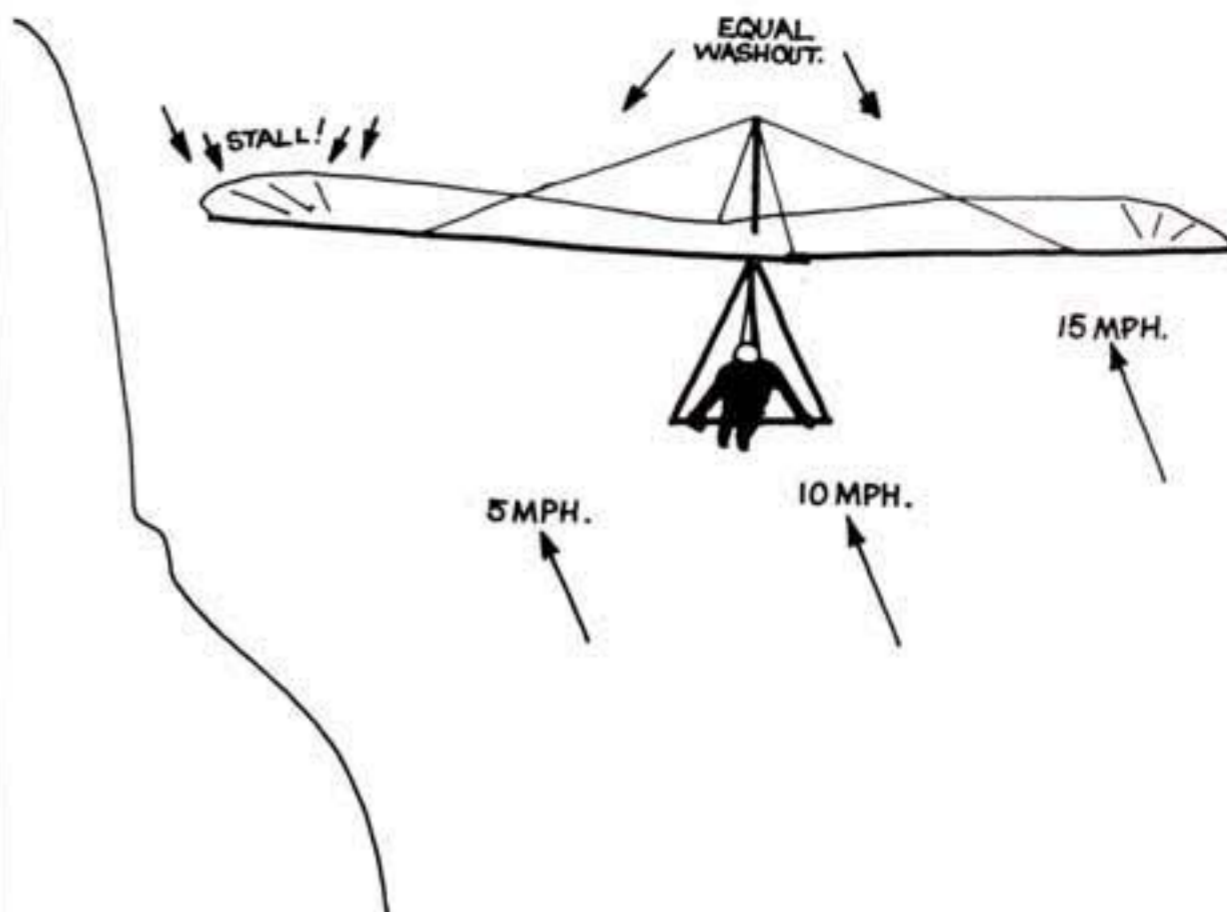
1. Pull on speed to get the stalled wing flying again.

2. Then — and only then, apply opposite weight shift to turn away from the hill.

This problem may seem more relevant to the latest range of gliders which employ high keel pockets and low twist wings, but older type gliders employ billow shift also, with long 1½ in. O.D. keel tubes, flexing from side to side to allow this.

The moral of this story is the same moral that accompanies every article or accident report involving stalls — aircraft cannot fly without sufficient airspeed.

Alastair Geldart C.F.I.
Peak School of Hang Gliding



Parachute safety

It is possible for the split pin on Windhaven and similar parachute containers to pass completely through the retaining loop, making the parachute impossible to pull.

Dales clubman John Turner has evolved a simple and effective cure for this. As the illustration shows, a piece of silicone rubber tubing approx. 1½ in. long by ½ in. bore is pierced transversely and fitted tightly over the head of the pin, covering the pin/cord junction.

With the rubber in position it is effectively impossible for the pin head to pass through the loop unnoticed.

The rubber tube is obtainable from model shops who sell it for making connections on the exhausts of boat and aircraft engines. Use only this material as it is very soft and

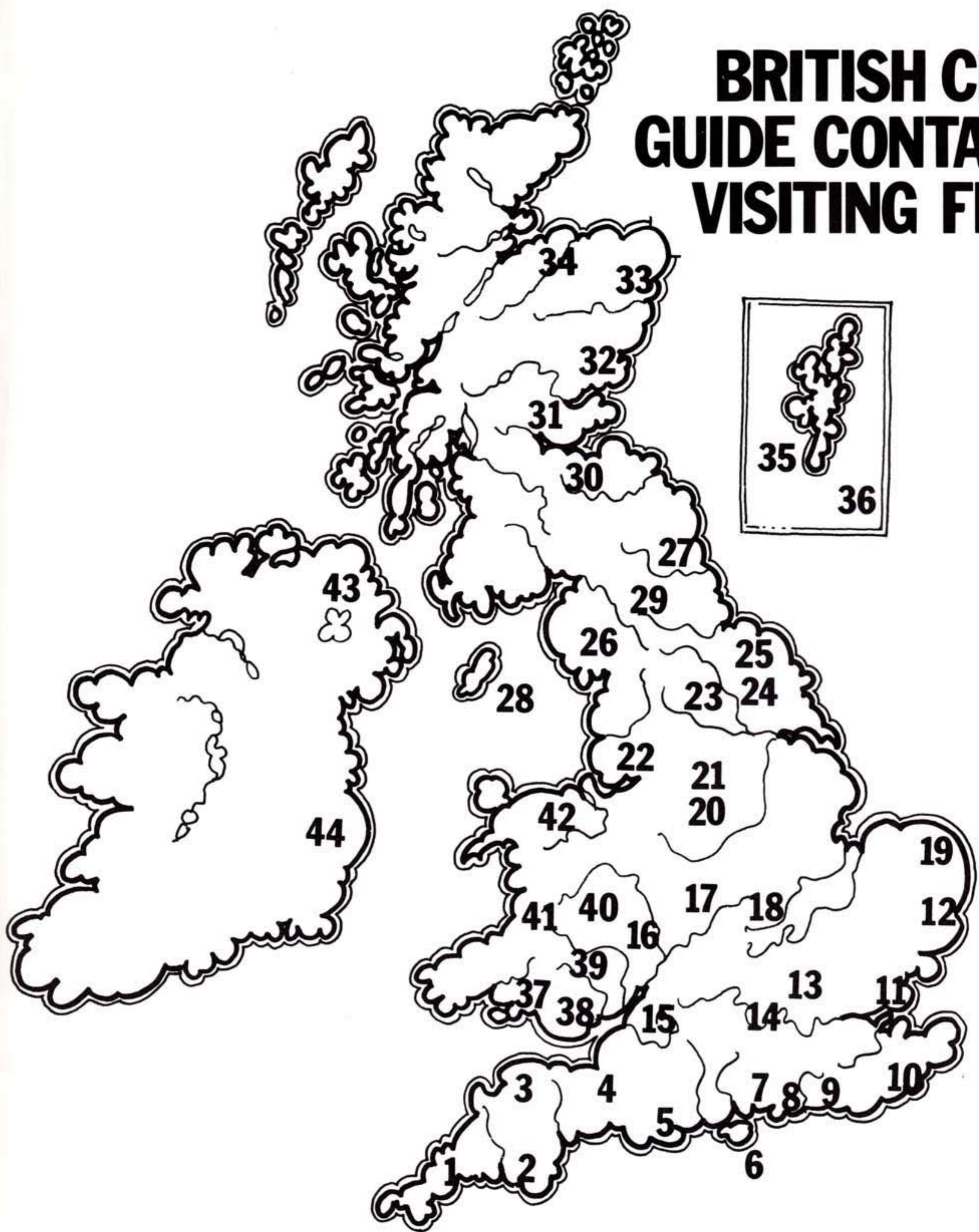
conformable. Plastic petrol pipe etc., should NOT be used as it is too rigid.

Noel Whittall



Reprint from TVHGC Volplane

BRITISH CL GUIDE CONTACT VISITING FL



JOBS TS FOR ERS

Compiled by David Bedding, BHGA National Sites Officer and Barrie Annette, author "Hang Gliding Sites", Chris Corston, BHGA Secretary.

This is your travel guide around the United Kingdom, compiled from the clubs which have volunteered local sites advisers. Many sites are vulnerable, and if you are travelling to new hills, you must find out the local rules so you don't endanger what could turn out to be a club's favourite site.

When you travel, write or telephone in advance, especially if you are arranging a number of pilots to visit an area. Planning can ease a lot of difficulties.

Sometimes a contact will have to say NO. Never fly regardless. We have to co-operate with each other if we are going to increase the number of available sites.

I must thank Chris Corston for his work in compiling the latest information from clubs, but the final responsibility for information published here — aside from being the Editor's — rests with David Bedding.

Barrie Annette's *Hang Gliding Sites, Guide to the UK and Ireland* is available to members from the Taunton Office at £2.75 (incl. p&p). Combined with this up-to-date information on whom to contact, you should have all the information you need to travel.

Good visiting, and flying.

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Scotland

In Scotland the Scottish Sailing Association is the BHGA member club and local clubs are branches of it.

29 LANARKSHIRE SOARING CLUB

Secretary: Dave Whitelaw, 10 Murray Road, Law, Carlisle. Tel: Wishaw 70033 Fred Joynes: Lanark 2451 Heidi Brogan: Glasgow 644 4540 Gordon Murray: Holytown 832580

30 LOTHIAN HGC

Secretary: Stephen Cuttle, 11 Temple Park Crescent, Edinburgh EH11 1JF. Tel: Edinburgh 667 1081 Ext. 2685 (weekdays) Robin Laidlaw: Edinburgh 334 6356 John Whitfield: Edinburgh 447 3048

31 LOMOND HGC

Secretary: Alan Keddie, 41 Townsend Place, Kirkcaldy. Tel: Kirkcaldy 62086 Fife Area: Ron Docherty Leven 23502 (work) Central Area: Henry Heggie Kippen 506, Stirling 3111 Ext. 533 (work) West Area: David Squires Glasgow 943 0322

32 ANGUS HGC

Secretary: Simon Ogston, 33 Seymour St, Dundee. Tel: Dundee 60111 Ext. 2426 (work) 65437 (home) Bill Anderson: Arbroath 75546 Alastair Milne: Montrose 5747

33 ABERDEEN HGC

Secretary: Eric Brooks, 477 North Deeside Road, Cutts, Aberdeen. Tel: Aberdeen 861067 Bob Dunthorn: Aberdeen 877899 Robin Smith: Aberdeen 322173 James Bruce: Kintore 2316

34 OSPREY HGC

Secretary: Victor Cameron, 38 Blackthorn Road, Meadow Park, Culloden, Inverness. Tel: Inverness 791522 P. Milward: Kinloss 2341 D. Carson: Inverness 792277 Alan McNeish: Elgin 44865

35 NORSE WING HGC

Secretary: Robert Turnbull, 46 Norderdale, Lerwick, Shetland ZE1 0SA. Tel: Lerwick 4768 Mike Welsh: Lerwick 3674

36 SUMBURGH HGC

NB. This club is not part of SSA. Secretary: Derek Compton, 11 Sandblister Place, Scatness, Virkie, Shetland. Tel: Sumburgh 60497 John Mackenzie: Sumburgh 60356 Martin Tricket: Sumburgh 60785

Wales

The Welsh Clubs are member clubs of the BHGA. They all belong to the Welsh Hang Gliding Federation.

37 SOUTH WEST WALES

Secretary: Tony Fletcher, Rainbows End, 27 Portia Terrace, Mount Pleasant, Swansea. Tel: Swansea 49825 (home) 42751 (work) Doug Powell: Abercrave 287 (home) Talgarth 671 (work) Ray Picton: Swansea 812483 Rob Symberlist: Swansea 26729 Neil Edwards: Swansea 813913 Pat King: Bishopston 3381 Bob Mackay: Skewen 813318

38 SOUTH EAST WALES

Secretary: Martin Hann, 6 Church Hill Close, Llanblethian, Cowbridge. Tel: Cowbridge 2953 (home) Cardiff 552808 (work) Mark Gladwyn: Newport 56111 (day) 277948 (home)

Geoff Loynes: Cardiff 700157 Ceri Davies: Ferndale 730741 Peter Harding: Cardiff 497531

39 BEACONS PARK HGC

Chairman and Sites Officer: Ewart Jones, The Quarry, Crickhowell, Powys. Tel: Crickhowell 810681

40 LONGMYND HGC

Chairman: Paul Bridges, Yard House, Wentnor, Bishops Castle, Salop. Tel: Linley 322 Eddie Bowen: Linley 275 Paul Bullock: Church Stretton 722884

41 MID-WALES HGC

Rod Lees, Troedrihwlas, Cwmreidol, Aberystwith, Dyfed. Tel: Capel Bangor 229 James Spottiswoode: Aberystwith 4589 Trevor Hyner: Letterston 433 Ernie Nowell: Newcastle Emlyn 710520 Jan Ketelaar: Llanberis 707 Gwynli Jones: Bron Pwll, Llanbedr, Harlech, Gwynedd. Llewelyn Griffin: Barmouth 280207

42 NORTH WALES HGC

Secretary: Ray & Diane Hanlon, 37 Kings Mount, Oxton, Birkenhead, Liverpool. Tel: 652 5918 Steve Armstrong: Wallasey 051 638 8644 Dennis Rowlands: Heswall 051 648 6506 Steve Bond: Widnes 051 420 6019 Bill Huyton: Liverpool 051 525 1740

Northern Ireland

43 ULSTER HGC

Secretary: Ernie Patterson, 95 Killyleagh Road, Killinchy, Co. Down. Tel: Killinchy 541778 Bertie Kennedy: Glengormley 2648 or Belfast 33821 Martin Bates: Belfast 692522 Chris Simmons: Cloughmills 607

44 Republic of Ireland

Contact the Irish Hang Gliding Association, Tom Hudson, 60 Hillcrest Road, Gleneageary, Co. Dublin.

Responsibilities of National Sites Representatives

Bob McKay, 83 Wern Road, Skewen, West Glamorgan. Tel: 0792 813318 (home) Central Electricity Generating Board, National Water Authority, Welsh National Water Development Board, H.M. Coast Guards, GPO Aerials.

Tim White, 18, Linden Grove, Middlesborough, Cleveland. Tel: 0642 88142 Countryside Commission, National Farmers' Union, Coal Board.

Pat King, 45 Heatherslade Road, Southgate, Pennard, Swansea. Tel: 044 128 3381 (home) 0639 812341 Ext. 6200 (work) Nature Conservancy Council, Ministry of Defence, Forestry Commission, Analysis of Priorities.

Gerry Stapleton, 12 Lower Church Wynde, Yarm, Cleveland. Tel: 0642 780533 (home) National Association of County Councils, Association of District Councils, Association of Metropolitan Councils, Scottish Office (Byelaws in Scotland), Country Landowners' Association.

Ewart Jones, The Quarry, Crickhowell, Powys. Tel: 0873 810681 (home) Welsh Office (Byelaws in Wales) Council for National Parks, Dartmoor Commons Bill Parliamentary Agent, Duchy of Cornwall, Commoners and Graziers' Association.

Barry Blore, 40 Castle Street, Steventon, Abingdon, Oxon OX13 6SR Tel: 0235 834033 (home) BHGA Development Officer, Improving existing agreements with National Bodies, Sharing tow launching facilities with other organisations.

Chris Corston, BHGA HQ, 167A Cheddon Road, Taunton, Somerset TA2 7AH Tel: 0823 88140 (work) BHGA Secretary, Communications, Dartmoor Commons Bill Campaign

David Bedding, 2 Chiltern View Cottages, Aylesbury Road, Monks Risborough, Aylesbury, Bucks. Tel: 084 44 7186 (home) 3101 (work) Responsible to Council for Sites, Home Office (Byelaws in England), Timber Growers' Organisation, Central Council of Physical Recreation, National Trust, General complaints from Clubs and members about organisation of national sites representation.

HEARTS AFLUTTER

Dear Sir,

Thank you for publishing a list of fatal accidents which have occurred since 1974 in the May edition of *Wings!* A simple analysis of facts and figures in this list has brought to light something which might help to reduce future fatal accidents:

1. In the four years 1974 to 1977 there were twelve fatal hang gliding accidents in the U.K. of which perhaps one could be attributed to an inadvertent stall.

2. In the three years 1978 to 1980 so far there have been eighteen fatal hang gliding accidents of which at least nine were directly due to inadvertent or uncontrolled stall.

It has been said that the pre-1977 Standard Rogallo was a very forgiving machine and to some extent this may explain the disparity. To me though, a much more significant factor is that the old Standard Rogallo had a built-in warning device, namely, trailing edge flutter.

I have heard several pilots say that they know their air speed by the feel of the air in their faces. To some extent this may be true, but I submit that all responsible hang glider manufacturers should fit their machines with a simple stall warning device.

Of course, there could be some other explanation, but, if on examining the records you find that you agree with me, then you may also agree that this subject deserves more attention at this time than even such a device as the parachute.

E.B.Hall
Hounslow

POWER TO THE PEOPLE

Dear Sir,

I would like to congratulate everyone concerned with the organisation of the Wellesbourne Power Meet. It clearly demonstrated the advances that have been made in Ultralight aviation, almost every machine having impressive design features and flying characteristics.

May I particularly thank Les Ward and Nick Wrigley, of Ultralight Aviation Services, for offering two of our club members the opportunity of a flight on their very powerful dual seat buggy. Chris Corston and Rodney Nickel have both been confined to their wheelchairs as a result of serious hang gliding accidents.

Both are still in love with flying. Les and Nick wanted to take Chris up as a mark of gratitude for all he has done for the movement in this country, but he proved a little too heavy for the conditions and felt it would be unfair to his family to accept a flight at the moment.

Rodney was thus offered the flight and anyone who saw his smile will know what it meant to him.

Nick took Rodney up for his first flight since 1974. It lasted about fifteen minutes and, after landing, Rodney told me it was an experience worth a million pounds". He meant it. Thank you Les and Nick for a very fine gesture. We hope that your very impressive aircraft will produce such enjoyment wherever it flies.

Simon Murphy,
Devon & Somerset Condors

BY THE PEOPLE AND FOR THE PEOPLE

Dear Sir,

I note from the Minutes of the BHGA Council Meeting of the 20th April that Colin Lark, BHGA Council member and Keith Cockcroft, BHGA Flying Training Officer, have proposed that in response to the AGM Proposal 7, Pilot 1 certificates may be obtained by those competent enough through clubs by obtaining test papers and task forms from club coaches, completing the test paper in the presence of an instructor, club coach or flying officer, all of whom must be observers and that the decision should be ratified by the club chairman on behalf of the committee. I must protest. Proposal 7, which was passed by a very large majority, stated that "Pilot 1 can be obtained on the signatures of at least two observers and ratified by club meeting." The clear intention of the AGM was that pilot training ab initio could once again take place in clubs and club trained pilots could gain entry to the pilot rating scheme with the minimum difficulty.

It was clear from the meeting, and indeed seems to me clear from the wording of the motion itself, that the phrase "at least" is intended to mean "by no fewer than" and not, as is apparently being interpreted by Messrs. Lark and Cockcroft "a much more complicated rigmarole than". The pressure for this change came from clubs whose beginner members were frustrated by the total dependence for ab initio training on commercial schools, sometimes many miles away from the clubs' home territory. This frustration is due to the impossibility of providing club training facilities as required by the former scheme, which is in turn due to the BHGA and its Flying Training Committee failing to institute its promised programme of club coach and instructor training courses. There, therefore, seems little point in proposing to administer club Pilot 1 entry via non-existent club coaches and in-

structors. Council should, immediately, implement Proposal 7 in accordance with the AGM's clearly declared wishes. If Council, or the BHGA Flying Training Officer, feel that they cannot do so then they should clearly state their reasons and be prepared to resign.

C.S. Stapleton,
North Yorks. Sailing Club

TELLING TAILS

Dear Sir,

So far this year our magazine has revealed that one tumble and two luffing dives have befallen hang gliders with nose angles of less than 180°. Hang gliders with 180° nose angles invariably have tails as do birds and aeroplanes. Hang gliders with nose angles less than 180° invariably do not have tails. As nose angles are year by year getting closer to 180° surely there must come a point where to do without a tail will lead to unstable flight and one might conjecture because of the above recent tumbles and luffs that we have already reached that point.

Reading the article by Peter Anstey about luffing dives we might assume that anti-luffing wires are only a palliative.

Warnings have been issued in the past about the consequences of flying gliders with large nose angles and here are two:

1. Longitudinal Dynamics of Ultralight Gliders by Gary Vale; "Gliders configurations most likely to experience large, possibly catastrophic, pitching motions are gliders with *High Aspect Ratio*, large span, low twist, low parasitic drag, non-rigid suspension system".

2. Ground Skimmer, October 1975 — Pitch Stability and Control — "With the trend towards higher and higher aspect ratios, a possible problem related to insufficient pitch damping should be considered that of a glider pitching down so abruptly following an aggravated stall that it tumbles".

About three or four years ago there was an attempt in Europe to stop prone flying as it was pointed out that a fall through the A frame could lead to an uncontrollable dive. In the light of the above, here are two modifications which perhaps could be looked into.

(a) By use of extra battens and sail cloth, extend the wing at the keel to provide a tail elevated upwards.

(b) provide bungees from A frame sides to a suitable point on the harness to prevent the body going forward or upward beyond arms' length from the A frame.

Geof Jones,
Leeds

PIGGY-IN-THE-MIDDLE

Dear Sir,

For fifteen years my flying experience has been limited to sailplanes (Gold C, 2 Diamonds and Full Cat. Instructor Rating). I have recently taken up hang gliding (only Pilot 1) both to broaden my own flying experience and to try to see the other side of mixed traffic problems.

Almost immediately I have found myself forced to act as an advocate to both camps. Fortunately the clubs involved have reached an amicable agreement without the traumas described in "Brothers-in-Law 1-3". I have not myself experienced any problems in mixed traffic though I still fear them. It is noticeable that hang gliders tend like the double-decker buses of the Flanders and Swann song to be more gregarious than sailplanes and on a hill-soaring site this can give rise to traffic problems for the fast moving but not necessarily very experienced sailplane pilot who unlike the double-decker bus can't stop — his choice can be put out of the lift-band and down or fight his way through!

Three articles in the "Brothers-in-Law" series have now described the difficulties in reaching agreement with a gliding club, yet none has wondered that any agreement was possible. It is easy to protest that gliding clubs which once upon a time had to struggle to survive now want to deny air space to others. Yet, is it really sporting for the newcomer to set up shop on the doorstep of the original participants and then argue, "There is plenty of room if you just move over a bit"?

The gliding club has very little to gain from any agreement — in fact, only one thing I can think of. In gliding clubs there is a common belief that behind the reasonable flying fellows whom they meet in the bar or may pass on the hill, there exists a hoard of barbarians waiting to break out.

For the gliding clubs to attempt to police the surrounding airspace (the police as often said have no interest) may well prove exhaustive in time and money.

How much better to allow in a few of those reasonable fellow pilots in order that they may carry out the policing operation. The really interesting question will arise when the gliding clubs discover that these decent flying fellows have not the power and very often not the will to stop the "cowboys" and the barbarians will burst through anyway!

Malcolm Shaw,
Falkirk

ICARUS ALL SORTS

... congratulations to **Lester Cruse** on his Fledge 2 for finally making a big XC, therefore opening up his chances of winning the League. Along with **Graham Slater**, **Keith Reynolds** and **Johnny Carr**, Lester went over the back of the Devil's Dyke in May at the same time as the northern pilots were pulling their silver C's. Johnny went the wrong side of a cloud over Brighton and landed after 7 miles. Graham and Ren did a couple of big ones along the coast, around 20 miles, though without challenging Johnny's record. But Lester pulled one out of the bag and made few mistakes for his 13 miles. Typically, though, he wasn't impressed...

... commiserations to the Southern HGC, using the Dyke. Now it's all the fashion to try for it in marginal conditions, and go XC, some of the Southern taboos against going down are weakening. But on the Dyke, going down can now cost £20 if you land in the wrong field, and the farmer — who already gets a massive rent — catches you out of season. There's said to be a bit of nail-biting over the chance of some hot-blooded rat-packer missing out and energetically refusing to pay...

... **American Cup** news is that this years competition organiser, successor to the late **Dave Murchison**, is the Colorado heart throb **Sean Dever**. Glider Rider boss **Tracy Knauss** has invited



Tracy Knauss, photo: Bettina Gray,

Sean for a couple of weeks in July to look over the course and devise some fiendish, but fair, flying tasks. General jubilation amongst the other competitors. Tracy has been wheeling and dealing for another site to take winds other than north-westerlies, and appears to have clinched a deal with Rock City, overlooking Chatanooga, which is believed to have been pioneered by some of the British contingent, including **John Hyam**, at the 1978 American Cup. Looks, too, like the French won't be going, having blown all their money sending a team to this months competition at Bishop. Now the Germans could get an invite, along with the brilliant Brazilians...

... **Jack McCornack**, who makes Pterodactyls from Fledge Mk 2s, and who took part in **David Kirke's** epic attempt at flying non-stop from London to Paris (as yet without success, took umbrage at the Icarus piece in May *Wings!* about Manta problems. He writes. . . "Manta builds us a lot of spare parts and I spend enough time there to qualify as an Industrial Spy, 1st class. Icarus said it was "almost a nuisance" for Manta to build Fledges. This is an understatement. The Fledge is probably twice as hard to build as a flexwing kite. And **Rex Miller** probably wasn't happy cranking away at the rib jig, literally thousands of ribs worth. But I don't see how this hurts the future of the Fledge. Ever hear of the expression 'crying all the way to the bank'? Sometimes success means working long hours and generally grumbling a bit.

Icarus said "no one appears to be doing any R&D" and that's a bunch of bullbleep (*sic*). Haven't you noticed any changes in the Fledge since Manta bought it from Klaus? Like a double-surface aerofoil, upright rudders, spiggoted compression struts? Most fliers think it's much improved over the original design, and it's all from in-house R&D at the factory in Oakland.

"Hans and Dieter aren't manufacturing Fledges under license. They're assembling from Manta-supplied materials and components. This is being done to get costs down and delivery times up for the European markets before some scoundrel starts making copies.

"The sail supplier is delivering five sails a day, not two. Shucks, we get two a day at Pterodactyl. Manta don't make the sails themselves because Dick Cheney makes them better.

"Back to the World Champion; Rex Miller left Oakland for Europe in mid-May for a promotional tour or something. I gave him 30 pence toward a pint when he gets here. He seemed to be looking forward to his trip more than he looked forward to bending ribs."

Icarus, he say. . . Got most details right, with exception of those five sails, and stil have great faith in my source of information. Suggest 30 pence would only be a down-payment on a pint of beer in London, and may be fund should start to finance a pint for Rex. . . must brush up on my spiggoted compression struts, though (whatever they are).

... PS from Jack: "I had a very usual time here in England, climaxing in not flying from London to Paris. It's an entertaining story which I shall write down and submit to *Wings!* . . .

Last word from **Icarus**. . . He certainly did have an entertaining time, judging by the centre page spread in the *Daily Express*, including a twinkly-eyed picture of Mr. McCornack with the label "Mr. David Kirke". . . the press never get it right, do they? . . .

... **John Fack** has finally forgiven his Samson-like twin brother **Jeremy** for breaking his arm, for John has taken to the skies again to fly. That means **Bob England** has to hand back the Phillips-sponsored Atlas on which he has been doing so well. Last seen running around the Downs in Bristol with his Atlas copy or maybe a prototype of one of his own peculiar kites, called the **Gobbler**, or something. . .

... **Ashley Doubtfire**, who runs the Birdman School of Hang Gliding in Wiltshire, hastens to assure us that *he* is not hanging up his harness alongside that of his mentor, **Ken Messenger**. His school is still going strong, thriving, lotsa customers. . .

... fascinating new guide just published which would suit hang glider pilots down on the ground. Called the **Guide to Adventure and Discovery**, it includes prices and addresses for great things to do when you're not flying, or lists absurd places to fly. You could catch a slow boat to South America on the cheap, to spot crocodiles in Peru, or dive in the Galapagos Islands, or visit the Great Wall of China via the Tian An Men Express. And it's all for our sort of pocket, not the idle rich. The guide costs £1.50 including p&p, from the Central Bureau for Educational Visits and Exchanges (phew!), 43 Dorset Street, London W1H 3FN. Say you read about it in *Wings* and maybe they'll advertise. . .



Derek Evans, photo: Mark Junak.

... **Derek Evans** has just pulled off some wonderful sponsorship. If a British team is going to win at the 1981 World Championships in Japan, it has to know before it goes what's happening out there. Japan is said to have had 20,000 pilots two years ago, with one manufacturer making 200 gliders a month! If that's true they'll have a lot of money to spend. They are also understood to have improved greatly since the 1978 American Cup. But how was Derek to get there? After sweating on various sponsors who came to naught, Derek and **Jeremy Fack** are lucky to be taking two brand-new kites, a Storm and a Vulcan, to Japan, in the colours of the **Celtic Line** and a fairy godfather called **Alan Cameron**. Aside from having a tremendous time, they'll attract a lot of attention in Japan, which will please Celtic Line, and we should have an interesting article in *Wings* later in the year. They go around July 30th, and come back around August 17th. Among earlier hair-brained schemes to raise the fares out there was a plot to make Derek a journalist for the duration, but that's not a story that can be told in print. . .

... **John Fack** has been cursed this year. News has just come in that, glorying in flight again as the assistant manager at Kossen, John experienced a switch wind coming in to land and broke his arm again, same place, same fracture, same pain, and same period, around 5 months, off flying again. Cards and chocs to Windcraft, please. . .

The Roses~Afterthoughts

by Jim Brown

Cross-country flying is probably the most skilful and demanding aspect of hang gliding. Courage, determination and imagination are just three of the qualities required for success.

On Saturday 17th May, sixteen pilots, eight from Yorkshire, and eight from Lancashire, met to compete in a cross-country competition which must go down as a classic in hang gliding history.

By the end of the day the eight Yorkshire gliders had clocked up a staggering total of 236 miles, established a new British Distance Record* of 68 miles and flown at heights in excess of 7,000ft. ASL.

The Lancashire gliders added a further 60 miles to bring the grand total for the day to an amazing 296 miles.

The day began with a peep through the bedroom curtains to reveal the by now familiar blue sky associated with the anticyclone which had been with us for over a fortnight. This persistent high pressure area had brought strong easterly winds and summer temperatures to the Dales, and had blown out previous attempt to run the competition on the 3rd/4th May. Was this going to be another dry run? The forecast confirmed my observations — a ridge of high pressure centred over Scotland and extending southwards to Cornwall. Moderate E to NE winds and clear skies with freezing level at 6,500ft. With a probable inversion at around 2,000ft. it didn't look too promising for XC.

However, having checked out with their respective captains, both teams assembled between 10 and 10.30am at the foot of Cow Close Fell in the Yorkshire Dales.

There followed the usual pre-competition wind-up and a report that the wind was too strong and 15/20° across the slope.

The venue was quickly changed to the more suitable east face of Windbank, and the competition was officially declared ON (with the captains exchanging lists of team members) at about 11.30am.

The wind on top was blowing an uncomfortable 5-30mph and felt decidedly 'bumpy'.

Trevor Birkbeck (now fast regaining his dare-devil image — we think) was first to go and after experiencing several 10's up followed by 10's down, rotor turbulence and lock outs, was finally drilled into the bottom landing field after only 5 minutes.

There followed two hour's silence whilst the competitors and spectators had an open competition to see who could get the best sun tan! At around 3 o'clock an advancing line of cloud heralded a change in the conditions. The wind dropped to about 0-20mph and the thermal activity began to feel more predictable.

Bob Calvert and John Bridge were quickly in the air and after twenty minutes and one earlier attempt, John went over the back and off up the valley towards Arncliffe.

The competition was now well and truly on, with first blood to Lancashire.

There followed an exciting twenty minutes as Robert Bailey and Bob Calvert had a private 1 on 1, each trying to tempt away or leave without the other. It ended when Bob Calvert got sunk out too far back over the ridge and had to land down, while Bailey managed a top landing, relaunching some minutes later.

By now most of the competitors had launched and were making their way northwards along the ridge towards Buckden.

Ian Rawson and myself were next to go followed by the returning Bob Calvert who had derigged, carried up and re-rigged in the time it took us to get ready and walk to the edge.

By now the larger group were working the northerly end of the ridge leaving just the three of us at the south end near take-off. Our attempts to join the main group were thwarted by fierce sink.

Each time I looked towards the main group there were less and less of them, until eventually I could only see one glider in the sky at that end of the ridge. The others had gone.

Meanwhile Bob Calvert had hooked a good looking thermal over Kettlewell and was on his way. I quickly joined him, but lost it only to find a better one on my return which took me away from the ridge.

Over the back and into Littondale I could see Bob was now scratching about on the lower slopes of Cow Close Fell. I was more fortunate and found good lift to 3,700ft. ASL and was able to leave him as I circled back over Fountains Fell. My good fortune was short-lived and I soon found myself on the ground 7½ miles from take-off. Pete Anstey had a similar flight and landed two miles up the road to the north. Bob Calvert had managed to scratch a little lift out of Cow Close Fell to land half a mile further north still. Richard Brown and John North, together with the Yorkshire team reserve John Stirk, had made it a little further into Ribblesdale ten miles from take-off.

As we all returned to the base at Windbank news came through that John Bridge had made it to Morecambe, a distance of 33 miles. There was jubilation in the Lancashire camp and a now happy Bob Calvert insisted it was in the bag.

Still no word from Bailey, Harrison, Silvester Hargreaves or Bowman despite repeated phone calls to Robert's home. Then the news began to trickle through. Bob Harrison and Mark Silvester had landed at or near Windermere in the Lake District. Unbelievable! But what of the other three? John Bowman had taken a more northerly course and landed 11½ miles from take-off. Finally the news came through. Bailey down 59 miles from take-off at Holmrook near Seascale on the Lake District coast, and Peter Hargreaves last seen over Coniston Water, as Robert climbed back to 7,500ft. for the last 15 miles of his flight. Had Peter gone further or was he down?

It was not until the next day that the full story of this amazing flight came to light.

Peter, Robert and Mark had joined up after about one hour into the flight and flown together for most of their respective flights working between 5,000 and 7,400ft. ASL and taking turns at being top of the stack. Mark was first to leave the group. He landed at Flixton on the shores of Lake Windermere, 39.5 miles from T.O. Peter and Robert continued until Peter got very low over Coniston Water where Robert left him and climbed back to over 7,000ft. That was the last Robert saw of him.

Fortunately, Peter found another excellent thermal which returned him to 7,400ft. and enabled him to continue his flight until he finally ran out of land at St. Bees point, four hours and ten minutes and 68.8 miles from take-off.

Meanwhile Bob Harrison in a superb lone effort had landed just beyond Windermere 41 miles from take-off.

With everyone accounted for and back safely there was time for map stretching and competition analysis and the presentation of the Yorkshire Eagle Trophy to the Yorkshire team.

Two things were abundantly clear. Firstly that Yorkshire hang gliding had demonstrated its superiority in cross-country competition and secondly that the leadership of Robert Bailey had played a major part in determining the success of the team.

*Subject to ratification

THE TEAMS

YORKSHIRE

Name	Glider	Distance
Robert Bailey (Capt.)	Atlas	59.2
Peter Hargreaves	Cherokee	68.8
Bob Harrison	Cyclone	41.6
Mark Silvester	Cutlass	39.5
Pete Anstey	Atlas	7.0
Jim Brown	Atlas	7.5
John Bowman	Cyclone	11.5
Trevor Birkbeck	Comanche	1.8

LANCASHIRE

Name	Glider	Distance
Bob Calvert (Capt.)	Atlas	6.5
John Bridge	Atlas	33.0
John North	Atlas	10.0
Richard Brown	Storm	10.0
Geoff Snape	Atlas	1.0
Ian Rawson	Atlas	1.0
John Hudson (absent)	—	—
Hughie McGovern	—	—

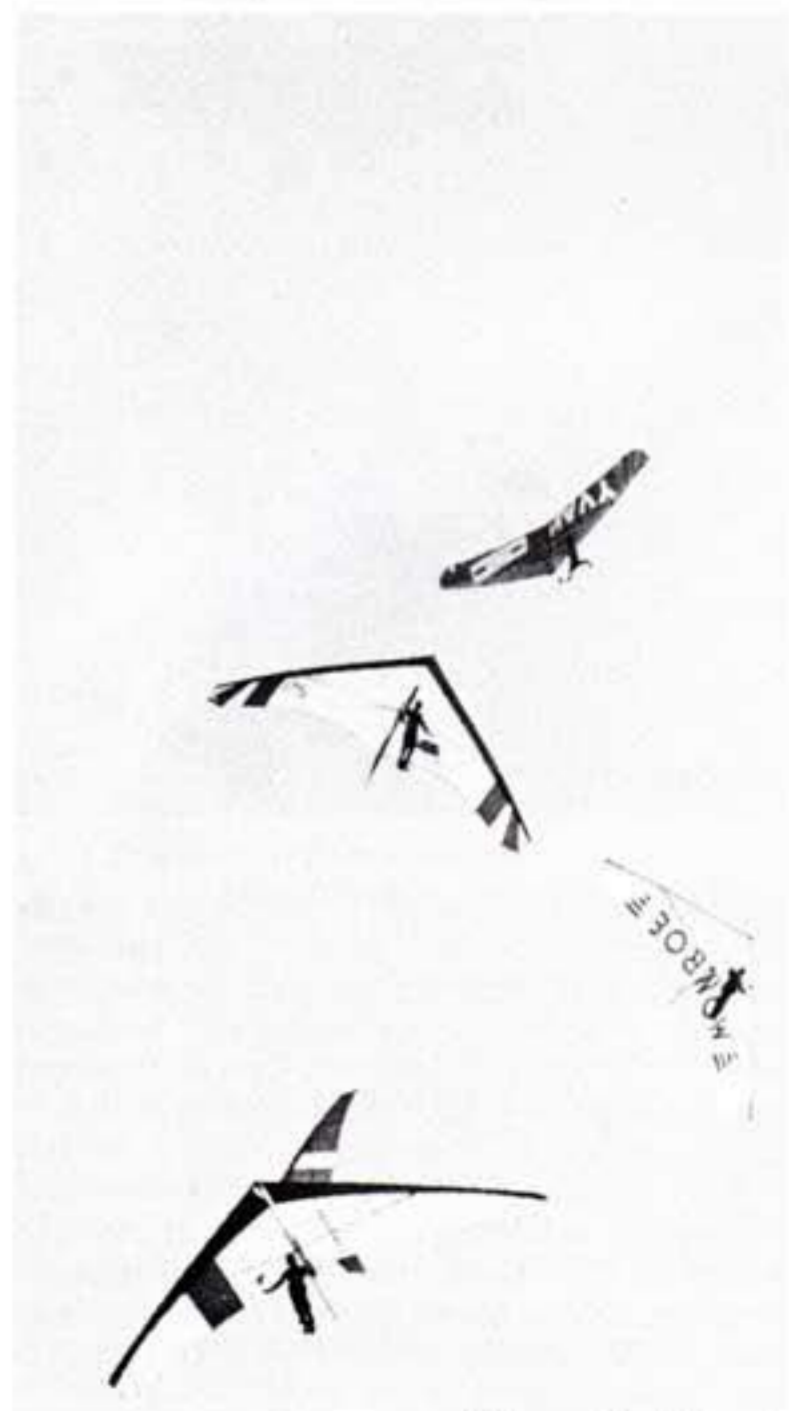


Photo: Mark Junak.

54 miles, Bob Calvert

The third weekend in May produced possibly the best hang gliding XC conditions ever experienced in England. Saturday May 17th was the day that I used up all of this year's bad luck and by precision flying steered around all the thermals for a devastating 6.5 miles.

Sunday's conditions were very similar to Saturday, very dry ground, stable high pressure to the east and a lapse rate of 3.5°/1,000ft. The freezing level was 7,000ft.

Eventually arriving at Dodd Fell (2,000ft. ASL), after the usual chase around the Dales, I took off at 1.30pm into the usual valley crosswind. The third thermal to come along was broken up, and only when I cleared 3,500ft. did it smooth out and conditions looked so ideal that I chose not to wait for John Hudson and continued to climb to 4,500ft. Downwind of Dodd there are 1,000ft. ridges every three miles as far as the M6, and with a moderate tailwind I cruised back to the motorway, never needing the ridges but glad of their presence. Beyond the M6 was high cumulus and soon I was up at 7,000ft. and planning to head north across the Lakes.

So often when the wind is strong in the Pennines the Lakes have hardly any wind. I got first-hand experience of this phenomena as my drift almost ceased west of the M6. Turning north, I was flying into a light North Easterly, and it took one and a half hours to fly up half the length of Windermere. I amused myself by outclimbing an SD3 sailplane (outbound from Parlick).

CONGRATULATIONS

To Bob Bailey and the victorious Yorkshire Team, especially to Peter Hargreaves on his 68.8 mile flight. Also to John Bridge for being the best from Lancashire.



Priceless archive photo of early Calvert landing a friend. Photo: Graham Fotherby.

The sea breeze front was five miles east and marked by 'fingers' hanging out of the cumulus. The almost stationary front was leaving a large area of shadow between itself and Windermere, and giving me no choice but to stay east of Windermere and rely on thermals.

The best thermal of the day then gave me an average climb of 1,000ft./min up to 500ft. below cloud. I pulled out then and set off for the sea breeze. After gliding for what felt like hours into wind, ignoring any lift below 400ft./min I contacted the sea breeze, pulled the bar in, and flew up the Helvlyn range over Keswick and over the top of Skiddaw without doing a 360. The highlight of the flight was trying to extract orange juice from the bottle strapped to the A-frame. Eventually I lifted it up the upright, turned it sideways and tipped up the bottle. Very effective but messy!

North of Skiddaw at 6pm the sea breeze front over the lowlands had moved inland and so I turned east of north to follow it. The front then decayed so I turned west to glide downwind. After two miles the sea breeze began to form again so I

turned east and glided downwind where I picked up a thermal and drifted west. The thermal decayed and I set off north hoping for one thermal to jump Solway Firth and land in Scotland.

It never happened and at 6.30pm I landed at Mealsgate just in time for Yorkshire Pudding, Roast Beef, Apple Pie and cream, etc.

After lots of hassles (including racing up and down the motorway in a police car in the early hours of the morning) John Hudson picked me up and by dawn we were home. Thanks John.

Conclusions:

1. The sea breeze always seems to converge North West/North East.
2. Never get on the coastal side of the seabreeze.
3. Take a straw for the orange juice.
4. A 300km glider flight recently failed due to flying the wrong side of the sea breeze front, as have countless hang glider flights. The sea breeze front offers superb XC potential. Learn to understand it and use it!
5. I don't think I will ever break the record.

National Hang Gliding League, 1980, positions after 4 competitions, 15 tasks, dropping 2 results.
Bob Harrison's competition, Wensleydale, May 24-26. 5 tasks, including one XC, completed.

Pos.	Name	Glider	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total	Was
1	B. Calvert	Atlas	85	89	64	65	66	72	97	85	158	56	96	70	127	85	99	1194	(2)
2	R. Bailey	Atlas	80	80	48	57	91	59	94	80	177	65	67	100	48	94	71	1115	(1)
3	G. Slater	Atlas	95	64	48	78	82	95	80	80	0	54	77	80	93	75	75	1028	(7=)
4	B. England	Atlas	60	44	48	62	64	82	70	90	144	74	83	65	38	84	80	1008	(6)
5	J. Carr	Fledge 2	70	73	80	83	95	56	45	82	10	82	70	100	36	77	80	1003	(7=)
6	G. Hobson	Atlas	100	80	84	66	93	72	83	60	93	62	55	85	52	65	53	998	(3)
7	G. Ball	Hilander	75	66	48	59	64	68	56	82	129	58	60	65	122	65	54	969	(11)
8	B. Martin	Cyclone	60	91	100	62	90	80	45	73	0	71	61	60	29	96	48	957	(9)
9	M. Silvester	Cutlass	85	61	84	82	50	57	66	66	18	68	84	100	51	55	75	934	(13)
10=	K. Reynolds	Sigma	95	73	0	87	49	62	67	65	138	59	40	20	47	61	45	888	(5)
10=	P. Harvey	Cyclone	64	47	72	67	16	0	75	90	168	65	47	35	38	70	50	888	(10)
12	L. Cruse	Comanche	100	77	80	58	64	87	66	95	0	85	0	40	35	53	45	885	(4)
13	J. Binns	Cyclone	75	59	80	82	80	79	52	79	0	61	40	0	47	59	88	881	(12)
14	Jmy Fack	Atlas	70	66	64	42	62	56	60	60	0	71	84	65	32	40	60	800	(19)
15	T. Birkbeck	Comanche	70	63	48	71	96	51	80	35	0	65	30	100	36	39	45	799	(14)
16	J. Bridge	Atlas	60	100	32	77	83	62	30	50	0	71	40	35	40	69	74	791	(16)
17	B. Harrison	Cyclone	70	57	80	75	64	64	50	32	0	0	55	80	42	49	54	772	(22)
18	G. Baird	Atlas	75	50	80	43	0	48	80	52	0	50	55	55	36	79	68	771	(26)
19	J. Fennell	Atlas	75	33	60	39	55	64	89	90	0	55	40	50	42	35	75	769	(17)
20	T. Hughes	Cherokee	49	65	60	80	96	56	35	0	0	37	55	100	37	91	5	766	(28)
21	S. Fairgrieve	Cyclone	75	66	48	0	80	48	65	0	128	62	55	45	36	45	5	758	(15)
22	J. Hudson	S/Scorp	30	53	84	57	48	64	50	76	0	62	15	45	52	94	40	755	(21)
23	R. Brown	Storm	30	73	16	49	79	69	35	47	0	71	79	45	37	87	30	731	(27)
24	M. Southall	Storm	45	73	48	46	69	89	35	80	0	59	31	50	46	53	35	728	(20)
25	T. Beresford	Cherokee	45	16	100	60	44	24	80	50	0	66	97	30	38	45	39	718	(24=)
26	R. Black	Cherokee	60	59	60	50	0	75	20	35	0	68	70	50	23	65	77	712	(34)
27	J. North	Atlas	60	78	32	62	48	64	45	30	0	0	43	80	30	60	67	699	(38)
28	A. Hill	Lazor	75	41	64	55	34	4	80	80	0	47	95	35	30	15	45	696	(24=)
29	R. Richards	S/Scorp	49	35	60	64	26	0	77	50	0	81	38	35	20	75	73	683	(31)
30	M. Maher	Sigma	55	53	64	46	45	48	80	50	0	0	0	65	32	65	75	678	(32)
31	R. Freeman	Wills XC	72	60	24	63	48	83	35	20	0	56	35	50	23	40	65	654	(29)
32	A. Doubtfire	Comanche	45	48	48	78	0	53	52	35	0	67	18	85	34	35	38	636	(35=)
33	R. Ware	Sigma	30	74	80	50	74	73	45	60	0	0	40	0	30	45	15	616	(23)
34	A. Weeks	Comanche	65	53	0	53	58	32	50	54	0	72	30	60	20	31	30	608	(33)
35	M. Atkinson	Storm	75	0	80	34	64	72	0	50	0	47	39	65	28	45	0	599	(37)
36	K. Cockroft	Vulcan	45	41	16	—	—	—	—	15	155	61	81	65	0	51	60	590	(41)
37	G. Leason	Storm	55	44	48	42	32	59	57	65	0	24	15	50	31	20	56	583	(35=)
38	G. Snape	Hilander	15	77	32	45	64	32	0	49	0	68	23	55	41	20	38	559	(39)
39	C. Johnson	Vulcan	30	64	48	88	80	48	50	80	0	68	—	—	—	—	—	556	(18)
40	P. Day	Sigma	15	—	—	44	87	0	15	15	0	45	49	80	36	75	80	541	(48)
41	D. Jones	Storm	56	32	48	53	16	0	65	50	0	57	0	35	0	45	75	532	(40)
42	C. Lark	Vulcan	75	47	45	47	0	56	0	35	0	0	54	15	36	45	63	518	(44)
43	B. Edmeades	Storm	40	30	0	46	16	32	60	50	0	0	25	60	39	45	35	478	(45)
44	B. Milton	Storm	15	62	36	44	0	48	20	48	0	44	25	5	19	96	15	477	(43)
45	D. Garrison	S/Scorp	50	66	68	46	56	56	65	50	0	0	—	—	—	—	—	451	(30)
46	R. Wates	Cherokee	60	67	32	73	32	56	—	—	—	—	—	—	—	—	—	320	(42)
47	R. Iddon	Storm	—	—	—	—	—	—	—	—	—	—	80	85	25	60	65	315	(49)
48	D. Thomas	Storm	35	52	80	—	—	—	0	45	0	51	—	—	—	—	—	263	(46)
49	J. Sharpe	Cyclone	0	34	48	60	16	72	—	—	—	—	—	—	—	—	—	230	(47)
50	John Fack	Not flown yet because of injured arm,																	

Where is powered hang gliding going?

What has happened to the concept that 'power is needed in the flat areas because there are no hills to launch from?' Inherent in that concept was the assertion that the motor was only a means of gaining several thousand feet, after which it would be shut off so that the pilot could enjoy all the joys experienced by the mountain-launched pilot. Has this in fact happened except in isolated cases? Are pilots using motors to replace ridges and mountains?

Two years ago, most powered hang gliders were foot-launched and foot-landed. In 1980, over 95% have a landing gear and are virtually incapable of foot-launch. The fact is, they are no longer hang gliders. Instead they are small, inexpensive, light-weight airplanes.

It's only a matter of time before powered hang gliders with landing gear will be forced into the area now occupied by experimental airplanes. When this happens all the licensing requirements for pilot and 'aircraft' will apply. It is amazing that this hasn't occurred already.

Too inefficient

Now for the next question. With the addition of motors and landing gear, is it possible for even the high performance machines, such as the Fledge and the Mitchell Wing, to retain any degree of cross-country efficiency and performance? Or, has the additional drag and weight rendered them too inefficient to be practical as a cross-country machine?

Motorless hang glider pilots obtain rewards, excitement, and joy in four basic ways: (1) Flying in an informal manner with several or even dozens of other pilots at an elevated launch area. (2) Flying in formal meets, competitions or contests. (3) Flying cross-country just for the fun and thrill of it and (4) Flying in search of local, state, or world records.

Are any of these categories of fun and excitement now open to powered hang glider pilots? The answer, in a practical sense, has to be no. Why not? Except at 'fly-ins' and other get-togethers (Wellesbourne) the normal flying of powered pilots simply does not bring them



together in one place at one time. There are no formal competitions similar to regional and national contests. Few if any articles have been written about 'shutting off the motor and soaring cross-country for 30 or 40 miles'. There are no state, national, or world record categories for motorised hang gliders.

Boring Boring

If powered hang gliding is going to reach even a fraction of its true potential, some very vital changes are going to be required. First of all, the pilot-enthusiasts who own powered hang gliders are going to have to recognise that simply boring holes through the sky in random fashion is not enough. After a short while, the boring gets boring. Once this recognition is achieved, the door will open to the vital changes required. It must also be recognised that spot landings, bomb drops, most beautiful new ship, and grand champion categories at fly-ins are truly uninteresting stuff in comparison with 'contests'. 'Fly-ins' are great. But unless formal competition is introduced, in a meaningful way, the real potential for fun and excitement will be missing. What should the powered hang glider fraternity do?

Here are some recommendations in order of importance:

1. Gather together all the representatives of each interested nation's powered hang glider groups and write an F.A.I. code for national and world records for powered hang gliders.
2. Hold formal regional and national contests at least once yearly.
3. Organise and conduct special annual contests. (Examples: the Owens Valley Cross-country Classic and the Great Race at Lookout Mountain, Tennessee.)

Possible Tasks

What kinds of tasks can be used for motorised hang gliders for records and contests? Listed below are some of the possibilities:

1. Cross-country is the most exciting. During the contest, remove the air-restart capability, and give each pilot exactly the same amount of fuel which would be used to achieve a 'best' altitude before beginning a cross-country flight. The course could be goal-and-return, straight distance, or around designated pylons. The scoring could be based on duration or total distance covered. In mountainous areas, the task rule could be to 'power' up to an observers site on a mountain top, and fly within 20ft. of a given point and shut off the engine and begin the soaring task. Eligibility could be based on 'standard empty weight' of the glider, or else on maximum wing span, or possibly on engine displacement.
2. Altitude gain, using a barograph, within a given amount of time. This would test a pilot's knowledge of lift/thermal areas as well as the climb rate of his machine.
3. Maximum climb from standing start within a short specified horizontal distance (i.e. 40 yards). Light-weight ribbons could be erected and raised higher for each heat as is done in high jump contests in track and field events. The shortest possible landing distance to a stop, could also be conducted after flying over a ribbon on final approach.

Crossroads

I would discourage all types of racing while using the engine. This would lead in totally undesired directions, and ultimately to streamlined enclosed cockpits. The final result would be a duplicating of midget airplane racing which already exists.

We've come to a crossroad in motorised hang gliding. New craft are appearing on a monthly basis. The interested pilot is bound to be confused about performance claims. Contests and competitions are needed in order to achieve some reasonable indications of true performance capabilities. A basic decision has to be made as to whether we are intent on designing an affordable light-weight airplane, as a substitute for the airplane we can't afford, or whether we are interested in powered ultralights as a new flying sport. Do we want cheap convenient transportation through the sky, or do we want a sport which will provide the fun, excitement, and thrill of competition? The interesting thing about these choices is that no matter which choice is made, everybody (the designers, manufacturers, pilots, etc.) will benefit if there are formal contests and official record categories.

GEORGE WORTHINGTON

1980 DIARY

July

4/6, Scottish Open, Glenshee. Details — Simon Ogston, 0382-65437.

7/15, Owens Valley XC, Bishop, California, British team of 4.

24/27, Grouse Mountain World Invitational Championships, Vancouver BC. British team of 4, plus gift places of 4.

19/20, 26/27, Ulster XC, Prizes by Protec, £50 to winner, £100 if winner makes more than 10 miles. 19/23 Practice.

23/27, Competition, Seventh World Delta Glider Championships. PO Box 60, Cyprus Gardens, Florida, 33880 USA. Contact Richie Henson.

August

2/3, Steyning Open, Sussex, open to intermediate and advanced pilots. Entry fee £3, organiser Jeannie Knight.

3/11, Japan Dry Run for 1981 World Championships, Derek Evans and Jeremy Fack to go on recce, sponsored by Celtic Line.

9/11, Fifth League, Bristol and Stroud area, organiser Colin Lark.

13/20, Understanding weather. Course at Met. Dept., Edinburgh University. £70.

16/24, Bleriot Cup, proposed dates still to be agreed, Anglo-French team XC, teams of 8.

September

5/7, Clubmans Mere, 5 events, open to everyone, defending Club champions are Northumbria HGC. Entry fee £5, camping included, organiser Bob Mackay.

12/14, League Final, venue still not decided.

October

11/19, American Cup team championships, Tennessee/Georgia, USA.

17/19, Army, Jt. Service championships.

Power lines can make your eyes water!

There have been two incidents recently of pilots hitting power lines. In neither case, luckily, was there a death. Mick Maher, flying a Sigma, now joins the august company of fellow Rat-Pack member Keith Reynolds, often greeted on the hill by ringing noises and murmurs of "Hello, Buzby!". However amusing Mick looks, it could have been, in slightly different circumstances, a tragedy. He was flying in the first task of the Dales League, down from an 850ft. hill into a restricted valley and a landing area that attracted no compliments from the competing pilots. Setting up for the target, Mick didn't see the power lines until about a half second before he hit them. His flying wires were immediately burnt through, the kite 'clapped hands' and Mick was left dangling on one side of the wire, supported by his harness still attached to the kite on the other side. It saved him from a nasty fall.

It took about an hour, with other competitors still flying over the by now clearly marked power lines, to get Mick down. In the event, his marriage prospects were almost severely damaged by the way we roped him off the wire. However, his harness was undamaged and he was able — in Chief Marshall Derek Evans' opinion — to change gliders and continue with the League.

There was little damage to the wires, as a fuse blew immediately Mick hit them. When the fuse was replaced, electricity flowed again. Mick's glider had to be re-built, though the sail was undamaged. Mick wasn't the only lucky one. Because of his accident, there's the strong possibility that, the following weekend, someone who saw Mick hit was able to save the life of another pilot.

Kenneth Dodd was flying a Midas Super E on Sunday, June 1st, at Staerough Hill, the last flying site on the Pennine Way. It takes a SW wind, that day roughly 16-18mph, and it's a fairly new site. Ken, who's about 22 years old, single, a professional photographer with 18 months flying experience, was trying to land in a tight field sloping

away slightly from 11,000 volt power cables. He hit the cables, leaving himself with one wing on them, the other on the ground.

Paul Quin, an outdoor education instructor and flyer, cut him down from his harness and dragged him clear. Ken was foaming at the mouth and having convulsions. After a while, he suddenly jumped up, bellowed for three seconds, and then became lucid. He was taken to hospital with entry burns to his hands and feet, and one shoe totally blown off. His condition was described later as comfortable.

Paul Quin later described how, and more particularly, WHY, he'd taken the action he had, which may have saved Ken's life. . .

"When Ken hit the power cables, most of his kite had already passed over them. But the tip of the left L/E caught the cables and there was an almighty bang, followed by sparks, flashes and buzzing. The kite spun left and came to rest with the left L/E caught in the wires and the right L/E on the ground.

"We ran across to the kite and people were shouting "Don't touch him!". Ken was hanging in the bent A-frame in the prone position, and I could see that he was unconscious. He had blood and foam at his mouth. I realised he was in a very bad way and his heart could have stopped at any time. Hanging in his harness under tension, we could have done absolutely nothing in the way of mouth-to-mouth, or heart massage. I got a Stanley knife from the car and slashed through all the suspension straps of the harness. Ken fell about a foot to the ground. I picked him up by his harness and dragged him clear of the A-frame. A friend then helped me drag him clear of the kite. Although I did not know for sure if the power was on or off, I made my decision to take the risk based on my extensive first-aid experience, fearing that Ken could have died if we had done nothing.

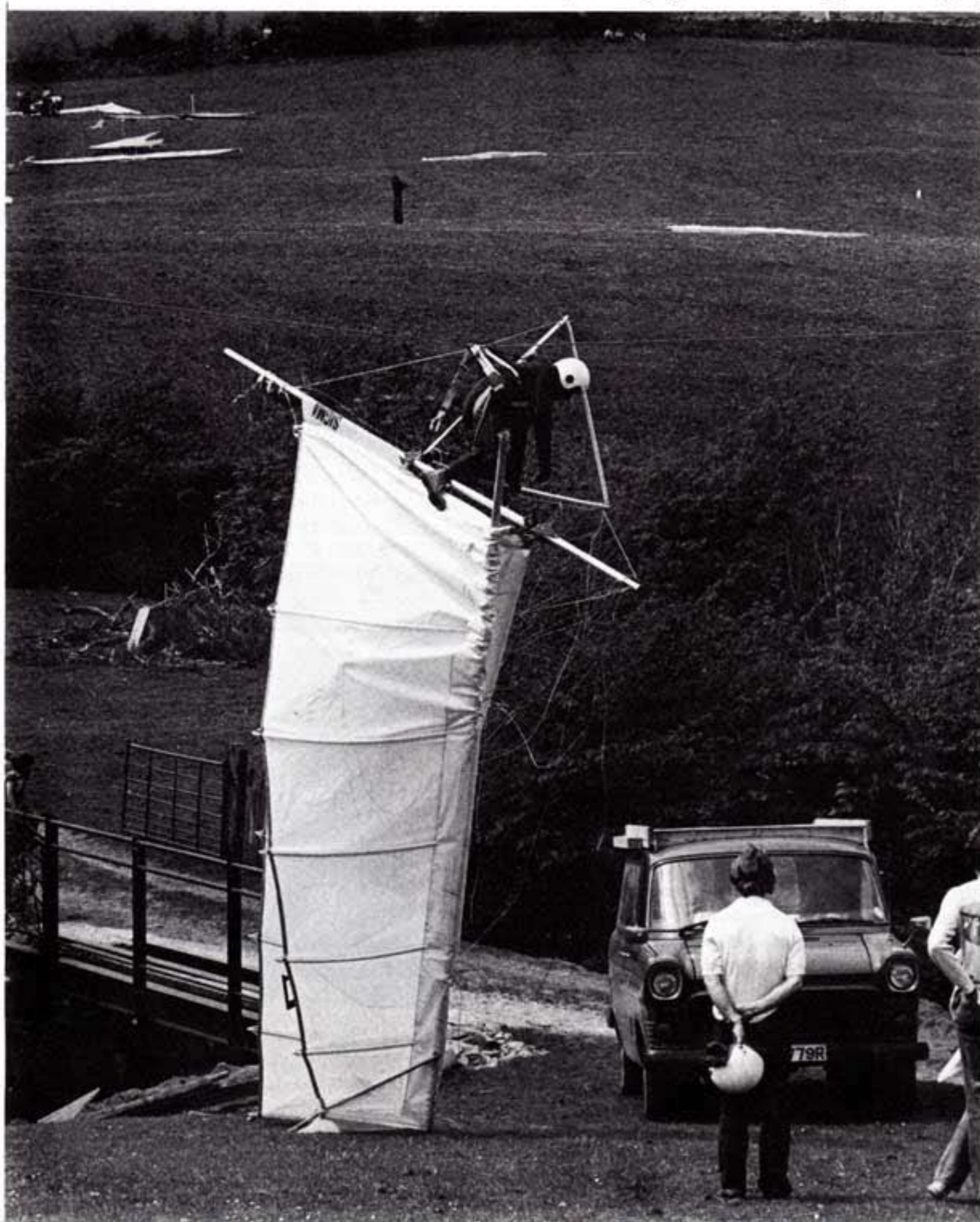
"However, I must say that one of the cables Ken had hit was on the ground, and I remembered the comments made to Mick Maher following his collision with similar cables at the Dales League, which I witnessed. The Electricity Board had told him that as soon as two cables touch, the power goes off! These two things could have subconsciously led me to believe he was not 'live', but I can't honestly remember thinking about it at the time.

"If Ken had been unharmed I wouldn't have touched him. But under the circumstances I took the risk, rightly or wrongly. Fortunately, his heart did not stop, and he was taken to hospital after regaining consciousness, in deep shock, and with severe burns on his hands and feet.

"Ken is extremely lucky to be alive. The whole incident was very traumatic and frightening; 11,000 volts is an awful lot of power, so please don't fly anywhere near power cables. They are innocently quiet and seemingly harmless until something hits them."

Paul Quin

Editor's Comment: Paul took a terrible risk rescuing Ken, and I'm not competent to say he was right. It was also very brave. If anyone can comment on what to do if you hit a power line, with advice for any number of circumstances, I'd be glad to publish it. But I want comment from people who know what they're talking about, rather than the "don't touch him under any circumstances" school. Clearly, there are some circumstances when it is possible. What needs saying as early as possible is, what circumstances?



Back in the old days, hang glider pilots were a different breed. There weren't many of them, only a few dozen, so they were close. They flew gliders made of bamboo and rope and plastic sheeting. Some contraptions had no place to hook up a harness — you just held on, weight-shifting between stall and divergency. California pilots in particular had a disdain for helmets or shoes. With the stage set like that, spectators got to see some pretty amazing acts in the sky. I know a pilot who descended 4,000ft. with a ripped plastic sail; another who somehow held his fractured control bar together with his hands long enough to frap into the side of the mountain he'd intended to fly away from; another who ate a bit of Orange Sunshine and launched at night with no harness into a cloud. . . They all lived, despite the chances they took.

The sport is much safer now, of course. Gliders are load-tested and test-flown by the factories, certified by a national organisation, and harnesses are much more comfortable and nearly up to parachute harness strengths. The new machines perform so much better and are so much easier to fly that they resemble their ancestors in the same way a Mustang resembles a Model T. Pilot attitudes have changed, too. Most now have jobs and families and a sincere wish to avoid death or injury. "You can't fly with a busted arm," says a friend. "You do something wrong, make a bad decision, and you spend the next few months on the ground watching your buddies fly." If his attitude seems thoughtful or conservative it is also representative of the new breed, who learned to fly on better machines, in more crowded skies.

But a few of the originals, the goforit boys, sky-surfing, "I bet I can do a loop," pot-partying, flat-spinning, hard-drinkin' womanizing home-grown philosophizing self-taught artist musicians endure. They still go for it in the White Mountains, sister range to the Sierra Nevada, lying west across the Owens Valley. And 'it' is a hell of a long way, the distance record for self-launched powerless flight, the 100 mile mark. Other records can be picked up along the way, the altitude gain record, the out-and-return record and so on. A decent flight for one of these good ol' boys might be a waltz of sixty or seventy miles northeast along the rugged range, with upbeats to sixteen thousand feet above sea level and one, two, three down to a few hundred feet off the barren valley floor. This circular boxstep, accompanied by temperature changes of sixty degrees or more, is percussed by thirty mile an hour wind changes and sudden reversals. If it sounds bouncy, it is. If it sounds scary, it is. Most pilots won't fly from Cerro Gordo when it's cracking. Cerro Gordo, 'fat mountain'. Lots of weird things have happened at Scareyergordoff. Many of the heavy-duty pilots who flew for competition or for fun there last year won't go back again, they said. One will never leave.

Both the Whites and the Sierras rise vertically for more than a mile from the dry baked floor of the Owens Valley. When you fly into this cauldron of potential clear air turbulence (CAT to the airline pilots), on a hang glider, your first concern is to gain enough altitude to reach the valley and a flat place to land. At the Cerro Gordo launch, you won't make it if there's sink and a headwind. You'll be forced to land in 'the pits' in the broken foothills. If you can do that without hurting yourself or your kite you'll either have to launch again from one of the nasty little hills or shoulder the thing and hike. The Gunther launchsite is more forgiving, and was used this year for the official contests. If you can get up from either launchsite you'll feel better (at 15,000ft. you'll probably feel inebriated) about having a flat place to land within glide range,

1979 Bishop XC Classic

but you'll be quartering downwind across desolation row, with little idea of where it will all end, or what sort of wind and weather await the landing, which inevitably approaches.

Because of the conditions at Scareyergordoff, which only the mealy-mouthed would call adverse, hang glider pilots carry strange apparatus for flying there. The heat on the mid-afternoon valley floor will be a solid hundred degrees, but the pilots want to fly up around fifteen grand, so they put on heavy thermal underwear, windproof jackets and thick gloves. They carry signal mirrors, snakebite kits, quick-energy foods, smoke, flares and streamers for marking groundwind speed and direction, first aid gear, compasses, windmeters, altimeters, radios and variometers. The truly serious about record setting also carry a large instrument called a barograph, used for authenticating altitudes reached and time spent in the air, a supposedly uncheatable gadget.

"But if you go down in the desert," says Paige Pfeiffer, current women's record holder for distance and altitude, "you've got to take all your clothes off. There's no shade, so you just lie down under your glider and wait for somebody to find you. I always wear my bikini. Being up in the air real high is the only good thing about flying there. You can't believe how hot it is on the ground. I hate it."

Just being on the launch can sometimes be worse than slow cooking on the desert floor. Dave Beardslee told of waiting with two other ready pilots on the Scareyergordoff launch when they began to hear approaching thunder. Shortly the noise proved to be a rasty thermal, turning in on itself so hard it sounded, said Beardslee, ". . . like a pickup loaded with sheet metal coming up the grade to the launch." The Beard's glider lay spreadwinged on the round, so he sat on its nose. Paige Pfeiffer's glider had a noseboom, so she and her mother, a large lady, sat on that. Gary Patmor and Jeff Scott and two others held on to Gary's glider. When the thermal, if that was the right name for it, got to the Scareyergordoff launch it broke both wings on Patmor's glider. It broke both wings on Paige's glider, too, and catapulted her distraught mother off the Mosquito's noseboom and nearly off the launch. She might have soared, because in a moment it lifted Gary's glider with four men holding it, even with two broken wings. "You better get off," shouted 6ft. 6in. Jeff Scott, "Cause I'm off the ground!". Jeff let go, and both broken gliders rose and embraced. ". . . And began to waltz," Beardslee recounted. A moment after that an empty harness and helmet got up as though they wanted to cut in. When Patmor's glider sat down after the dance, it came down on the Pfeiffer's new pickup, good and hard. It destroyed the Beard's initiative to fly cross-country then. He dismantled his Alpine as soon as it calmed. "I thought I'd come back some nicer day," he allowed.

Page Pfeiffer's husband Rich had launched with wildman Jerry Katz moments before the killer thermal arrived, but the boys still got a piece of the action. They gained 4,000ft. in five minutes, respectable for a powered airplane, but maybe a mite faster than a hang glider needs to go up. The power that gave them so much lift made Katz so airsick he landed at the first town he came to, Lone Pine. Undaunted, Rich Pfeiffer continued for sixty miles. On the way he saw a hawk working close to a

ridge. As Rich watched, hoping to learn something from the bird, a gust smashed the hawk into the mountainside and killed it.

What can happen to a hawk can also happen to a hang glider pilot. White Mountain Canyon is particularly feared by flyers, as they must cross its mouth to continue downrange. The canyon's maw seems to inhale with violent turbulence and sink. Apparently it sucked Brad LaFarr of Seattle back into a place walled with rock, where he had to get up to get out. Flying close, in the raggedy heated air, he was also dashed against a rocky face. Another pilot watched it helplessly from far above. Later a helicopter retrieved Brad's body.

BRITISH TEAM MEMBERS BISHOP XC 1980



John Hudson — 35, married, one daughter, lives in Rochdale in Lancashire, director of Mainair Sports, will be flying a small Hiway Vulcan in Bishop. One of the founder members of the National League, and the second longest serving member of the BHGA Competitions Committee, after Johnny Carr. Made a silver C distance in the fabulous Dales flying of May, 1980 (55kms), but has also made other notable flights, including 4,000 feet gain in wave with Bob Calvert. His ambition is to gain a silver C, and to hold a British record of any kind. Flew in Bishop in 1979, after the Classic.

British Team. Photos, Mark Junak.



Jo Binns — 24, single lives in Princes Risborough in Buckinghamshire, flies a Chargus Cyclone 180. Entered National League, 1980. Britain's first Delta Silver, his longest flight was 38.5 miles, from Pandy in South Wales on May 16th. Won the Knock-out distance competition at Clubman's Mere in 1979. Flew as wind-dummy in Bishop competition in 1979, his ambition is to represent Britain in the 1981 World Championships.

Owens Valley, California

by W A (Pork) Roecker

A few days before, Eric Raymond, 1979 US National Champion, and Jim Handberry, a former national skydiving champ become parachute manufacturer, headed off down the spine of the Whites. Both pilots flew Fledglings, hot semi-rigid wings steered by rudders at the wingtips, generally acknowledged to be among the very best machines for cross-country work. Eric was last seen very low between some mountains. Pilot consensus that night was that if Eric wasn't dead, he was crashed somewhere back in the boondocks. What happened was that Eric managed to thermal back up out of the valley that had entrapped him. He flew about fifty miles and landed in the desert some

way from Bishop. He waited for his friends to come and pick him up. No one came. It was mighty chilly out in the desert that night, Eric said. He needed all the heavy clothes and his sailbag to keep warm. In the morning he walked and hitchhiked to a telephone. He called the police and the hospitals to tell them it was alright, to see if anyone was looking for him. No one was. Eric hitched to their campsite. It was vacant. Everyone was up flying, and they'd moved to another campsite. "Talk about go for it," complained Eric. "They didn't know if I was dead or what."

Handberry's ride that day was even wilder. Jim cruised along smartly with his Fledgling at well over 15,000 above sea level when he encountered monster sink. Later he realised it was the rotor from a wave of high winds coming over the Sierras, many miles to the west. It came down on Jim Handberry like a swatter on a fly. It ripped his hands from the control bar and pinned him against the keel of his glider for the worst drop of his life. He fell nailed up against his wing for over a mile, 5,500ft., he said, and only let him pull out when he was 200 feet off the spine. Handberry had one of his own parachutes, but it likely would have done no good to chuck it into air going down that fast. Handberry claimed he'd never been so scared, even while parachuting. He didn't think he'd fly there again. "You could see the wave clouds that day," said Eric. "I don't know why we were flying."

Brad White had a moment to wonder why he was flying there. A former national champ in rigid wing class, Brad had his glider come unglued. The Mitchell Wing is undoubtedly the fastest hang glider available. It's made from spruce and veneer, just like the real airplanes used to be. In fact it looks rather like the stabilizer off a DC-3 with rudders at the tips. It resembles those ill-fated flying wings of World War II. At any rate, Brad's wing disintegrated around him in turbulence above the launch. Brad arrived back groundside via his parachute, and pieces of the wing came down in a lot of different places.

British and Australian teams came last year to compete against the Americans. So did a few Canadians. Many of the British pilots had been on the team that decimated the Americans at the first American Cup of hang gliding, held at Lookout Mountain in Chattanooga. The British didn't care much for the Whites. Maybe it was the landscape, or the turbulence. Most British pilots said they wouldn't be coming back. The Australians and the Canadians loved the place. Sixty and seventy mile flights appealed to them, as perhaps did crossing the state line into Nevada. More than one pilot was reported to have landed near the small trailer camps lit up with neon even in the daytime. * To use the phone, of course. One pilot said this was the only place he'd ever been where you could fly fifty miles across the wilderness without seeing another glider, only to come around a mountainside to confront ten of your competitors, all vying for position in the same thermal. Former *Hang Gliding* editor Rich Grigsby found the clusters of gliders in the middle of nowhere both funny and disturbing. "Imagine having a mid-air (collision) at 12,000ft." he said.

There were no mid-air, but just about every other catastrophe that could happen did. At least three of the hot Fledgling wings encountered conditions that taxed the ability of those craft to

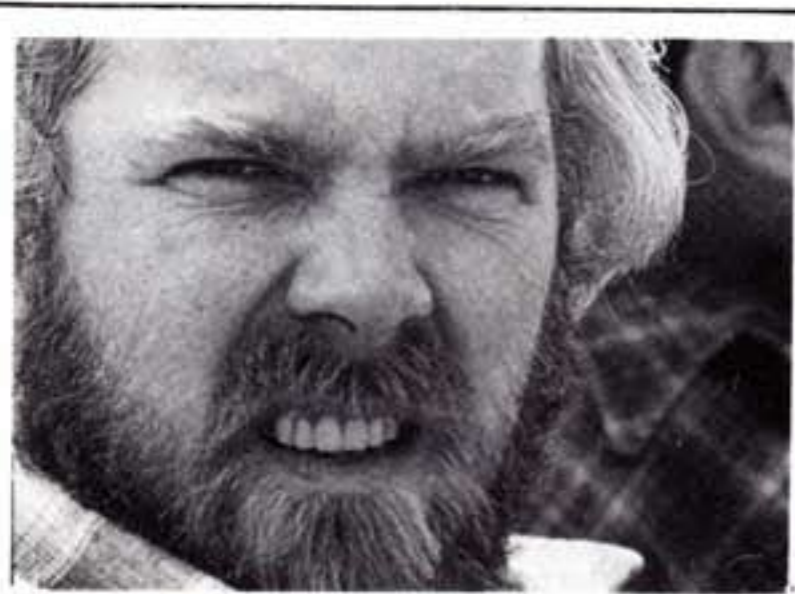


remain right side up and in one piece. A Mosquito tucked or was flipped over. The pilot threw his parachute, only to observe his own flying wires sever the shroud lines. The empty chute floated off, but the yank it gave the disabled glider righted it, and its relieved pilot made a safe landing. Competitor Jon Lindburg said that one morning during the Classic contest the pilots voted not to fly after hearing a weather report of winds to 42 knots at 18,000ft. Butch Peachy and George Worthington, the contest's founder and director, opted to go for it anyway. "Butch took off and just skied out," said Jon, "and we all said *whoa*, maybe we should fly. Then George launched, and he got drilled straight into the pits. So we all left. Butch got real high, but he couldn't go anywhere. He had to land on top of White Mountain. He had to spend the night up there at 12,000ft. I bet he froze his butt off."

Goforit spirit was probably never stronger than in the Cross Country Classic. Californians dominated the top ten finishers, but pilots from Utah, Arizona, New Mexico and Australia placed there as well. Often competitors had to land in isolation and dangerous winds on the desert floor after an exhausting high altitude flight, a risky proposition. Eric Raymond wasn't one of these. "I always took safe landing places," he complained, "but a lot of guys didn't. They'd do anything to stretch for a few more miles. There was no penalty of totalling your kite."

The drubbing administered Rich Pfeiffer's pickup by Gary Patmor's runaway glider must have served Rich inspirationally, because on Sunday, July 15th, the last day of the Classic, Pfeiffer came from behind Keith Nichols to win it. Flying with a barograph, Rich made 72 miles that day, the goal being a ranch called Katz' Farm. Consider Pfeiffer's mileages for the meet: 45, 21, 17, 17, 33, 35, 72. Not bad for a sport that less than ten years ago consisted mainly of lurching into a shallow glide down a small hill.

*Brothels, legal in some parts of Nevada. The race to Janie's at Bishop is a race to a brothel, and pilots are often cheerfully propositioned as they come in to land. Ed.



John North — 31, married, 2 kids, lives in Preston, Lancashire, one of the famous "Joiner" partnership with Richard Brown (see Italy team, news section). Joined National League in 1979, flying a Medium Atlas. His best height gain was 4,200 feet over Lookout Mountain in Tennessee when on holiday during 1978 American Cup. His ambition is to hold the UK XC record, and his other ambition, well, that's now being fulfilled in his being sent to Bishop. Let's hope he does the 100 miles he wants to do.



Keith Cockroft Captain — approximately 29, single lives near Halifax in Yorkshire. BHGA Training Officer since early 1977, retired this month. Flies a Hiway Vulcan. Founder member, National League, member BHGA Competitions Committee, went to Kossen in 1976 with national team for the World Championships. Deputy Manager, 1978 American Cup team, and Manager, 1979 British team in Bishop where he flew 56 miles without a vario. Always a brilliant pilot, has been laid-back for years, but recently (see account of 3rd League) he woke up and began fulfilling real potential. Captain, British Team, Bishop XC.

RESULTS OF 1979 XC CLASSIC

Pilot	Home	Glider
1. Rich Pfeiffer	CA	Mosquito
2. Keith Nichols	NM	Electrafloater
3. Jeff Scott	CA	Lazor
4. Larry Tudor	Utah	Mosquito
5. Steve Moyes	Australia	Moyes Mega
6. Rich Grigsby	CA	
7. Jerry Katz	CA	Lazor
7. Allen Reeter	AZ	Mosquito
8. Tom Kreyche	AZ	Mosquito
9. Tom Workman		
10. Joe Greblo	CA	Seagull

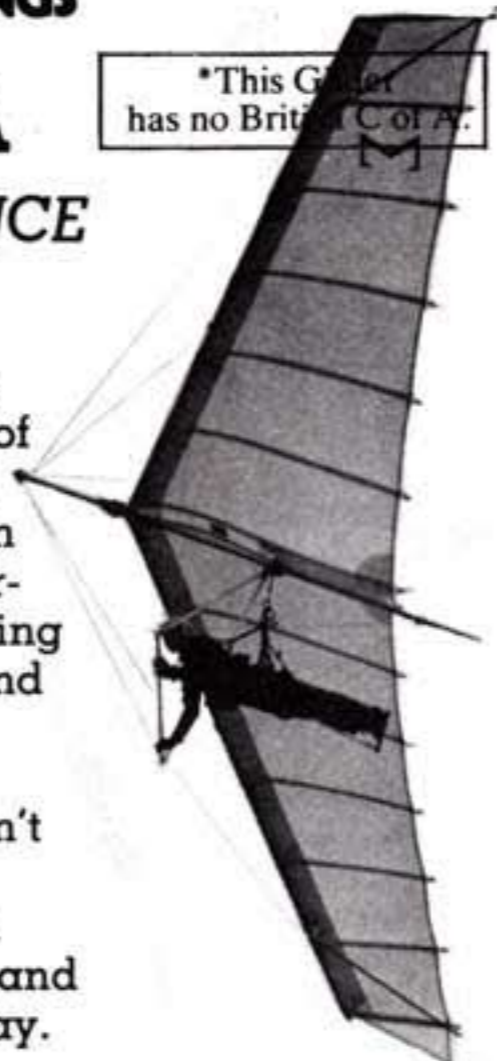
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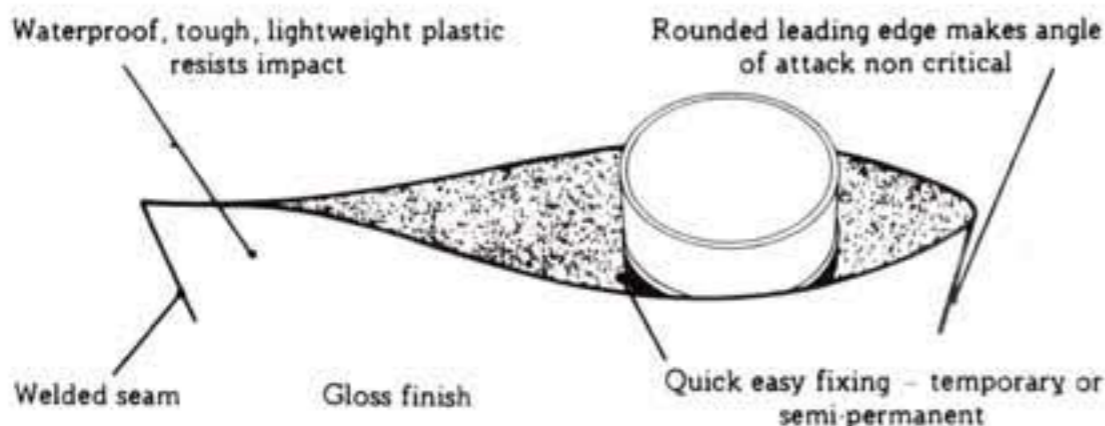
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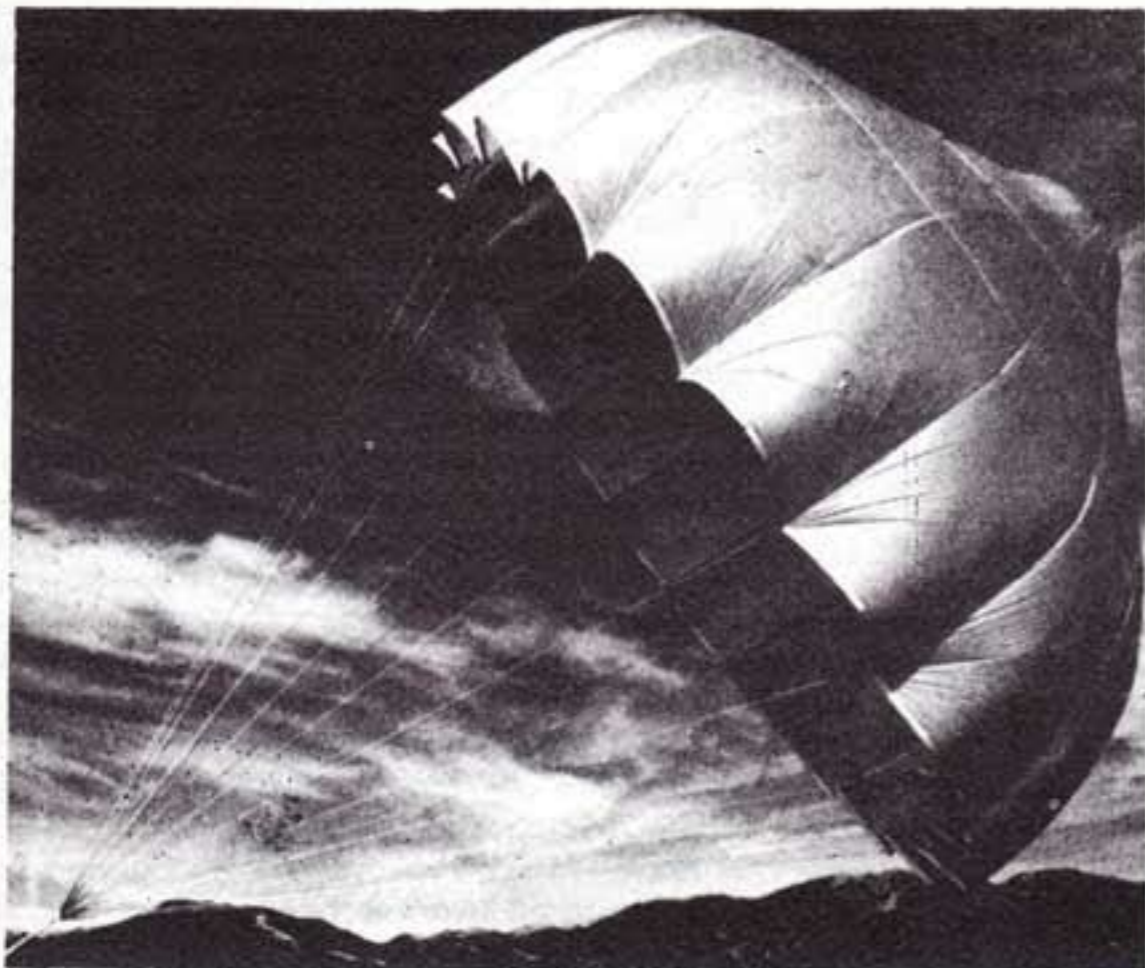
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Photo Mark Junak

Best of the Clubs

A Welsh look at the future

by Peter Harding

Merthyr Common,
Dawn, July 1986

The boys were rigging. Down in the damp valley the welsh mist was clearing like an old fire slowly gone out. You could feel the thermals. Fat Freddy was stoking up his Super C+, which was just able to support his 16 stone. The twin machine guns on the booms were fed from belts running in to the heart bolt. The big trigger ready to hand on the control frame. He carefully clipped the six grenades into their quick release holdings on the upright. No sound on the hilltop but the methodical readying of weapons, varios, ASIs, altimeters and turn and banks.

Alf, a quiet 22 year old, scanned the clearing haze towards Tredegar, where the opposing forces, he knew, must be waiting, ready to take to the air the moment the S.E. Wales Liberation Army came in sight. Always assuming of course, it was soarable over there. The wind was a bit light at Merthyr and slightly off to the south. No need to worry about that maniac with the soarmaster armed with the new HIVAC — 2,000 rounds per minute — it had shaken the kite to pieces after thirty seconds. The hero was thought to be recovering in hiding somewhere in the hills above Crickhowell.

Don, the Captain, inspected the machines laid out on the hill. A crisp row of spanking new gliders, hand-made from Japanese and American dacron, and graphite reinforced tubing. The new Typhoon, looking superb with its freshly greased Brownings ready to go, and the nickel-plated .44 magnum in a patent leather holster neatly to hand on the edge of the side wires.

"Noses!"

24 kites swing to readiness, straining at the wind (what there was of it).

"Harnesses!"

24 krabs clicked in unison.

"Zero Varios."

A warm bee hum subsided to the odd click.

"Soar!"

24 kites hit the ether together, jostling for air space. Albert Johnson, smiling through his blond hair and thermal spotting glasses, flew straight up and down the ridge, as usual, patting his parachute and nodding blandly at passing wingtips.

"Thermal at will!"

A big fellow was working itself up off Troedyrhiw. Wally hit it first but bottled out after three 360s. His Grasshopper shivered in the turbulence and he flew down to Dixies, shaking, as was his way. To Albert, this mother was a dark crimson in his glasses. He hammered into it in his Dragon, snout twitching in the 16 up. Soon all remaining kites were swimming round clockwise, anti-clockwise, S-turning and twitching in the lift. The vario noise was deafening, blanketing out all sound in the valley.

As Albert hit 4 grand Don opened up with the morse light on the hill and flashed out "XC!"

As one man, the kites turned downwind — noses and snouts lined up in a charge towards Tredegar. Over Bedlinog they executed the customary gun checks, scaring the pants off the school down there. One student, aspiring to the heights of Albert, winced and said "Jeez, I wish I could shoot like

that". He hit the ground as a dozen stray cannonshells from the notorious Fat Freddy kicked up the grass around his feet.

By Pontlottyn the problems of hang warfare were once again becoming apparent. The gliders were now stretched across the sky, laterally and vertically in order of performance. Martin Sadgin in the Typhoon predictably at the front with an L/D of 26:1. Always in action first, he had often thought of trading in his weapon for something prehistoric, preferably Richard Miller's Bamboo Butterfly. He pushed these thoughts aside now as he absent-mindedly strafed the road to Abertysswg taking out three caravanettes and a spectator's mini and chipping the sides of the now derelict Hang Glider Amusement Park and XC Recovery Service, built by an entrepreneur from the Rhondda. Banking to 90°, he swept in over the landing area and shot up the ground a bit with his Magnum (the only way to clear a space). One spectator grudgingly moved his car from the approach. Martin set up his landing.

The other gliders were now coming to terms with the monstrous problems of landing at Tredegar simultaneously in non-soarable conditions. At least the flak was quite light today. The only damage so far being a few new vortex holes. Albert, Fat Freddy and a nonk came in belly to kingpost — Albert on top of course. Freddy was laughing insanely and flinging grenades all over the place. Behind them, mid-air finished the flights of three pilots who spun unceremoniously in on the grass behind the road. One poor fellow overshot and was forced to go down. He was taken prisoner by the farmer and locked up in an outhouse with ten other pilots for the duration.

The end of the mission was the usual endless drag. Firstly the Tredegar pilots were all moaning about the conditions and pointing out how one-sided it all was. "How are we supposed to get to Merthyr?" Go on, answer me that. And when it's peachy here, who can we attack — are we supposed to make it to Mere? Me for one, I'm fed up with messing around with searchlights and ack-ack. I've been through three cars in two weeks. Albert keeps soaring the roof before landing and chucking grenades in through the windows. If this goes on, my girl's gonna stop coming out and then what will I do for recovery... etc?" By this time the Merthyr Recovery Team was steaming up the valley in armoured jeeps.

It was pointed out that ON A GOOD DAY it would be soarable at both places and the Liberation Army and the Tredegar Trogs had had some great scraps. John Groyne told everyone again about the day the thermal layer was 12,000ft. deep and he'd fought Brian von Migraine for six hours, drifting back at 10 grand in a thermal over the Severn Bridge without instruments. Oh, those days when the sky was stacked high with war gliders and you could see the tracer from Cardiff. The battered old veteran Curly Francis, who had once built the Amusement Park sat mending an upright with Super Glue 3, shaking his head at such antics.

From then on the day developed as normal. The wind picked up at Tredegar and the thermals grew, with a little help from the Rhymney Valley Thermal Generating Corporation. Someone said it

was about time they changed the colours. A Corporation patriot had been sending them up green with red dragons for weeks now. Fat Freddy (who'd been down the Bush for lunch) was rolling all over the grass, laughing and potting crows with an M16. "These Tredegar crows got nothing on those Merthyr swine. Anyway what are you complaining about? At Merthyr the thermals are sponsored by Hoover, and you've got to fly for at least half an hour a day with a banner that says 'Buy Hoover'. And you should see the damn things — they come roaring up with 'Hoover, Hoover, Hoover' written all over them, and each one is in the shape of a giant Hoover upright. Man it's murder trying to core the handle — and when you get to the flex...!"

Albert was having the flight of his life at 24,000ft., circling round six pulsating dragons eminently visible through his glasses. He kept passing out but this merely clouded his judgement slightly as he plotted a course to Heathrow Control, intent on becoming the first Liberation Army pilot to shoot up a Concorde.

Von Migraine strutted around the hill clicking his wooden leg, compliments of John Groyne and planned next year's American Ruck.

Martin in the Typhoon was attempting an out and return flight to the Beacons from 16 grand, pursued by a Trogg, who couldn't quite get close enough on L/D to open up. Fat Freddy was doing wing overs above Pontypool with a bottle of Talisker 100, and keeping a sharp eye open for the Aerial Patrol Group, who were keeping a sharp eye open for Fat Freddy.

The Monk, a bearded, white-haired gentleman in his sixties, who used to run a school in the area, was levitating somewhere over Abertillery. It was a normal sort of day.

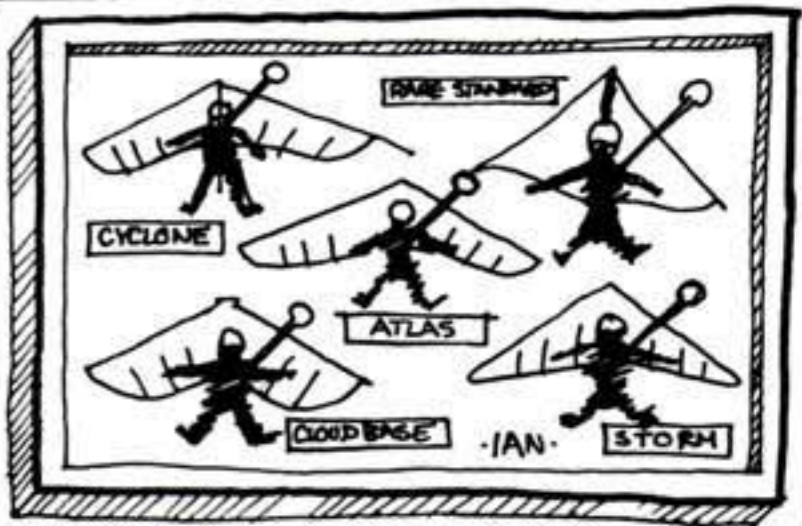
Sergei Shunt from Hicraft Ultralite Destruction Products Inc., was out back on the new Abertysswg Firing Range and Coffee Bar, testing a new armament system on a couple of test pilots, who were having difficulty penetrating the 60mph wind generated by the fans.

The main problem on everyone's mind was the planned strike by thermal controllers, fed up with manning the generators 24 hours a day "just 'cause Albert wants to fly all night — and it's practically impossible to make them uniformly luminous..."

As the evening came on, people began to drift back to their bunkers and dug outs on solar powered Easy Risers and similar, a few purists still driving home in armoured vehicles, dodging grenades from a drunken Fat Freddy. The thermals were going green and Albert was 6,000ft. above Terminal 3...

From the Welsh Federation magazine

*Tredegar is about 4 miles downwind of Merthyr, for those who don't know the two famous Welsh sites.



Crosstubes can't float

by Bob Fisher

I recently had the opportunity to fly a glider which had been modified to the 'floating crosstube' principle. The way this glider felt, plus the fact that I had never understood exactly what was meant by 'floating crosstube', caused me to work out how the principle works and why. The results surprised me and this article is the outcome.

I had never been able to understand how the crossbooms were able to float. The answer is, they don't. Diag. 1 shows the essentially rigid airframe which gives the sail its basic form. This includes the crossbooms, which in a floating arrangement are geometrically buckled and then tied to the keel near the hang point by a tension member, pivoted at both ends. This can be a trailing link as shown in Diag. 2, or a leading link with the crosstubes buckled forwards, in which case the front half of the keel would be in compression. It is important to realise at this point that this four-sided frame is essentially rigid, except for a slight possible spreading effect of the leading edges (L.E.'s) as the length between A and B in Diag. 1 changes due to the arc movement of the tension member. These four booms can be thought of as the airframe proper as they define the fixed extremities of the sail.

The part of the airframe which 'floats' is the keel, together with the A-frame and kingpost (Diag. 3), although because of the constraining flying wires,

which connect the A-frame to the fixed points C and D, the A-frame is forced to rotate as the keel moves sideways. This is shown in Diag. 4. I have not yet worked out where, between the A-frame and L.E. booms, this rotation is taken up. It concerns me a little.

This covers the mechanics of what is happening when the booms appear to move from side to side, as they do — up to 2 or 3 inches — when ground handling. The interesting and exciting part is the effect this has on flying the glider. There are three main effects on any glider.

First, the hang point, being part of the keel, moves across (see Diag. 4) when you weight shift. This means control is much lighter — you are not having to support yourself at as great an angle from the vertical. (This was very evident in the glider I flew).

Second, because the A-frame is rotating there is a small enhancement of the pilot's available sideways movement before fouling the A-frame.

Third, and this I think is the most profound aspect, the keel is free to follow billow-shift induced by different lift under each side of the wing. Because the hang point and control frame follow this movement, the pilot gets feedback on what the air is doing *immediately* the sail is affected. Contrast this with the situation in a conventional hang glider. First, billow-shift in the

sail occurs, allowed by the keel pocket. This billow-shift is in such a direction as to tend to stop the glider rolling as a result of the differential lift. However, the lift will still roll the glider, against the billow-shift, and only *after the glider has started to roll* does the pilot know which side the best lift is on. We all know how difficult it is to get a wing down that has started going up!

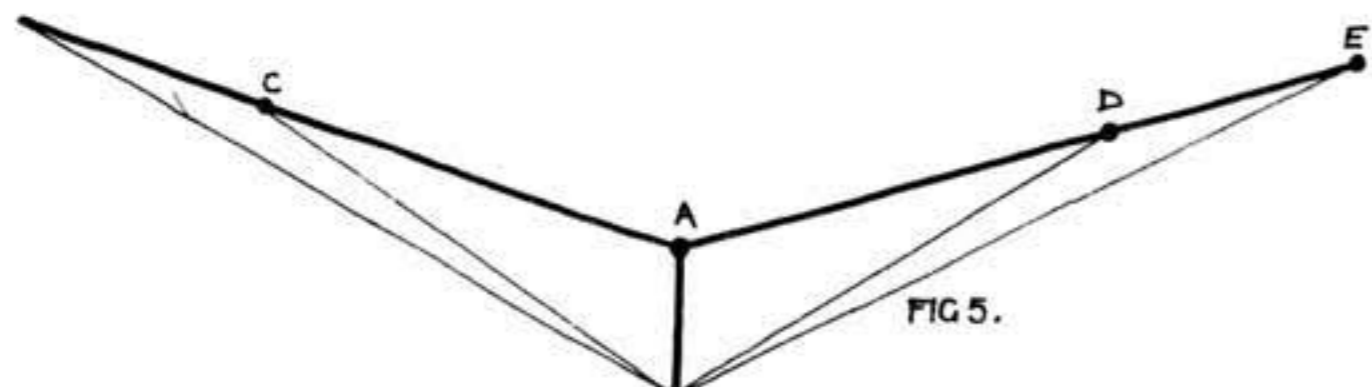
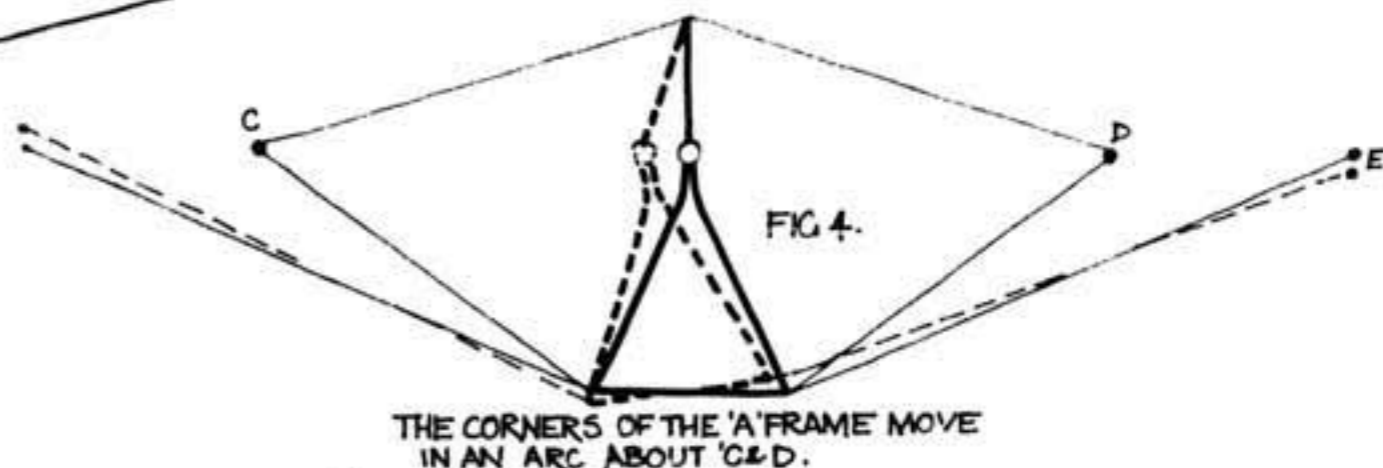
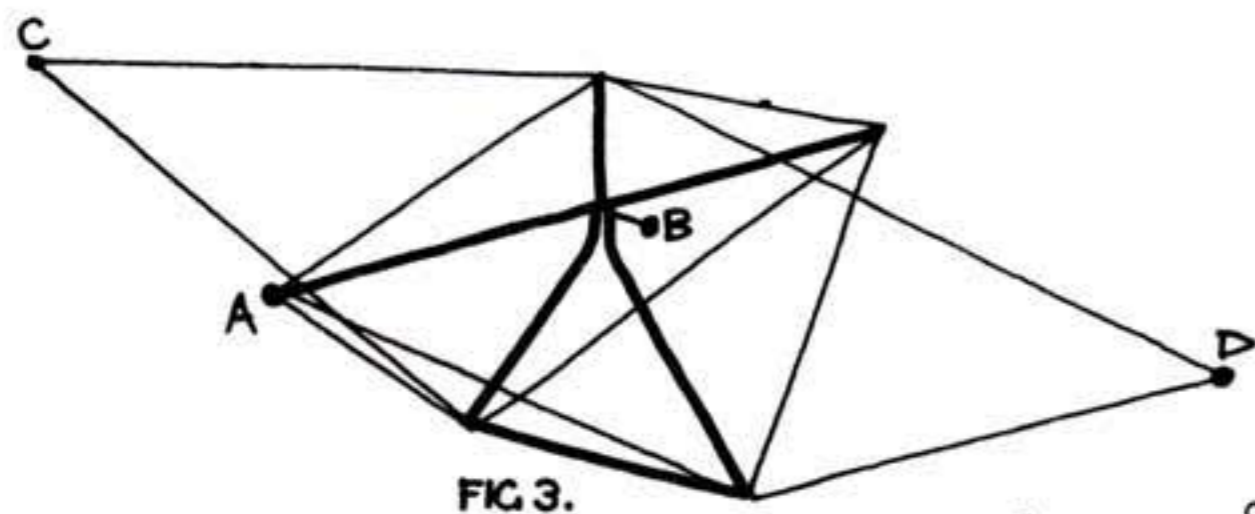
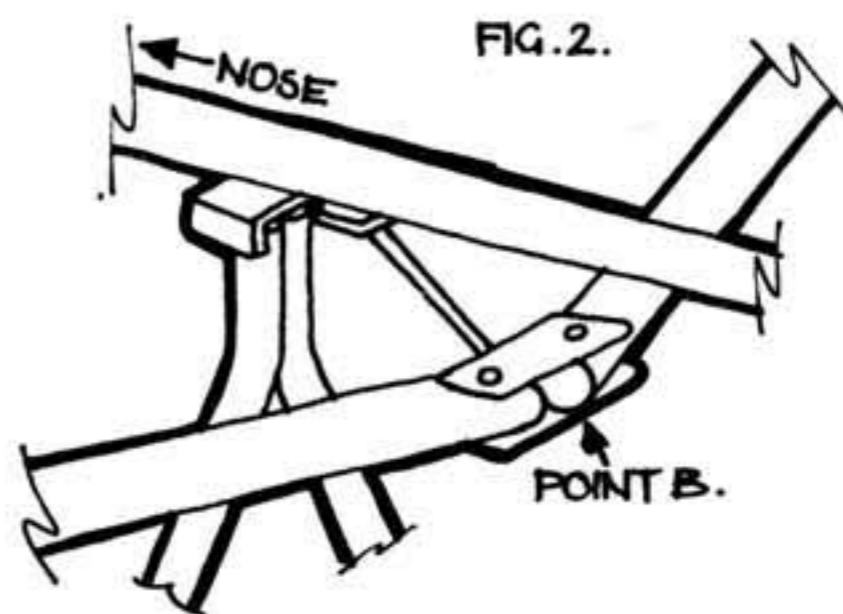
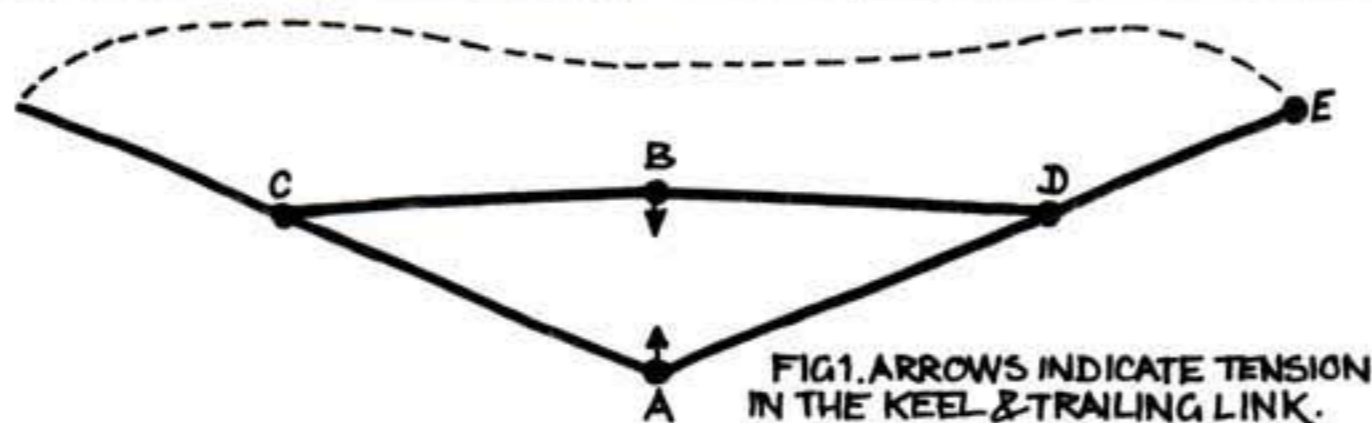
Again, on the glider I flew this feedback was present in the gently thermic (1/2-1 up) conditions. I described it as 'feeling very sensitive', another pilot as 'the glider feeling alive', although at the time neither of us understood why.

With some gliders, there are additional possibilities: — if the glider has tip to A-frame wires, like most crosstubeless machines, then the A-frame movement might be used to effect a faster roll response by changing the tip angle of attack — if the glider has tip to heartbolt wires, like the Chargus gliders, then these could be used to limit the sideways movement of the keel, if necessary (assuming the L.E.'s have side deflexors).

Finally, all the above applies not only to floating crossboom gliders but could also be made to work on crossboomless machines. Diag. 5 shows the 'rigid' part of a crossboomless airframe equivalent to the original Diag. 1. It now becomes evident that a similar modification to convert crossboomless machines to a rotating A-frame design would be a horizontal pivot in the keel at point A to allow the back part to float sideways.

Warning: The above configurations impose several extra loads on the airframe. Unless you are familiar with frame analysis and Eulen buckling, then forget any thoughts of modifying existing gliders.

From TVHGC's Volplane



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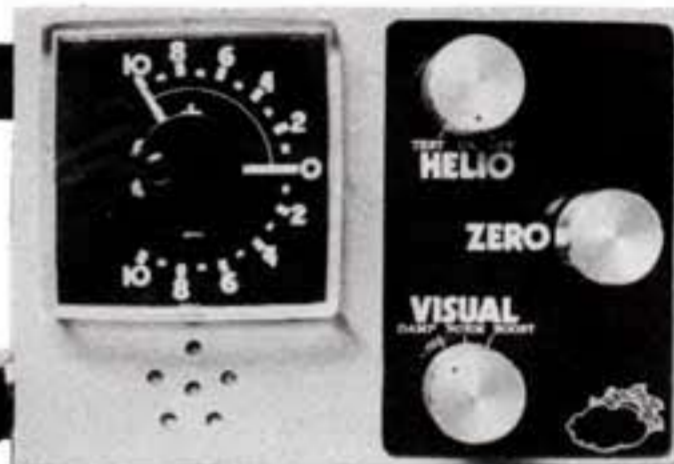
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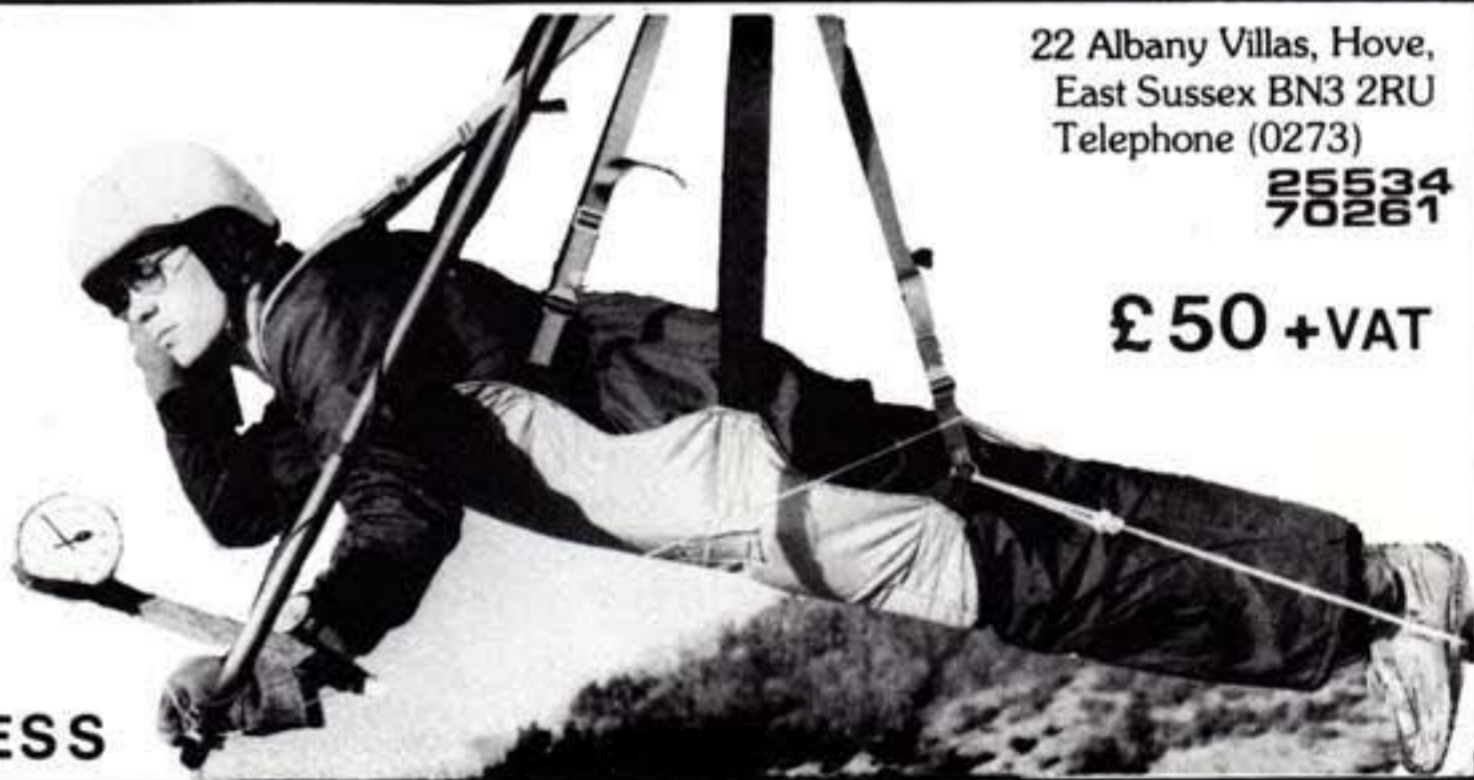


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