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Letters	February 12
Club News	February 12
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Luke Roberts took this picture while soaring in New Zealand's mountains. Lake Pukaki, at the end of this valley, provides vital clues in an easterly to a convergence that glider pilots can use. Gavin Wills explains more on page 30

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Royal Aero Club
and the
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A year of highs and lows

AS I LOOK back on the year 2001, two things stand out. Firstly, the impact Foot-and-Mouth Disease had on our activities, particularly between the end of February and mid-June and, secondly, the successes of our British teams in world championships.

I have written about both these highs and lows previously, but to sum up, foot-and-mouth has created a difficult time for many clubs. I know many have been under considerable pressure in terms of keeping operations going, battening down the hatches financially, and trying to keep members at the beginning of, as well as throughout, the summer season.

I hope readers feel that the BGA handled the situation well. We had to take decisions rapidly, and I should like to thank my colleagues on the Executive for their very professional approach to the crisis, as well as club chairmen for their support of the BGA's strategy.

Judging by the very few criticisms we received of our actions to protect the long-term interests of gliding, I believe we got the timing of the changes, following the initial cross-country ban, about right.

At the other end of the spectrum, the success of British gliding against tough international competition is the fruit of many years' dedication by many individuals: not just the successful pilots themselves, but also the competition structure that we have in this country, supported by many volunteers at club and national level who give of their time freely. The five gold medals won in 2001 will be a hard act to follow, but then that is the new challenge.

However, the biggest challenge we face as a movement, I believe, is in relation to airspace and its use by glider pilots. In this issue there is an article by Carr Withall, the BGA's Airspace Committee Chairman, bringing us up to date on what proposals are in the pipeline.

In the past we have dealt with proposals for change in airspace within a UK context. But now there is a different dimension. The proposals for change are coming from Europe, and in part, from ICAO (the International Civil Aviation Organisation).

In this we have to extend our activities to join with our colleagues in the European sporting aviation governing bodies to influence those proposals to ensure we have a future as a leisure activity, against the might of commercial and military interests.

This is new territory, because whilst we have had for many years a good working relationship with the CAA, which has a well-established consultation process in which the BGA has played a leading role and secured the respect and attention of the rule makers, the same cannot be said necessarily on a broad European front. The danger, rather like the arguments about the Euro currency, is the theory of: "one solution fits all".

The UK model of consultation is pre-eminent and the envy of many of our fellow gliding associations in Europe. Many now realise that such a model would be of great benefit for dealing with the proposals coming from within the developing European agenda for airspace and its use.

'The biggest challenge we face as a movement is, I believe, in relation to airspace and its use by glider pilots. In the past we have dealt with proposals for change within a UK context. But now there is a different dimension'

Rather late in the day there has been a realisation that all airsports need to act together on a European basis and with one voice in facing up to these challenges.

The BGA is helping with the formulation of strategy and policy at the European level, and a small part of the BGA's increased budget, approved at the last AGM, is allocated to this essential representational effort.

David Roberts
Chairman, British Gliding Association
January 1, 2002
d.g.roberts@lineone.net



the *White Planes* picture co.

BGA Chairman David Roberts attended the reception at Buckingham Palace last autumn for the successful British Team. Three current World Champions and the Team Manager were present, along with supporters such as BGA Communications and Marketing Committee Chairman Marilyn Hood (who was the sponsorship co-ordinator for two of the successful teams), and Competitions Committee Chairman Ron Bridges. For more pictures, see page 14

Club visits by Executive members

MEMBERS of the BGA Executive have now visited eight clubs to hear about their concerns and to present the work the BGA does on their behalf. Reports back suggest the clubs found the visits very useful and informative. More visits are planned in early 2002, but more clubs need to fix dates with their BGA Executive contacts.

New arrangements for radio

THE CAA's Directorate of Airspace Policy (DAP) has been appointed by the Radiocommunications Agency (RA) to distribute Wireless Telegraphy Act radio licences. DAP staff will operate a telephone helpline for licensees (0207 453 6555). Plans are in place for a newsletter on aeronautical radio matters to keep licensees informed of changes.

Self-sustainers

THE CAA is (late December 2001) in the final stages of taking a change to the Air Navigation Order through Parliament to regularise the status of self-sustaining sailplanes ("turbos"). For the last 20 years or so these gliders have operated without registration with the CAA, despite the fact that with an engine they were strictly within the definition of an aircraft requiring registration. The CAA has agreed with the BGA's position that, so long as such gliders cannot be and are not launched under their own power, they will in future be treated as ordinary gliders without the need for a "G" registration. This regularisation is the result of the good working relationship the BGA has with the CAA and the CAA's desire not to regulate where there is a proven system of self-regulation within a governing body.

Please think before you phone

WOULD all members please bear in mind that most BGA posts are voluntary and although many people, such as examiners and safety officers, can be contacted at home, consideration should be used in making this contact in a reasonable manner and at reasonable hours. If the person you want is not at home, please do not hassle their immediate family with requests or demands, but try again at some other convenient time. Please remember that the BGA relies on voluntary help willingly given and that we must not abuse this resource. Thank you. *(BGA Secretary)*

NPPL – and medical requirements

TERRY Slater, who leads the BGA working group with the CAA, recently provided the Instructors' Committee and the BGA Executive with an update on progress towards the introduction of the National Private Pilots Licence (NPPL). If it is implemented in the form currently under final discussion, there will be considerable benefits to glider pilots and those operating self-launching sailplanes and motor gliders. The BGA will publish the detailed proposals once finalised. The CAA's consultation document, has the details at that stage: *http://www.srg.caa.co.uk/documents/SRG_GAD_national_ppl.pdf* Changes to medical requirements for glider pilots, linked to the introduction of the NPPL, are being promulgated to all BGA clubs.



THE scene at the French site of Gap (left) now appears to have evolved to a situation where visiting pilots with their own gliders tend to operate with Philippe Tarade while those seeking to hire single-seaters (Pegase and LS4) or basic dual instruction choose the resident Aero Club Alpin. Tarade Aero Services' operation includes the site's only 235hp tug and a pleasant grassy area for camping and trailers next to his hangar. Either way, Gap remains one of the greener and less crowded sites while giving immediate access to the medium "relief" (6,000ft) as a stepping stone to the 14,000ft high Alps, 30 miles to the north

Dates for your diary

Competitions in 2002

Overseas Championships	Spain	13 May–24 May
Gandhi Soaring Comp	India	1 May–10 May
Turbo/self-launch	Bidford	15 Jun– 23 Jun
Standard Class Nationals	Pocklington	22 Jun–30 Jun
Europeans	Hungary	6 Jul–27 Jul
Regionals	Lasham	6 Jul–14 Jul
Competition Enterprise	North Hill	20 Jul–27 Jul
Regionals	Hus Bos	27 Jul–4 Aug
Regionals	Nympsfield	27 Jul–4 Aug
Regionals	Sutton Bank	27 Jul–4 Aug
15-Metre Nationals	Gransden	27 Jul–4 Aug
Inter Services Regionals	Cosford	3 Aug–11 Aug
Club Class Worlds	Germany	10 Aug–24 Aug
Club Class Nationals	Lasham	10 Aug–18 Aug
18-Metre Nationals	Lasham	10 Aug–18 Aug
Open Class Nationals	Tibenham	24 Aug–1 Sep
Regionals	Tibenham	24 Aug–1 Sep
Regionals	Dunstable	17 Aug–25 Aug
Two-Seater Comp	Pocklington	18 Aug–25 Aug
Regionals	Booker	24 Aug–1 Sep
Junior Championships	Hus Bos	31 Aug–8 Sep
Mountain Soaring Comp	Deeside	Sep 2–Sep 8

Deadline for returning UK nationals entry forms: Jan 31, 2002

British teams for 2002

AFTER voting, the **Club Class Worlds** team is: Pete Masson (qualifies as champion), Richard Hood, Afandi Darlington and Paul Fritche (reserves: Gordon MacDonald, Mike Jordy, Mike Cuming and Bob Fox). As a result of the 2001 British Nationals, the teams for the **European Championships** are: **Standard Class**: Andy Davis, Mike Young (reserves in order – David Allison, Ken Barker, Gary Stingemore). **15-Metre Class**: Steve Jones (qualifies as champion), Al Kay, Dave Watt (reserves – Ed Johnston, Howard Jones). **18 Metre Class**: Jay Rebbeck (reserves – Jez Hood, Leigh Wells, Chris Starkey, David Masson). **Open Class** – Russell Cheetham, Pete Harvey (reserves – John Gorringe, Graham McAndrew, Jed Edyvean)

CAA Safety Evenings

FOR full details of these, see *www.srg.caa.co.uk*

Royal International Air Tattoo

THE RIAT returns in 2002 to RAF Fairford, Glos, after a two-year stint at RAF Cottesmore. It takes place on July 20-21; some 450 aircraft from 35 nations are expected to attend.

BGA Conference and AGM

SEE page 6, overleaf, for details of how to book.

National Ladder results for 2000-1

FOLLOWING the significant impact of foot-and-mouth last spring, many clubs managed to take advantage of the subsequent relaxation in cross-country restrictions that arose during June.

The Open Ladder received claims from over 190 pilots. Three flights of 500km and one of 400km was enough to put me at the top of the Open Ladder, so qualifying for the Enigma Trophy. Andy Davis was fourth in the Open Ladder but presented enough evidence to qualify for the Firth Vickers Trophy as the runner-up.

Chris Starkey, second in the Weekend Ladder, qualifies for the L duGarde Peach trophy as winner while the next pilot with enough evidence to qualify for the Slingsby Trophy as runner-up was Kevin Hook from Portmoak.

Will Harris, of Cambridge GC, after much persuasion, donated enough logger files to qualify for the Spitfire Trophy as winner of the Junior Ladder. Well done to all those who took part. Remember that Club Ladder Stewards may submit scores online at *www.bgaladder.co.uk*

First submissions for the 2001/2002 season for offline users, please, by the end of March 2002.

OPEN LADDER

	Pilot	Club	Score	Flights
1	John Bridge	Cambridge	10921	4
2	Dave Caunt	Booker	8201	4
3	Chris Starkey	Lasham	8060	4
4	Andrew Davis	BGGC	7129	3

WEEKEND LADDER

1	John Bridge	Cambridge	8880	4
2	Chris Starkey	Lasham	8060	4
3	Dave Caunt	Booker	6491	3
4	Steve Lynn	London	5784	4
5	Kevin Hook	Scottish	5629	4

JUNIOR LADDER

1	Will Harris	Cambridge	4546	4
2	Jonathan Meyer	BGGC	4212	3
3	Sean Churchill	Bicester	4176	3

John Bridge
National Ladder Steward

In brief

PILOTS in West Sussex have until February 15 to object to a county structure plan that would, in effect, restrict most existing small General Aviation sites and ban any new flying sites in the county. See *www.westsussex.gov.uk/splan* for the form to submit your comments on draft policy NE18.

JUST ONE official foot-and-mouth "at risk" area remained in the UK as *S&G* went to press. Cumbria, North Yorkshire and Durham are free of the infectious livestock disease that has devastated rural Britain since February 2001. The world's worst outbreak involved 2,030 cases, the slaughter of 3.9 million animals and an estimated cost to the economy of £2.8–5.4 billion pounds. The last confirmed case was in September in Cumbria, but as sheep in Northumberland have since tested positive for exposure to the virus, this county must wait longer for clearance. The BGA has lifted its remaining restrictions on cross-country flights.

DETAILS of bursaries in flying and aerospace engineering supported by the Air League are now available at *www.airleague.co.uk*

THE BGA's Technical Exposition 2001 Issue 1 was approved by the CAA in November 2001.

THE RAeC Trust is seeking a voluntary Youth Air Sport Adviser for Flying for Youth. Please email *chairman@royalaeroclubtrust.org* to apply. HRH The Duke of York recently became Trust Patron.

THE British Women Pilots' Association awarded the OP Jones Cup jointly to Gillian Spreckley and Sarah Steinberg for their women's world championship wins in Lithuania in 2001.

WE ARE sorry to report the death of "Bev" Snook, chairman of the Royal Aero Club 1982-1986 and a vice president of the Guild of Aviation Artists.

IF YOU competed in a UK nationals in 2001 or 2002, please could you make sure that British Team Manager Harry Middleton has your email address – and update it as necessary? He is at *harryandmarjorie@middleton700.fsnet.co.uk*

HAVING got Gold, Michael Pettican (18) found out why Diamonds are harder than metal. Missing an undeclared 500km by 2km last year wasn't so bad, but his Diamond height bid at Aboyne was just 10m short. We wish Michael, who flies from Hinton and works at RD Aviation, better luck in 2002.

WINNER of the BGA 1000 Club Lottery's November draw was NA Dean (£49.00). Runners-up (each winning £9.80) were: Southam, EA Hull, M Blackburn, K Olpin and RQ Barrett. The December winner was RH Hanna (£49.00), with runners-up (each winning £9.80): S Hord, JR Kinley, M Bainbridge, JF Crawford and VC Carr

BGA AGM, Conference and Dinner 2002

Eastwood Hall Conference Centre, Nottingham

Saturday 23rd February

Provisional Programme

0945 Welcome and Introduction by BGA Chairman, David Roberts

1000 The Committee So Far
Feedback from the recently formed Communications and Marketing Committee
Marilyn Hood (Committee Chairman)

1020 British Teams

1030 Coffee

1100 Title to be Announced
Ron Elder (CAA)

1130 Keeping Members
Feedback from the recent Nordic Conference
Robert Danewid (President, Swedish Gliding Federation)

1230 Lunch

1330 AGM of the British Gliding Association

1450 Ted Lysakowski Trust

1500 Coffee and Exhibition

1600 Title To Be Announced
Lembit Opik MP, Parliamentary Spokesman

1630 The evolution of the Turbo self retrieving systems
Tilo Holighaus

1730 Close

1900 for 1930 Dinner
1900 Pre-Dinner Drinks from the Lounge Bar
1930 Dinner in the Lawrence Suite
2130 After-Dinner Speech by Brian Lecomber, Firebird Aerobatics Ltd
2145 Awards
2215 Live Band - "Souled Out"

Dinner in the evening is strictly by ticket only. The cost is £22.50 per person.
For more information and to book you tickets for 2002, call Claire at home (01280 705741), or on her mobile (07887 548913), or email: claire@eventia.co.uk
For accommodation bookings, please contact Eastwood Hall directly: Tel: 01773 532532, Fax: 01773 532533.

BGA 2002 AGM, Dinner & Conference

Your letters

How they did that – perhaps

WITH reference to *How did they do that?* (December 2001–January 2002, p5), may I suggest that the conversation in the K-13 cockpit went along the following lines:
P1: *Can you see the airfield?*
P2: No.
P1: *That's strange, neither can I. Well, I'm afraid I will have to fail you on that part of the check. We don't normally cover field landings at this stage but how about having a go at picking a field?*
P2: I like the look of that one.
P1: *You mean the one by the pub, with the sheep and two trees?*
P2: Yes.
P1: *OK, I suppose it is either that or the housing estate. Set us up for a circuit; what is your intended approach speed?*
P2: 50kts.
P1: *OK. Don't cramp the circuit.*
(A few minutes' tense silence.)
How do you feel about your position in relation to your proposed landing area?
P2: Maybe we are a bit high and close.
P1: *Very good. Perhaps the rather excessive noise would indicate that we are nearer 75 than 50kts.*
P2: Oh yes!
P1: *Perhaps I should fly the last bit.*
P2: That might be a good idea.
P1: *Those trees are approaching rather quickly and watch out for that sheep on your left.*
P2: I thought you were flying this thing?
P1: *Oh s**t! Poor sheep.*
P2: What happened? I had my eyes shut.
P1: *Well, I thought you were going to the left of those trees but after the incident with the sheep we appeared to land with a rotating motion. At least we don't seem to have damaged the port wingtip.*
P2: Do I pass the check, then?
Chris Ellis, OSWESTRY, Shropshire

Two more possibilities

I THINK that what happened was as follows: the aircraft, after making a successful landing, merely slid sideways down what looks like a steepish bank, possibly wet grass (nothing more slippery) and luckily came to a halt between the trees. I bet they had some fun getting it out – or just de-rigged it as it stood.
Tom McKinley, BROUGHTON, North Lincs

EITHER: due to a combination of bad directions from the pilot, and an inefficient retrieve crew, it was a long wait and what had been two tiny saplings when they landed... *or*: the landing run was from left of picture. Getting close to (or hurtling towards) the trees (do I detect a slope in the field from left to right? and does the position of the parachute suggest that such a landing would have been downwind?) the pilot put the right wing down to induce an arresting groundloop. This worked partially, but having swung though ninety degrees the aircraft continued on its track, sliding sideways on its wheel to come to rest in the position shown.
Peter Denman, MAYNOOTH, Ireland



How did this K-13 do that? Michael Powell's correct answer is below, along with (left) some inventive suggestions

Thanks to all who came up with suggestions, and our congratulations to Chris Ellis, who won the prize of a bottle of red wine, donated by Michael Powell. We emphasise that Chris's prize is for the most original, not the most accurate, account of the landing...

How they really did that

HAVING completed my duties as tuggy for the comp and seen all the keen glider types off into the blue it seemed no bad idea to do a spot of engineless flying myself. As is my practice at "foreign" clubs I broached the subject to the CFI and an instructor was duly allocated to see (i) how I would manage without 180hp up front and (ii) what I could make of the ridge. So far, so good.

Shortly after the launch, control was passed to my companion and as we progressed down the ridge it occurred to me that the ground was getting closer. The instrument fitted for this purpose told me that we were now at 800ft. This was followed by 700ft and, not long after that, 600ft – at which point I began to take an interest again. As is often the case in these situations it had become quite quiet in the cockpit until, confronted by a line of trees we were evidently not going to clear, the expletive "s**t!" – said with feeling from the rear seat – was followed by the following remarkable piece of flying.

The only available field was on our left with the line of trees at the far end. At the bottom of the field was a wood and the field sloped down towards this. We would have to land downhill and I reckoned that we would touch down at the top of the field and shortly after this take off again and land in the trees. Well, there has to be a first time for everything! In fact, remembering some words of wisdom passed to him by an old and wise instructor, my companion yawed the glider hard right as it touched down and the glider slid sideways down the slope decelerating in a very gentle manner to end up between the two trees exactly as in the picture.

The words of wisdom imparted by the old sage to my companion boiled down to: "If you are going to hit something, don't do it head-on. Use the wings as a crumple-zone and live to fly again".

That's what we did (without the crumple) and the glider was flying again later that day.
Michael Powell, UPTON, Norfolk

ME163 and seating foam

I HAVE been carrying out research on aircraft seating foam at The British Library, St Pancras, London. At the end of WW2, the Surgeon General of the United States Air Force carried out an investigation of German aviation medicine. It was noted that early gliders had skids, and the ME163 rocket fighter had profited greatly from data obtained from gliders. In 1942, ME163A and B aircraft had reached speeds of 516mph at sea level. Owing to failure of the skid springing, so many fractures of the spinal column of the pilots occurred during the landing that for a long time these aircraft could not be put into service. (It will be remembered that Hanna Reitsch broke her back landing an ME163.) Among the measures taken to remedy the situation was the provision of seat cushions of a material that began to deform when the load exceeded a predetermined value. The use of energy-absorbing foam has a longer history than I ever imagined.
Tony Segal, UXBRIDGE, Middlesex

Collision avoidance

ROD Witter's letter (December 2001–January 2002, p7) reflected my views of the multiple start points at the same competition. The only way to start accurately was by careful use of GPS, which means head down flying by some pilots in congested areas at the declared max start height. The small size of the start point forces the starting pilot to fly through the 1km circle regardless of any thermalling gliders at his start height, perhaps at high speed. This is much less likely to happen with the long startline.

I do not accept the argument about the start point system reducing gaggling, as most pilots tend to select about the same start time, perhaps by watching adjacent start points, then arrive at the first on-track thermal at the same time.

While on my competition soapbox, does anyone else think that the otherwise good assigned area task rewards the landing out pilot too much?
Paul Whitehead, CAMBRIDGE, Cambs

Plat and one-wing waterballast

HAVING found myself mentioned in Plat's ever-interesting column (October-November 2000, p17), I thought I'd add a bit on his ➢

queries concerning flying with one wing full, one empty.

As he says, I found myself inadvertently and unknowingly in that situation in the 1970 Marfa Worlds in the Nimbus 1, not all that controllable a ship in the best of conditions. The result of a steep bank with a bit of a skid thrown in to photograph a TP was an instant and violent spin into the heavy wing (tanks were five meters outboard in the Nimbus 1). Since designer-owner Klaus Holighaus had told me spins would probably not be recoverable, concern ensued.

Luckily, after normal recovery proved futile, I recalled an article about spin recovery in the D-36, the first of the long-wing flexible flyers, which recommended full back stick to flex the very bendy wings and change the flow over the tail. Just as I was thinking of abandoning stick for canopy release this worked: all was well although we were 1,500ft lower. Incidentally, I had no idea what had caused this weird behaviour until I landed after completing the task – and one wing dropped heavily to the runway.

A year or two later I spent all one spring doing experiments flying my Standard Cirrus with one wing full, one empty. I had a theory at the time that it might be advantageous to circle away from the full wing since the inner wing goes quite a lot slower. Experiments showed that take-off was possible if the tug was powerful and the heavy wing was held very high. Once in flight it was hard to tell which wing was the heavier. There did seem to be a slight advantage in circling away from the heavy wing but a very decided disadvantage in getting caught having to circle into the loaded wing. Sort of like circling into a dead engine? Since development of a high-speed pump to get all the water into the high wing also proved rife with problems, I eventually abandoned the project, along with such other far-out lines of experiment as using only flaps for pitch control and flying with largely locked elevators.

Then there was also the longitudinally-moveable 35 pounds or mercury ballast on the Nimbus 3, but that's another story...

George Moffat, MARION, USA

Triggering renewed thought

I DID enjoy reading hang-glider pilot Justin Needham's article (December 2001–January 2002, p24) on trigger points for thermals. It renewed concentration on the basics of what influences the air we wander about in looking for lift. I suspect a lot of people, while reading it, will have recognised a trigger point they experienced and will now look for in a more organised way. Nice to see *S&G* going outside the closed confines of the gliding movement for a fresh viewpoint. Thanks.

John McWilliam, KINSALE, Ireland

Elliotts of Newbury and 419s

ANDY Davis' letter (*Tracing the Wild Goose*, December 2001-January 2002, p7) about the EoN 419 originally owned by (Sir) Peter Scott reminded me that in the 1960s, at Keevil, Bath GC (later Bath & Wilts GC) had incubated more than one gliding offspring who, like Andy, went on to become National Champion. (Something in the water?). Another was Jed Edyvean, whose late father co-owned this glider with Les Hooper, Dennis Packer and Pat Ladd, who originally wrote in. (For this information, I am indebted to a busy Jed).

My own first contact with the 419 type was holding a wingtip while Nick Goodhart rigged at Farnborough. Narrowly avoiding slipped disc and hernia, later that morning, (in a Kranich), I nervously circled in my very first solo thermal, was joined by him in the 419, watched it climb past and point to the horizon. Just before sunset, he final-glided back off the last thermal of the day from a journey around various national extremities. From then, I lusted to fly it.

Years were to pass before satiation came in 1981 with an hour flying from Duxford in the ex-Scott/Ladd-Edyvean machine (no less). Memories are of speeds-to-fly (40kts circle, 50 cruise) and the huge, low-geared trim-wheel from a cancelled airliner. Whispering along in a time-warp sitting in a luxuriously large cockpit was like driving a vintage Rolls-Royce. By then it was owned by a father-son duo from Usk, whom I later repaid with conversion to the ASW 19.

Norman Ellison's *British Gliders and Sailplanes* details the 419. In all, I believe 11 were built, one (at least) going to RAFGSA Bicester and another to the Army GA at Lasham. Several were exported, including one to Michael Slazenger at Dublin GC. Another went to the USSR, causing speculation about Siberian forests felled to mass-produce 'fouronenineskis'. Tongues may have been in cheeks, perhaps not too firmly in view of Blanik production, but nothing further was heard. Elliotts, the makers, retained a demonstrator, which it loaned out for nationals. Nick Goodhart and Anne Burns (fellow RAE club members) each repaid such faith by winning.

With its then revolutionary laminar flow 19-metre wing giving a reputed L/D of 38, the EoN (Elliotts of Newbury) Olympia 419 was the Nimbus 4 equivalent of its time and, at £2,150 in March 1961, it cost the price of a small house in southern England (*'Twas ever thus*). The company built several 15- and 17-metre clones as prototypes (types 401, 402 and 403), leading to the 415 and 419. Examples were flight-tested by ETPS Farnborough whose Staff Tutor with interests in powerless flight was Chris Rigg (brother of actress Diana) and test-pilot was John Brownlow (currently active with RAFGSA and PFA). For 415 tests, yours truly hooked on, ran wings and kept records. Elliotts settled on production of the alternative 15-metre 460/463 series (the last two digits indicating sub-type/year). The 465 was Britain's Standard Class entry for the 1965 world championships at South Cerney, flown by Tony Deane-Drummond.

Elliotts was principally a furniture manufacturer whose WW2 efforts turned to production of parts for the wooden DH Mosquito and wartime gliders. After the war, Mr Horace Buckingham, Director, extended this to sport gliders, supported by Production-Manager, James Cramp. Sadly, the former died in 1965 and EoN glider production ceased.

In a hotel room recently, reaching for my keys, fallen behind the dressing-table, I noted its fine dove-tail joints. Reading "Elliotts of Newbury" on the maker's label, nostalgically I recalled the factory off the high street of a busy UK country town, from which state-of-art gliders once emerged to be professionally test-flown prior to production.

What a pity it is that we can't seem to do this nowadays.

Tony Gee, MARLOW, Buckinghamshire

Young pilots and the Air Cadets

I AM a 21-year-old gliding instructor with the Air Cadets, at RAF Sealand in North Wales. Having read the last few issues of *S&G* I have noticed that there are lots of mention of encouraging younger people into the sport. Well, look no further than the Air Cadets. We solely train young people between the ages of 13-20, from beginners to solo standard once they have turned 16. For the better students we have advanced courses; some join the gliding school as staff. We do what we can to encourage gliding beyond this, by giving them forms to apply for the BGA solo endorsement, but other than that we're limited.

I myself would want to try civilian gliding, I would love to try cross-country and, when ready, competitions. However, lack of money (okay, I know it doesn't cost much but I am a student at university), and lack of contacts and information deter me from trying. Is there any way to help younger, less affluent people to enjoy the sport? For any club members why not visit your local Air Cadets gliding site? Meet staff and students and start making those all-important contacts to keep the sport alive, you never know you might just find a future champion.

Paul McMinn, *via email*

The BGA liases with the Air Cadets and I hope S&G has helped you find out some more about civilian gliding. Another way is the club directory at www.gliding.co.uk *– and perhaps your university students' union could even set up a gliding society to offer subsidised access to the sport? See page 51 of the December 2000–January 2001 S&G for how students at Reading recently did so – Ed.*

More on oxygen

I TREAD warily when taking issue with the experts, but Peter Saundby (*Oxygen – further facts*, December 2001–January 2002, p8) states that: "All commercial oxygen is dry when supplied." Having been confused about the specification of so-called aviation oxygen I contacted BOC, who supply oxygen in two (possibly more) grades. These are "Medical Oxygen" and "Breathing Oxygen". A strange choice of names as they're both for breathing! Breathing Oxygen has a moisture content

specification of less than 5mg/m³ whereas Medical Oxygen has no moisture content specification at all. It MAY be dry but there's no guarantee as for medical use it's (probably) irrelevant. So for our application we really should ask for Breathing Oxygen and not use that from the nearby clinic (or welder). Also beware dive-shops that make mixes using medical oxygen.

Brian Payne, CHILTON, Oxfordshire

BGA medical adviser Dr Peter Saundby replies: It is perfectly true that specifications for oxygen differ as described by Brian Payne. That is why I was careful in my choice of words: "all commercial oxygen is dry when supplied". The manufacture of oxygen is by the fractional distillation of liquid air and for this it has to be dried. The sales of medical or aviation oxygen are tiny when compared with industrial oxygen, but the prices charged by BOC are very different. Higher standards are applied to handling breathing oxygen but all oxygen meets all specifications when manufactured. The reasons for distinguishing the grades are commercial and not technical.

Happy memory but a sad ending

I ENJOYED reading the October-November 2001 article on the T-21 (*With the wind in your hair*, p18) and it reminds me of one good flight in a T-21. In June 2000 I visited Cotswold GC at Aston Down as a tourist. It was a warm and sunny summer day and there were several club ships, including K-13s and K-8s, lined up at the launchpoint.

After watching several launches, I introduced myself to the chief instructor and was asked if I would like to fly. As K-13s and K-8s are not uncommon in Japan, I said: "If possible, I would very much like to fly in the glider with open cockpit that is hangared."

So, with the assistance of a club member, I pulled out a T-21 into the launch queue. In spite of its size, I felt the lifting weight on the tail was not so much. Looking inside the fuselage, I found a wooden frame structure that I have not seen on any other types.

It was a very smooth wire launch. Even before release we hit a thermal and I really enjoyed England's summer sky. The wind on my face was not as violent as I expected. Instead there was a comfortable breeze. What a nice glider to fly in such weather! Over the beautiful patchwork of Cotswold hills I soared (just) for ten minutes, and I made a perfect landing. One of my gliding dreams – flying a T-21 – was thus fulfilled at last.

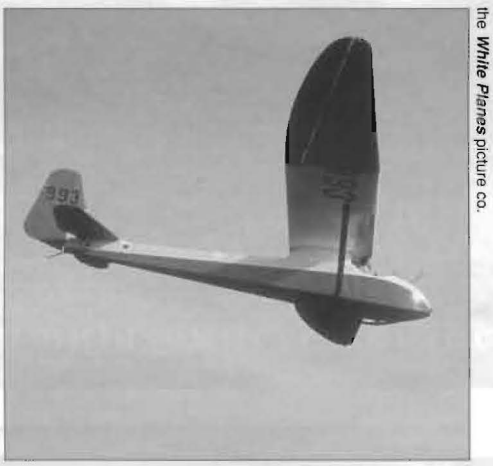
The sad part of the story is that in the same *S&G*, I found the name of the instructor who invited me to fly in a T-21 on that summer day – Malcolm Gay – in the fatal accident section of the Stop Press column.

Naoaki Ooishi, YOKOHAMA, Japan

England expects

WHENEVER I hear a reference to Lord Nelson's famous signal before the Battle of Trafalgar: "England expects every man will do his duty," I am reminded of an incident at Sutton Bank where the T-21 played a central role. At the time, we were re-establishing gliding in the North of England after the 1939-45 war, and I was secretary of the Yorkshire GC. It is relatively easy to gain publicity for new and untried sports, but it is more difficult to get good, repeated publicity. To succeed, your activities must be placed before the public on a fairly regular basis, or they are forgotten.

In the late 1950s, gliding was coming into fashion. The BBC approached us at Sutton Bank and we did a broadcast for *Children's Hour* from there. We must have satisfied them, for BBC Manchester kept coming back once or twice a year for odd spots in their programmes. I remember choosing a record in a T-21 at 800ft in hill lift to be played on air. On another occasion we gave a BBC interviewer his first lee wave flight off Sutton Bank. He complained about the cold and totally missed the novelty of the experience.



the *White Planes* picture co.

Your T-21 letters are still coming in thick and fast. Thank you very much to everyone who has written in. We will probably have to call a halt reasonably soon

So we were very impressed when we were asked to be part of the omnibus *Grandstand* sports programme one Saturday afternoon. The presenter at Sutton, Alan Clarke, was making himself a reputation on air as a try-anything daredevil. His personal sport was hydroplane racing: racing very small powerboats on lakes often too small for them.

We got together our most experienced members to support the programme. Fred Slingsby came up; John Reussener, our chairman, was there, too. Henry Doktor and I put out the T-21 at the north end of the north-south runway, while Ewart Haswell set up the winch at the southern launchpoint about 800 yards away.

The BBC arrived before lunch and a studio was set up in the wooden clubhouse. The only snag was that their arrival coincided with that of a particularly virulent warm front that sat over England, bringing just about all forms of sport to a halt. Only fishing off Scarborough pier and gliding at Sutton Bank seemed unaffected. Everybody who was there was interviewed – Fred Slingsby twice – in a valiant effort to fill the allotted time for *Grandstand*. But we were losing the battle: the producer came up to me and said: "Chris, we must have a flight."

"In this?" I queried, for by now visibility was about 50ft. "Yes," he said, "England expects!" This was the pay-off. "All right," I replied, "give me a few minutes."

I went to Ewart Haswell and asked him to go to the winch and to take a second person and a radio tuned to the programme. Ewey looked at me knowingly and disappeared into the fog. I went up to Alan Clarke and asked him, in my best *Maitre d'Hotel* voice, if he would care to take a flight. I detected some apprehension but he strode out manfully with me to the waiting club Land Rover. We drove out to the T-21 along the chalk path worn in the grass by the cable retrieving cars; it led directly to the glider.

We made much of the preparation for the flight, the controls and the instruments: I explained that we had fitted a compass to the glider that allowed it to be flown in fog with the aid of a stopwatch. Alan was clearly uneasy but, being the professional he was, said very little.

Finally, Henry Doktor placed the cable ring in the Otfur hook and raised the wing. I turned to Alan and said: "May I have the use of your microphone?" I gave the instruction: "Take up slack!" The cable tightened immediately. I called: "All out!" The T-21 accelerated. When we were about two feet off the ground I released the cable and glided down the chalk track that we had driven up a few moments before. The ground fell away from the take-off point at about the glide angle of the T-21 at 30kts; our "flight" was about 100 yards in length.

Alan Clarke was broadcasting away: "Yes, we're flying... through some sort of detergent!" Hardly a moment after this deathless phrase had been uttered, the main wheel touched the surface and we came to rest about 50 yards from the clubhouse. Alan made a great story of his historic flight and the programme was saved.

I had long forgotten about this broadcast when, many years later, I was on aerotow duty at Sutton.

A man in his early thirties, who had been very active in helping to push the gliders into position at the launchpoint, but whom I had not seen before, came up to me.

"So *you're* Chris Riddell," he said. "I always wanted to fly gliders but my mother heard your broadcast with Alan Clarke and she wouldn't let me near the place for 20 years."

So much for publicity – but I like to think Nelson would have approved.

Chris Riddell, HARROGATE
North Yorkshire

Please send letters – marked "for publication" – to the editor at the new address on the contents page or to: helen@sandg.dircon.co.uk *Please include your phone number and postal address. The deadline for the next issue is* ***February 12***

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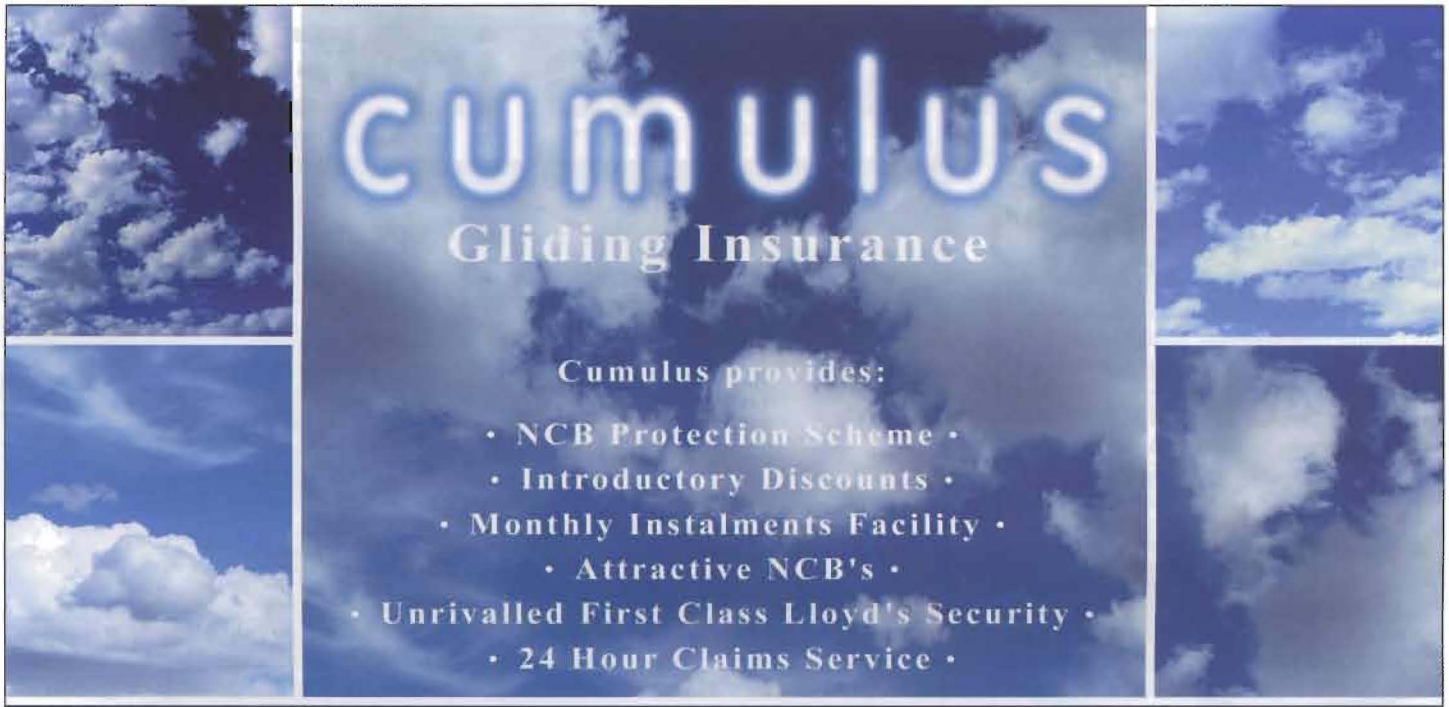


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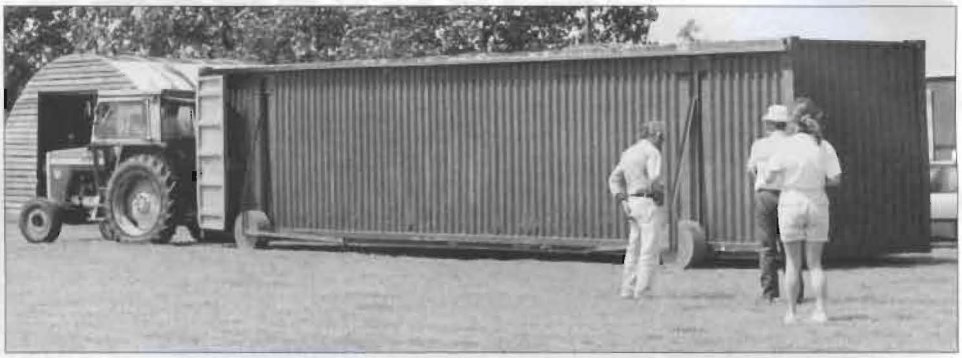
WITH financial assistance from the BGA Planning and Environment Fund, Essex GC has received favourable decisions at Appeal on three out of four issues that were the subject of Planning Enforcement Notices. The three successful points in one Notice were that mobile units, used for gliding purposes on land that has planning permission for gliding, are entirely lawful.

The structures in contention were a mobile home used as a briefing and meeting room, two 40-foot ISO containers on wheels and a mobile glider store, also on wheels. The latter is in the form of a T-hangar, similar to many used at other gliding clubs but unique in its size – capable of housing either a K-13 or a tug – and in its mobility: it has 16 wheels, enabling it to be towed easily to any position. All had been moved around the site at various times and they had been acquired only following legal advice that they were lawful.

Unfortunately, the local council, urged on by a pressure group, challenged this without ascertaining all the facts. They exaggerated the size of the glider store by over 100 per cent in their evidence to the Public Inquiry and had to admit they were wrong.

Consequently, they lost the case on all three items. On a fourth issue in a separate Notice, whether certain land had acquired a ten-year established use for gliding and so was lawful, the Inspector upheld the council's view that the early use was insufficient to have created a material change more than ten years ago. The council had originally told the gliding club that the disputed area had planning permission, but later changed its mind. The club had used the land in question, based upon the council's original advice.

Without the BGA's financial assistance, the main purpose for which the Planning and Environment Fund was established, the Club would have been unable to afford professional advocacy in the Appeal and success would have been far from certain. The results on the three structures are useful precedents for any other gliding clubs contemplating the use of mobile structures where planning permission for permanent buildings cannot be obtained.



A 40ft container on wheels being moved at Essex GC. A Public Inquiry has ruled it lawful *(Chris Nicholas)*

Compensation for clubs

Gliding clubs that have suffered as a result of Foot-and-Mouth Disease restrictions can claim Rural Recovery Grants towards the redevelopment of their businesses. Applicants must be able to show a 50 per cent reduction in income during the period April-July, 2001, compared with the same period last year. They are also required to provide a simple business plan. Grants from £5,000 to £15,000 are available through Regional Development Agencies. Contact your local Business Link office for details.

Unwanted access?

The Countryside Agency published a guide to access rights under the Countryside and Rights of Way (CROW) Act, in February, 2001. In accordance with that publication, *New rights, new responsibilities*, draft access maps have now been produced for two areas, the north-west and the south-east of England. Draft maps are available for viewing on the agency's website, which is *www.countryside.gov.uk./access/mapping*.

Altogether, eight areas have to be mapped and access to the public will not be made available until the last area has been agreed and a commencement order has been approved by Parliament. That is not expected to happen until 2004-2005.

We have already advised gliding clubs to ensure that their sites are treated as *excepted land* – where there is no public right to free access. Provision exists within the CROW Act for land used for the purposes of an aerodrome to be treated as excepted land. However, until excepted land has been agreed, it will not be identified as such on the maps. Hence, gliding sites are likely to appear as access land on the draft maps.

The procedure and timetable leading up to the Commencement Order is as follows:

Autumn 2001	First draft maps available for inspection 3 months' consultation period
June 2002	Provisional maps available for inspection Appeals heard and planning decisions published
June 2003	Conclusive maps available for first areas
June 2004	Conclusive maps available for all eight areas
2004-2005	Commencement Order

Unfortunately, there is as yet no agreed procedure for the registration of excepted land. We will inform members as soon as a formal procedure is announced.



This mobile hangar at Essex GC is large enough to hold a K-13 or tug *(Chris Nicholas)*

"Awards for All"

Although these special grants have been available for several years, applications from gliding clubs have been singularly unsuccessful, to date. However, we understand that more funding is now available and recommend that it is probably worth trying again.

Grants of up to £3,500 are available for specific projects; the application procedure is very straightforward. Call 0845 600 20 40 for an application form and contact your development officer if you need any assistance.

Roger Coote, BGA Development Officer

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Palace welcomes champions

(the ***White Planes*** picture co.)





THE Patron of the British Gliding Association, His Royal Highness The Duke of Edinburgh, welcomed British team members and their helpers to Buckingham Palace on a cold November day. The purpose of the event was both to mark British gliding's superb successes in 2001 and to support the team for the then forthcoming World Championships in South Africa.

Pictured above, from left, are Ed Johnston and his partner, Maryse Canaudin; His Royal Highness; Pami and Andy Davis; Helen and Russell Cheetham; Sarah Steinberg, Jay Rebbeck and Pete Masson. Ed, Andy and Russell were due to fly at Mafikeng; Sarah, Jay and Pete are each 2001 World Champions.

Above left: Gold medallists Sarah (Women's Standard Class), Jay (Junior Standard Class) and Pete (Club Class) in conversation with the Duke of Edinburgh. Two world champions, Gillian Spreckley (Women's 15-Metre) and Steve Jones (18-Metre), were unable to be present at the reception.

Left: Silver medallists in 2001, brothers Rich and Jez Hood, were instrumental in their teams' successes.

Below: the entire line-up of attendees at the event.

Right: BGA Competitions and Awards Committee Chairman Ron Bridges with his wife Jane (who helped rig/de-rig his glider, 676, at Buckingham Palace) share a joke with the Duke of Edinburgh.

Above right: Ed, Pami, Andy and British Team Manager Harry Middleton with His Royal Highness.







50 IDAflieg summers





STUDENTS of the German Academic Flying Groups (Akafliegs) and the DLR (German Centre for Aeronautic and Space Research) met for the 50th annual IDAflieg summer meeting in 2001 at Aalen-Elchingen airfield, near Stuttgart.

As well as the ASW 28, remaining points in the polar of the Nimbus 4DM and a second Duo Discus were measured in comparison flights with the DLR's "holy" (calibrated) DG-300/17m. ASW 24B, ASW 27, ASW 28, Duo Discus, Janus, Mosquito, AK-5, AFH-28, Hütter 30 and BS-1 were there for flying characteristics evaluation. The latter give students the chance to learn about older gliders and so helps them assess their newly developed prototypes, which do not always behave as expected.

The new differential GPS measuring system for comparison flights *(see in-cockpit shot of calibrated DG-300, above)* was tested further. It removes the need for a documentation aircraft and a lot of work evaluating the positions of gliders on photos. Making the data available on the evaluation computer now seems to work reliably and has another advantage: continuous logging reveals pilot error or other problems (such as turbulence) throughout the comparison. The previous system (taking one photo at the beginning and one at the end of each polar speed point) could have missed them. Instant evaluation of the results reveals anomalies that require another flight.

Researchers also investigated microturbulence, which seems to be present sometimes even before convection starts and affects profiles differently. The DLR Janus was equipped *(see picture above right)* with an acoustic system to record the point of laminar-to-turbulent airflow conversion. This differs in microturbulent air to calm air, so the state of the air during each comparison flight can be identified and its effects assessed. Flights with different c of g were also made to research its influence on performance. These results are an alternative to data from laminar wind tunnels.

The ASW 27 tested a new digital system that registers control movements and operating forces to record pilot workload during flight.

At the OSTIV sailplane development panel meeting, Prof Loek Boermans presented Hans Zacher with an FAI Tissandier Diploma. Hans, aged 89, developed the flight performance and characteristics evaluation scheme, which has been used at Idaflieg meetings since 1937. Until his retirement in 1976 from the DLR's forerunner, he led the meetings enormously well and directed glider development to combine high performance with easy, safe flying characteristics.

Text and photos: Jochen Ewald



Hans Zacher (left) with Loek Boermans and diploma

Telford show boosts gliding



VOLUNTEERS staffing the BGA stand at the Telford Air Sports Exhibition in December were Claire and Cris Emson; Pete Masson; Anne Mellor; Marilyn, Richard and Jez Hood; and Gavin Goudie. Observers noted a professional presence enhanced by a new BGA display stand (which you can see at the association's AGM in February). Combining stands with Midland GC allowed three gliders – a Skylark, Duo Discus and Discus – to be displayed, showing the range of options for newcomers. About 5,000 people are believed to have attended the event, many of them active airsports participants with a genuine interest in gliding. If your club monitors where trial lessons come from, please let Claire@eventia.freeserve.co.uk *know how many cite Telford as their source of information. Thanks.*



Soaring to 100,000ft in wave

AN ambitious plan to soar a new sailplane to record heights is under way. The Perlan project initially involves a DG-505M with its engine replaced by two liquid oxygen dewars and about 100lb of batteries. The unpressurised cockpit *(above)* is equipped for two pilots in pressure suits and is ready to fly to 60,000ft/18,288m (the world record, 49,009ft/14,938m was set in California). The plan, involving entrepreneur Steve Fossett and ex-NASA pilot Einar Enevoldson, is supported by NASA Dryden – with data and work on designing a new pressurised glider, *Perlan* (named after mother-of-pearl wave clouds). The goal is to to soar the Perlan to 100,000ft/30,480m; balloons have recorded wave at this level in Sweden and New Zealand. The initial DG-505 flights, which began in January, will explore the transition from tropospheric to stratospheric wave to inform Perlan's design. *S&G* will keep you advised of progress.

New chart symbols

THE WAY that gliding and hang-gliding winch launch sites are displayed on CAA VFR air charts is being changed to help other pilots avoid over-flying sites where there is a hazard from ground-based launch cables. The new symbol has a one nautical mile circle around the site, with the height of the cable shown above mean sea level. A minimum cable height of 2,000ft AGL has been added on to the airfield elevation to calculate the height shown, although where a site is under controlled airspace the relevant altitude may be the lower limit of that airspace. The new 1:500,000 charts are due to be available as follows: Scotland (Edition 21), December 27, 2001; N England & N Ireland (Edition 25), May 16, 2002; S England & Wales (Edition 28), March 21, 2002. See *www.caa.co.uk/dap* for updates

Winch Launch Activities

Due to the ground-based cable, Aircraft must not overfly Glider/Hang Glider Winch Launch sites below the indicated altitude.

Primary activity at location showing maximum altitude of cable AMSL G/2.3

Additional activity at location showing maximum altitude of cable AMSL G/2.3

Hang/Para Gliding showing maximum of cable AMSL ..... /2.3

Additional activity without cables ..... G



A Scenic Ladder?

I HAVE MORE OR LESS dropped out of competitions after having nearly done myself in through an excess of competitive spirit. The problem about rated contests, apart from the daft, life-threatening things one does to win, is that no task-setter will ever dare to send the competitors to any area of outstanding natural beauty, because that would mean coasts (sea-breezes, horror!) or mountains (wave and ridges, yeccchhh!). What serious UK contestants want is seven triangles around Birmingham, all in thermals, thank you very much. Scenery is scary: it involves unorthodox sources of lift (and sink) and maybe long retrieves.

There is a club that shall remain nameless who at weekends specialised (maybe they still do) in countless tours round the same tiny triangle, the two turnpoints of which were Didcot power station and Bicester aerodrome. The excitement consisted solely in seeing who went round fastest. That club has produced some great contest pilots, of course. But a coffee-table book with the title *Memorable & Scenic Didcot–Bicester Triangles* would be a pretty slim volume, even if lavishly illustrated with pictures of cooling towers and hangars. (Indignant protest from the B****r bar, "Hey, it wasn't always Didcot–Bicester! Sometimes it was Bicester–Didcot!" Indeed. My point exactly.)

Why don't we extend the idea of the Isle of Wight tour, briefly mentioned in the last S&G, to create a National Scenic Ladder? We need, say, 20 or more turnpoints. First, ten or more lighthouses, seaside piers or remote promontories; then a list of mountains: Ben Nevis, Snowdon, Sca Fell etc – Britain's top ten peaks. Photos would be semi-obligatory: a logger trace is accepted as proof of making the turn, but a photo, not necessarily in sector, gets a bonus. Every flight must contain at least one of the 20 turnpoints, and every additional turnpoint from the list during the same flight collects a big bonus. No speed points: only distance would be scored.

This idea could build! We can use websites or e-mail to communicate ideas and to suggest each week the optimum tasks for each region, according to the best available forecast. I am sure that you can already think of complications and refinements. Thus the main objection to what I have sketched out so far is that at present the attempts by pilots from Nympsfield and Dunstable to photograph St Catherine's lighthouse are not competitive, but co-operative. We try to help each other get round – a refreshing change from the mentality of contests, in which the truest joy is to see a rival sitting in a ploughed field far from home. There have in recent times been devised forms of co-operative competition (not such an oxymoron as it sounds) in which the collective goal of all participants is for this year's total score to beat last year's score.

Whatever "rules" (the word itself may be inappropriate) we adopt, we need to keep in sight the main idea – to encourage us to go somewhere beautiful where we have not been before, preferably in groups both to maximise our fun and our chances of getting round. Since there's no money or special glory involved, one could run several sets of rules and ways of scoring in parallel as an experiment.

Over to you.



sitting in a ploughed field far from home

Anoraksia Nervosa

It is not generally known that our site was used as a prisoner-of-war camp from 1941 to 1945. Indeed some of the huts are still standing, despite the prayers of many club members that a fortuitous tornado may remove these eyesores and deposit them on the large airport only six miles downwind in a westerly. They might find a use there, if one takes seriously the harsh and illiberal ideas currently mooted by the Home Secretary for dealing with suspect visitors from abroad.

However we ourselves could find the prison huts handy to deal with a new menace. Strange people in groups. By strange I mean both a) unfamiliar and b) slightly weird. They are very polite and unobtrusive as they wander across the gliding site, jotting everything down in little notebooks. No, I tell a lie: they do not write down anything that you or I would consider intrinsically interesting, such as the span, the aspect ratio, the presence of flaps or the wing-loading. Instead they doggedly record such trivia as the BGA registration numbers, which are tiny and need to be peered at through thick spectacles from a few inches away. On a modern T-tail glider this number is at the top of the fin, just under the elevator. There is a serious risk that if you do a vigorous control check without first bellowing, "Stand clear!" as one does when firing up the motor on a powered aircraft, you will generate a high-pitched squeal of anguish from a plane-spotter. Similar noises can result from a sudden decision to swing the glider round without first checking for nerds. (In the 30 years that I have been around plastic gliders I have discovered that there is one thing more painful than a whack on the head with the leading edge of a tailplane, and that is a whack on the head with the trailing edge. I am still discovering it, in fact, at least twice a season.)

"But they're quite harmless, aren't they?"

"I'm not so sure about that. How do you know that these apparently inoffensive aviation enthusiasts are not secretly feeding vital information to a hostile power?"

"Like who?"

"Well, like Lasham or, worse still, Karl Striedieck. All the stuff in their notebooks about BGA registration numbers, when decrypted, says something like, Pimple to Base: 1) average waviness on Team Rebbeck airfoils is .000735 per cent, 2) their ballast systems won't allow optimum aft CG position. Get 'em in the climbs, I advise. They could do that easily. I'd lock the lot up in Hut B till after the Nationals."

"Even the long-suffering women?"

"Sure: I bet when they come up all smiles and offer to wipe the wing and canopy

down after a shower you'll find their chamois-leathers are full of gravel."

"Y'know, you're paranoid."

"You bet I am: but not half as paranoid as all our enemies."

Other hugely-talented but absent-minded gliding geezers

The late Humphry Dimock (often affectionately called Dimphry Hammock in honour of his career as a Royal Navy Lieutenant-Commander) was a legendary pilot of fierce determination, still competing into advanced old age. He beat me in the Northerns at Camphill in 1961, and I won the same



"Don't look up!"

competition, just a whisker ahead of him, in 1962. He said on that latter occasion: "I hope your tail falls off" in a tone of voice that made me laugh but caused me to post a guard over the Skylark 3's rear end. A Portsmouth Gliding Club member recalls that Humphry took off in a foreign contest and found (as one does) that he had the car keys in his pocket. He had no desire to land and lose precious points, so:

"Only Humphry could have thought of attaching his handkerchief to the keys and, with due warning, dropping them from 3,000ft over the launchpoint..."

The writer is mistaken – I have heard of people doing the same in the USA, and with the same dismal result. The outcome could of course be even worse than merely losing the keys. I would guess that even with a large hanky attached, a set of car keys would be a dangerous object with a high terminal velocity. The rule for those on the ground hearing the pilot's broadcast (or in Lt Cdr Dimphry's case, broadside) must be: "Don't look up!" In fact you should dive into any vehicle with a hard roof, or hide under the nearest wing, if you have failed to persuade the pilot by radio not to do anything so rash.

It would be safer for the immobilised crew to ask someone on the ground how to hot-wire the ignition. A car thief, or a retired bank-robber with experience of driving getaway vehicles, would be a good person to have around at such a time. Indeed such a resourceful individual might be a great crewman, so long as you could make sure he did not disappear permanently with car, trailer and glider while you were collecting your winner's trophy.

Of course nobody carries handkerchiefs these days, not even tucked up one's sleeve, as the British officer class used to do. A Kleenex would shred uselessly on the way down, giving the keys lethal momentum and ensuring there was absolutely nil chance of their being found – unless they made a distinct noise like going through a glider canopy. But such good luck would be rare.

There's no substitute for a comprehensive, written, pre-launch checklist. Except at the last moment I am always sitting on the list or have left it somewhere on three square miles of airfield. Not losing the checklist is an item which itself should be the first item on the checklist. The vicious circularity of this problem is clear even to those who, unlike moi, have not studied Formal Logic at one of our great institutes of higher learning.

Words fail us

When I was a mega-magazine publisher in the 1980s I had an editorial appropriation of about a million pounds a year and strangely my editors (note the plural) had no shortage of material. In fact they had to fend off would-be authors with a moat, portcullis and boiling water.[1]

However, finding copy to fill a journal like S&G is always a headache. You have no budget and all the writers are volunteers, willing or not as the case might be. Some editors without funds get so desperate that they exhaust themselves far into the night writing the whole magazine under a series of made-up names. There is even a rumour that this column is written by the editor, the original Platypus having done a bunk to Rio with a blonde some years ago.

(The precedent for this substitution was in the 1991 World Championships in Texas, when Plat had to hasten home for a family emergency after six competition days. During the next six contest days a large sack of inert ballast was strapped into the back seat of the ASH 25, wearing a Platypus baseball cap. Despite this being in the year before GPS made it easy to find one's way around, Robin May's performance with the dummy navigator was significantly better than with the genuine article.)



a comprehensive, written, pre-launch checklist

To generate copy in the Silly Season, some stunt has to be manufactured. I have suggested to the Editor that she should fly a scenic cross-country with me next year in a two-seater (T-21, ASH 25, or Janus C, take your pick). Then we can get not one but two columns out of it. The big question is whether, if we published our separate accounts without comparing notes, it would be recognisable as the same flight.

Maybe not, but in that case the readers would be getting double value for money, wouldn't they?

mdbird@dircon.co.uk

The Platypus Papers: fifty years of powerless pilotage *(hardback, 160 pages, 100 Peter Fuller cartoons) costs £19.95 + £3.50 p&p. See* www.hikokiwarplanes.com *tel 020 8748 6344, fax 020 8741 1757 email* mdbird@dircon.co.uk *Or from the BGA: 0116 253 1051/*www.gliding.co.uk

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More grunt for the Grob



Jochen Ewald has tried out the "turbo tug" – the G-109 motorglider with a new engine

"IF YOU NEED more power, go to Korff", – that's what you'll hear from pilots of motorgliders like the AVo 68 Samburo, RF-5b Sperber, G-109A, H-36 Dimona or Valentin Taifun. Many have been modified to take more powerful engines, and type-certified in Germany, by Rainer Korff, Franz Volking and his team.

For the Taifun, the team became closely involved in engine development with the Limbach factory; the 100hp L-2400 EFI was developed according to Korff's requirements, water-cooled and with electronic fuel injection and ignition. Now, with the130hp turbocharged variant of this engine the most powerful motorglider engine has been created. At Aschaffenburg airfield, Rainer Korff offered me the chance to try his new "super-powered" Grob on its first aerotows of heavy two-seaters.

The G-109B L-2400 EFITurbo has five times the power of the first two-seater motorglider built in considerable numbers (Scheibe's SF-25(A) Motorfalke) – do we really need this much? Grob originally developed a 2.5-litre 90hp VW-based engine, which makes the G109 a fine 190km/h (100kt) cruising aircraft. More power and an optimised constant-speed propeller can bring the cruising speed well up into the yellow on the ASI. But if you fly from high, muddy, short or hot airfields, you might well find yourself in marginal situations at max weight of 850kg (1,875lb). And motorglider aerotowing is coming: cheaper, safer and ecological. You could be glad of extra power under your cowling!

Built from the mid-Eighties onwards in large numbers and distributed worldwide, the G-109 is known to be strong, docile and easy to fly. The Royal Air Force operates 54 (as Vigilants) in the Air Cadets. The G-109B is one of the rare aircraft of its class with an acceptable payload: an empty weight of about 620kg (1,367lb) and a max AUW of 850kg (1,875lb) allows a sensible amount of fuel in its 100-litre tank – even when flying dual. Grob stopped production some years ago, so now only used aircraft are available.



The modified Grob (left) can be recognised by its new cowling with round air inlets

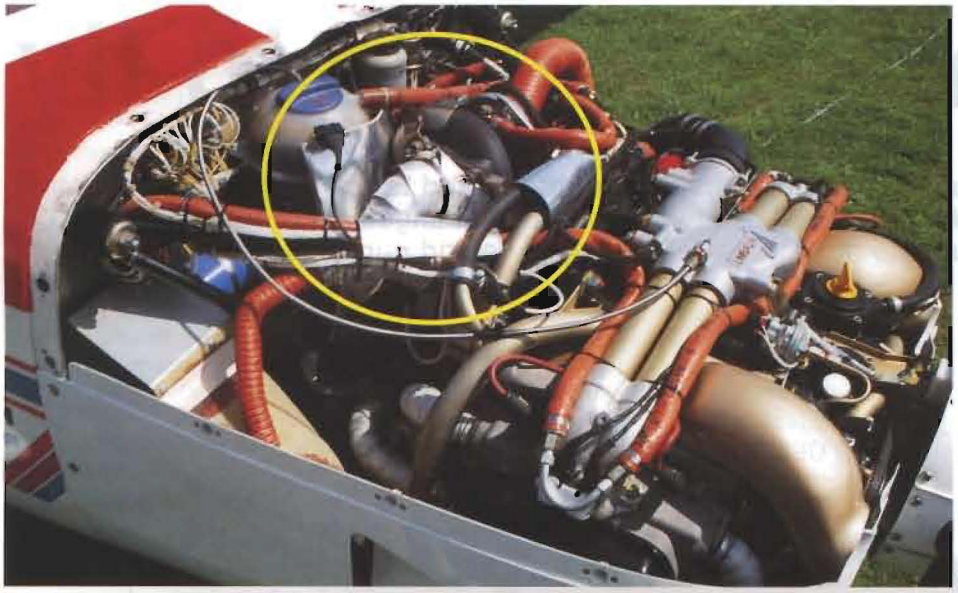
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The Korff-Limbach L-2400 EFITurbo makes a good first impression: professionally installed, this new engine even weighs a bit less than the original. So empty weight with the new engine and towhook equipment is roughly the same. The modified G-109B L-2400 EFITurbo can easily be identified by the new, elegant cowling with round air inlets and the water cooler in its lower part. A little piece has been cut off the bottom of the rudder to for towcable movement, while the Tost towhook is fixed to a bar connected to the fuselage tube.

In the factory prototype D-KHBA, the cockpit remained nearly unmodified. On the left side of the instrument panel, there's an adjusting turnknob for the Mühlbauer electric constant-speed prop, and on the right side an emergency switch has been added. With this, the pilot can change the electronic engine controls to a fixed emergency programme in the case of engine problems. In this mode the power is reduced a bit, but it gets you home safely. Positioning of other switches and operating knobs will be re-designed, as the new engine needs fewer of them. So the remainder can (and will) be placed in easier reach of the pilot.

Like its non-turbocharged 100hp brother L-2400 EFI, this engine turns at max 3,000rpm, and doesn't need a reduction gearbox. Even at 2,600rpm, 120hp is available. At 9.5 dbA, less noise than the German government threshold, it can carry the environment protection sign, which lowers landing fees at many airfields here. The three-position-prop switch lever under the centre of the panel became the (now yellow) towcable release handle (or cable cutter, if a towcable retrieve system is fitted).

Before aerotowing, I took a solo test flight. Main switch on, fuel pump and electronics switch on (a separate switch when I flew in 2000 but due to be integrated to the starter key) and a turn of the key starts the engine immediately. There is no choke: the fuel



The turbocharger at the heart of the L-2400 EFITurbo is circled on the above photograph of the demonstrator

injection is set by the electronics, according to the engine temperature. After a short warm-up phase I do the engine checks: at full throttle 3,000rpm, and a bit more than 41 inches manifold pressure. The propeller control is checked by turning its knob to lower rpm and back to full, and the emergency function by switching on emergency. The engine in D-KHBA is equipped with a single ignition system.

Acceleration during take-off is impressive: after a short ground-run the heavy motorglider is airborne and climbs with the variometer indicating 5m/s (9.7kt). During take-off the manifold pressure goes up to a bit more than 42 inches, so I have to take the throttle back a bit to stay in the certified range (41). With propeller rpm reduced to 2,800, showing no significant change in the climb rate. To reach 1,000m (3,281ft) took 3.5 minutes; the climb rate did not decrease with height thanks to the turbocharger. The engine runs smoothly and cockpit noise levels are low – as is fuel consumption: In test flights, 12-15 litre per hour in economical cruise was measured, for aerotowing about 25l/h is estimated – about half the level of conventional tugs.

Time to try aerotowing. The first glider is an LS4 weighing about 320kg (705lb), which gives me a feel for the Grob's towing characteristics. I barely notice the weight at the tail, and reach 1,000m (3,281ft) after a bit more than six minutes.

Although the weather is hot – nearly 30°C on the ground – the indicated engine temperatures stayed in the green, so I decide to take the DG-505/20m (with one pilot) weighing about 550kg (1,212lb). Again the acceleration is excellent: both tug and glider lift off at the same time at about 80km/h (43kts), with a climbing speed of 105-110km/h (56-59kts) feeling optimal. After nine minutes the DG releases at 1000m. Next is the same glider with two pilots: 630kg (1,389lb). People on the ground confirm that at the end of the airfield the combination is higher than the local 180hp Robin, towing a (lighter) ASK-21, as the Robin has to accelerate to a higher speed for best (and safe) climb! During this tow, I feel the thermals starting and use them to improve the climb (which is much easier and effective than with a fast tug); we reach 1000m after only eight minutes.

For descending and the cable-dropping circuit only two minutes is needed as the water cooling allows descending with the engine running idle and full airbrakes. At higher speeds, the upper-surface Schempp-Hirth airbrakes are sucked out lightly, so the tug pilot does not need to yank the airbrakes out as with spoiler-equipped motorgliders.

This descent with about 170km/h (91kt) is so steep that special care has to be taken with lookout. Although the cockpit view from the G-109B is excellent, you cannot look through the floor! If you descend straight, there is a risk of approaching other level-flying aircraft coming from behind or underneath you, so I recommend descending in a steep circle.

For tug pilots the G-109B L-2400 EFITurbo is very comfortable. Its good overview, low control forces, effective and easily adjusted trim, and effective air ventilation protect you from fatigue. During taxying you may even open the door a bit (but don't let it go!).

The upgrade of the G-109B to the "Turbo-Tug" is an attractive option. For about 43.500 Euros the well-loved training and touring motorglider becomes a tug that is able to tow nearly all gliders safely and cheaply. Since I flew these first aerotows, eight G-109s have been modified with the Limbach engine, and final JAR type certification is expected shortly for towing max loads of 790kg on grass and 850kg on a hard runway. In normal use, of course, it becomes one of the fastest and best-climbing motorgliders, with simpler engine handling and low fuel consumption.

Words and pictures by Jochen Ewald

When the winch went up in smoke

WITH ONLY one serviceable drum on our winch and the new winch experiencing teething problems, (its final effort closing the airfield as the smoke generated by a blown piston ring drifted over the runway) the prompt arrival of the Grob 109T tug was essential for a successful open day at the then Phoenix GC at RAF Bruggen, in Germany.

I had to confess a little trepidation: I had once, in a Discus, experienced a very indifferent aerotow by motorglider tug. Now, not the lightest of pilots, I was to fly the K-21 with an assortment of visitors. I also knew that the Turbo Grob had only made the mandatory (by German air law) five flights to attain its aerotow licence: this was to be its real test.

My wife, and DCFI, was voted most expendable and therefore my check pilot – oh, I forgot to mention, I'd been out of the country for a while and was out of currency, winch and aerotow. This was my check flight.

We were briefed by the Grob pilot, Jochen Ewald: "Keep the wheels of the tug on the horizon; it is also a glider so my best climb will also be yours!" And off we went.

The air was very stable as we rolled down the paved runway. We were airborne very quickly indeed with the tug remaining on the ground for only a second or so longer than us.

We paused at around two feet while the Grob 109 accelerated to an indicated 65kts in a matter of seconds. This speed was easily in the tug's range and was deemed to give the most efficient climb for the K-21. Our rate of climb steadied at +4-5kts.

We took our tow to around 600m (1,800ft) QFE. The tug departed, dropped the rope and landed in a total of only six minutes.

The Grob 109B managed an average of 6.3 minutes over 19 launches, all to 600m QFE and at a fuel consumption of only 22 litres per hour.

On the downside is the noise. While it is quieter than a Chipmunk or even a Super Cub it is noisier than the Super Dimona.

However, it is more efficient than the Dimona and so the noise is for a shorter time.

All in all, I believe that the motorglider tug is the way of the future and the Grob 109T will be part of it for some time.

Martin Clegg

Defending freedoms to fly

The future structure of, and continued access to, airspace in the UK and Europe is probably the most important challenge to gliding in the next few years as fundamental changes are proposed from Europe. Carr Withall provides an update on what is happening to defend our freedoms to fly

THIS ARTICLE may not be your idea of good bedtime reading but it gives a brief outline of the work of the BGA ASC (BGA Airspace Committee).

They are involved with many agencies and departments. By being pro-active they trust we can continue to enjoy our wonderful sport.

Yes, gliding does lose "free" airspace to both civil and the military from time to time. However, as the late Bill Scull said long ago: "without our very personal involvement with the CAA (Civil Aviation Authority), NATS (National Air Traffic Services), LATCC (London Air Traffic Control Centre), ScATCC (Scottish Air Traffic Control Centre) and the MoD (Ministry of Defence) we would lose much more".

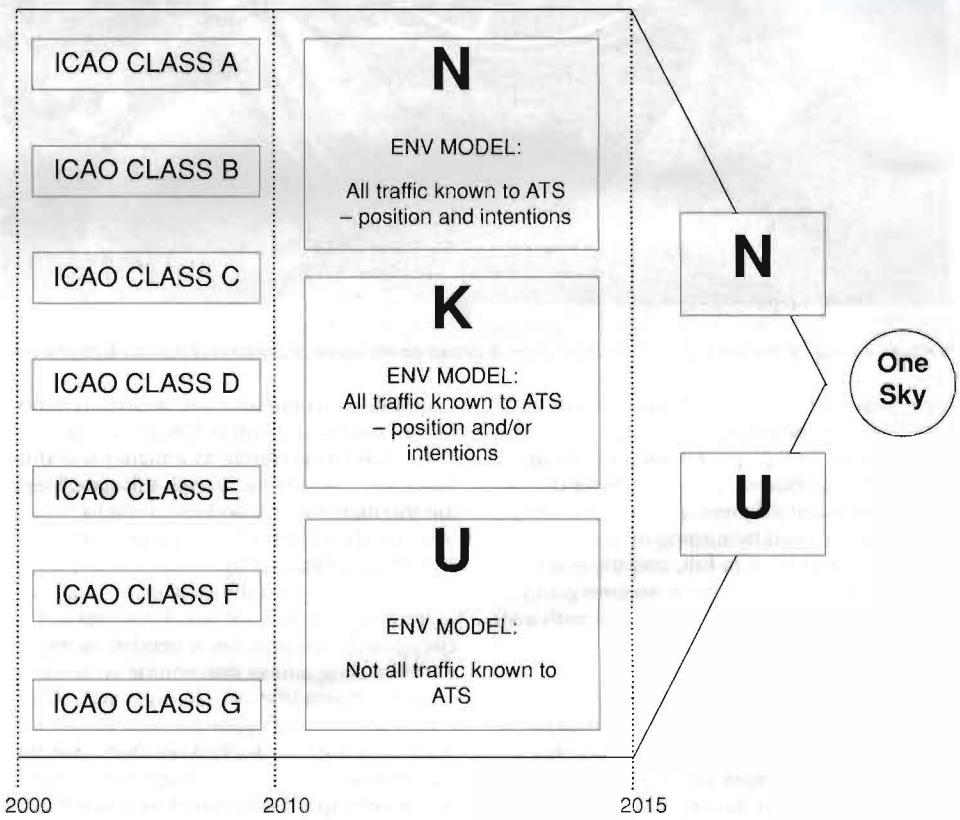
The gliding community is respected throughout all these organisations, having always been represented by experienced pilots and air traffic controllers among our members.

The BGA ASC is chaired by Carr Withall, a member of London GC and retired BA Captain who flies ASH 25 number 8. Bruce Cooper, a British Midland Captain, is vice-chairman. He flies his LS6 from Booker. There are regional members around the country, who are either practising or retired airline pilots or air traffic controllers.

Airspace users can be divided into three categories. There are Commercial operators, who generally fly IFR (Instrument Flying Rules), Military operators in MoD, and GA (General Aviation), which includes all sporting and recreational aviation including gliding.

Both commercial operators and the military normally require ATC (Air Traffic Control) due to their operating conditions and speed. Therefore controlled airspace is designed to keep that traffic apart from each other and apart from GA activity.

As we know, some military flying also takes place in the Open FIR (Flight Information Region).



One sky one day *is the slogan for the move towards harmonisation of European airspace. The diagram represents the transition from the current situation (on the left) to, at first, a "Traffic Environment Model" (shown in the central column as ENV MODEL; ATS stands for Air Traffic Service). Under this model the ICAO Airspace classes A to G may between the years 2010 and 2015 be applied within three new categories of airspace: N, K and U; it is not yet clear which ICAO classes would fit within each of the new categories. Finally (on the right) harmonisation into two classes (N and U) is scheduled for 2015. For an explanation of the three new categories, see the final section of this article, on the opposite page, headed* European plans for the future management of European airspace

UK airspace management structure

The umbrella regulatory body for all aviation in the UK is the CAA. Twenty-five years ago the CAA formed **NATMAC** (National Air Traffic Management Advisory Committee). Carr Withall and Bruce Cooper attend the meetings. This meets twice a year and every branch of aviation is represented. Through the year NATMAC send consultative letters on every proposed change to all classes of airspace to all the aviation organisations.

The **GAWG** (General Aviation Working Group), of which Carr is a member, meets every three months and is a small group of six pilots who are very experienced in their particular field of aviation. They have been invited by the CAA's DAP (Director of Airspace Policy) specifically to represent GA as a whole and not to be partisan for their own organisation. The meetings and minutes are "in confidence". The group put their views forward on proposed plans by both the CAA and MoD so that the NATMAC consultative process can be refined.

SASWG (Surveillance and Spectrum Working Group). This group meets twice a year and focuses on radio, radar, transponders and the threats from outside agencies eg, BT and mobile phone companies who wish to use aviation frequencies.

Of particular concern to gliding are proposals on the carriage of transponders in GA aircraft, including gliders.

MCWG (Maps and Charts Working Group). This group meets as required when any aviation body proposes a change to the aviation maps. Last year the BGA ASC proposed a change in symbols, following both the increases of GA aircraft flying low over gliding sites and the high number of Airprox reports within one mile of gliding sites. The changed symbols will be on new maps this year and with every map will come the flyer shown on page 15. There will also be articles in aviation magazines highlighting the dangers of flying into a cable and how busy it can be close to many gliding sites.

Airprox Board. This meets monthly to discuss every reported Airprox – and there are hundreds each year. The Board consists of civil and military pilots and controllers from different spheres of aviation. Bruce

Cooper sits on the Board as a BALPA (British Airline Pilots' Association) representative but also covers any incident involving gliders.

Incidents have been very thoroughly investigated before they come to the Board, which then decides the level of risk of collision and how possible changes in procedures or operations may reduce such incidents in future.

Airspace changes

When the BGA ASC hears of proposals – officially or otherwise – it contacts the proposer to arrange a meeting and he receives the excellent BGA video on cross-country gliding. These face-to-face meetings between the ATC unit and Carr Withall or Bruce Cooper are exceptionally useful. Invariably, a compromise is achieved, allowing gliding to continue with little inconvenience.

In some cases airspace that has been there for historic reasons is rolled back, to the benefit of a local club. With their extensive personal contacts Carr and Bruce can put clubs in touch with the appropriate department to put their own case. The Kent club achieved a notable success in rolling back the London TMA. LATCC have been particularly helpful over the last few years.

However, the bad news is that the Government plans further development of regional airports. These airports will be requesting increases to their controlled airspace.

Class D airspace

As you are aware, pilots have to contact the ATC unit to obtain a clearance to enter and fly through any Class D airspace. Most glider pilots prefer to route around this airspace, as the workload to fly, find lift, navigate and then talk to a controller is too daunting.

However, what the BGA needs to know is how many pilots have asked for clearances to fly in Class D airspace and what was their experience.

If glider pilots are to continue to have access to Class D airspace it is essential they use the current arrangements as much as possible. Before the BGA can go to the CAA and complain or praise a particular ATC unit there is a need for pilots to send the BGA ASC and the CAA a Class D form with a very simple report of their experience. Every club should have copies of this form.

GA pilots are having many refusals to enter this airspace and at the moment I am relying on Ralph J for his encounters with Southampton.

Transponders

After a mid-air crash over India some years ago, which may have been prevented if both aircraft had been equipped with transponders, ICAO (International Civil Aviation Organisation) came out with a demand that every flying machine throughout the world must be fitted with a transponder by 2002.

This appears to have been a knee-jerk reaction without reference to selective applicability.

A transponder is a type of 'radio' equipment that sends out a signal at very high power (200 watts at the aerial). This signal can be picked up by radar up to 150 miles away and the controller can 'see' that particular aircraft and also read its height if it has a Mode C transponder.

For aircraft without electrical generators the power required for current 'commercial' transponders is impossible for them to achieve. Therefore the CAA sponsored the development of a low-power, light-weight, battery-powered transponder with height readout (Mode C) After several years this 20-watt transponder is about to have flight trials early in 2002.

Most countries could not achieve the ICAO deadline and so they 'filed a difference' with ICAO and set their own criteria for types of aircraft to be fitted and date for compliance.

The current position in the UK is that the date for GA is 31 March 2008 in all classes of airspace. However, this assumes that there will be, by then, a transponder on the market suitable for gliders and hang-gliders, etc. The CAA is about to start the long consultation process on this subject and naturally many types of GA activity are up in arms at the very thought of this requirement at all! One of the main arguments for transponders is that the low flying military aircraft will 'see' an aircraft and avoid it.

However this assumes that the military aircraft is fitted with TCAS (Traffic Collision Avoidance System). At this time, only one type of aircraft is being fitted with such a system and other types may never be due to cost and technical difficulties.

Of great relevance to GA is the totally unproven safety case, when there has only been one military civil collision with a GA aircraft in the last 10 years in the Open FIR. The fact that large number of transponders in a small area will swamp the radar system has not been fully addressed. If their signals will be filtered out by ATC why have them? There are over 16,000 registered GA aircraft in the UK. The still unknown cost is also very relevant to some sections of sporting aviation.

Radio 8.33khz frequency spacing

The rumour that we shall have to equip our gliders with a new radio with 8.33khz frequency spacing, compared with the current 25khz, is not true.

The use of this frequency spacing to give controllers more frequencies is already in use in Europe above FL245 (Flight Level 24,500ft) and it will come into use in the UK for en-route airways and possibly the London TMA after 31October, 2002.

There are no plans for it to be used in the lower airspace for years and no plans for its use in the Open FIR. Gliders flying in the upper airspace will continue to talk to military controllers using current 720/760 channel radios with 25khz spacing.

Flight Level 195

It is the case that the Upper Airspace level will change in the future. At present over the UK, the Upper Information Region (Upper airspace Class B) starts at FL245. Over Germany it starts at FL100 and is Class C airspace. Over Spain it is FL245 (Class G) and in France it starts at FL660 as Class G airspace. France also has a level of FL195 above which only IFR-equipped aircraft may fly (Class A).

As far as UK wave sites are concerned we shall continue to have access to Upper Airspace on a tactical basis as we do now. Carr Withall is on the two CAA working groups discussing both Flexible Use of Upper Airspace and changes to levels and classes of airspace. These two groups are already fully aware of the needs of gliding and the BGA ASC's objective is to ensure that this important area of our sport will continue.

European plans for the future organisation of European airspace

This total lack of harmonised structure within the European states, for all classes of airspace, led the European Transport Minister (Loyala de Palaccio) to act, in 1998. Several bodies were formed and they have developed to become the Eurocontrol Airspace Strategy for the 38 European states (ECAC). Their slogan is *One Sky One Day*.

The strategic intent is to: "progressively move towards a uniform airspace organisation leading to one single continuum of airspace – *One Sky* – for all the ECAC Region". This plan will take until 2015 to implement and of course it is intended to enable the air traffic system to handle the ever-increasing demand for airspace from all airspace users. The plan envisages there will three classes of airspace. N, i**N**tended Traffic, K, **K**nown Traffic, U, **U**nknown Traffic (that is, not all known).The second two-day Eurocontrol workshop to discuss this harmonisation was due to take place in Brussels in January and many European gliding organisations, including the BGA, planned to be present. This will be followed by a conference of Europe Airsports in February in Paris to co-ordinate the approach and response of all European GA interests to the changing airspace scene.

Again, the BGA ASC will be present and taking a leading role.

Gliding has a far far greater need for uncontrolled airspace than most other sections of the GA community. Therefore it is absolutely vital that all European gliding organisations send a clear message, at the highest level, to their governments with facts on the extent of gliding activity in their countries. The BGA is fortunate to have direct access to, and involvement with, all sections of the CAA where it will continue to fight for the interests of glider pilots.

The BGA cannot stop progress but it can oppose legislation when it is clearly unnecessary, detrimental and costly to gliding.

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Australia on a budget

Simon Bennett explains how an expedition enabled him to get three weeks' gliding in Oz for the cost of a ten-day package holiday in Europe



Expedition leader Allan Tribe and Alan Latemore scan the sky before deciding on which glider to take up

THE CLOSEST I had previously been to gliding in Australia was reading adverts for well-heeled, experienced pilots to visit commercial operations and pay substantial rates for the privilege – something significantly out of my reach.

The Army Gliding Association recently proved there is another way... organise a club expedition with lots of new Bronze and Silver pilots, take over a club and operate its fleet. Members and club officials have to take on as much of the preparatory work as possible, to reduce costs and build team spirit. The result? Ten people flew for three weeks in Australia in fantastic conditions for the cost of a Mediterranean holiday.

On a chilly October afternoon in 2001, our collection of intrepid aviators assembled at Heathrow, brimming with anticipation and excitement; 28 hours, five meals and several Sakes later, we reassembled at Brisbane to a typically warm welcome from our hosts, the Darling Downs Soaring Club.

The expedition aimed to achieve long-distance flights; to introduce novices to cross-country flying; and to build team spirit. We represented a broad experience range. At one end was our CFI, Allan Tribe, a full Instructor with all three Diamonds; at the other, two early Silvers (Werner and me) and three pilots who had done their Bronze with Cross-Country Endorsement (the minimum qualification for going) the week before.

Having arrived at base, we then travelled to our Bugs and Beasties safety lecture at the Army Air Base at Oakey, which was presented by a lance-corporal of the Australian Army. It did not help our concentration that, despite being surrounded by dead things in jars, she was really rather attractive! Full attention was restored when we learned that Australia has more things that will kill you than anywhere else. That evening we met our first one; a four-foot brown snake. It was several days before we could walk without looking at the ground.

Next day, we were up at 06.00hrs and rolled out the gliders for check flights (instructors first) over the rather featureless terrain. The big silos that would guide us back on final glide were a comfort. The aerotow, too, was novel. Although we had familiarised ourselves with their preferred low tow position, only a few of us had previously experienced the tug digging in a wingtip and thermalling as if riding the wall of death. Our tow position control is now second to none! I was teamed with Allan for my check in the Puchacz. He pointed out the landmarks; most important was the edge of the Oakey airspace – we were restricted to below 5,800ft. I laughed. I hardly ever reach that on great UK days.

Forty-five minutes later, my centring had sharpened up and I had to break off to avoid entering airspace. This was going to be some trip!

The next two days were spent getting used to the conditions and equipment. Bod, attempting a 500km, believed he completed it but only had 450km on the logger. The mismatch between GPS waypoints and the

'He spied a swimming pool, surrounded by young ladies in bathing costumes, in the grounds of a large house. The 50km could wait...'

logger was thus discovered and fixed. Richard came back beaming, believing he had done Gold distance, Gold height and Diamond goal, only to discover that 'beer can' turning point (TP) sectors are not allowed for badge claims. And he was a few feet short of Gold height.

A tremendous *esprit de corps* developed, a great help for those new to cross-country flying. We knew that if it all went wrong and we landed out, we would be retrieved from the field by a happy, smiling crew... Well, we'd be retrieved, anyway!

Still in single figures for real landouts but with increasing confidence, I managed to cut the umbilical cord on the third day and set off on my first 300km attempt – Chinchilla, Miles and return. What a thrill to see the open country and fabulous blue sky dotted with impressive thermal-producing clouds! I rounded the TP to the north of Chinchilla in sink but managed, just, to get back to an earlier thermal over the town. At 5,000ft and with growing faith, I set off over Tiger Country, the 75km² area of forest and melon holes between Chinchilla and Miles. Having twice lost height and returned to Chinchilla to climb, I made better progress on the third try. Then I heard on the radio that Trip Rodgers had landed out: it had been flat from Tiger Country to the TP. I turned towards home but missed the energy line and joined the crawling insects at Brigalow, having completed about 130km. Never mind: it was my best distance to date. I spent a pleasant late afternoon in the cockpit eating my in-flight rations, dozing and planning my next 300km bid. DJ did his whole Silver in one flight. That evening his bank balance and club bar receipts went in opposite directions.

At 14.30hrs on the first Tuesday of November, during our second week, all Australia came to a standstill for the Melbourne Cup, Australia's premier horse race with prize money of more than Aus$4 million. The day itself held the promise of that elusive boomer. With several of us still chasing badge flights, the gliders were prepared and launched.

Craig felt comfortable that he would achieve the 50km required for the Silver Badge: his out-and-return (O/R) to Jimbour was just short of 100km. The outbound leg was without incident. But then things started to deteriorate; he got low having rounded the TP. As it was only half-way through the day, he started for home. Under 2,000ft and still going down, but confident of finding lift further on, he conscientiously began looking for a field. Within a few seconds, the decision was made. He spied a swimming pool, surrounded by young ladies in bathing costumes in the grounds of a large house – the 50km could wait! Lining up on the paddock parallel to the pool, down he went. Calling the airfield, he gave his location, said he and the glider were OK, and told us not to bother rushing to retrieve him. He was not sorry to be met by several of the ladies, driving a 4x4, with which they towed the glider to the edge of the field. His new

friends invited him to join in the pre-race festivities and thrust a beer into his hand, making it impossible to refuse – or that's how Craig tells it.

Our crew arrived a few hours later to find him disinclined to leave what had been the party of the year. The Cup was won by Ethereal, beating our favourite, the British-trained Give the Slip. Skilfully assisted by his new-found, female friends (dressed in the typical crew rig of bikini and sarong) the glider was de-rigged and a happy pilot reluctantly returned to normal life.

The friendliness of Australians was a delight, particularly when we descended unannounced into their fields. Our hired 4x4 and a minibus gave us two retrieve vehicles. Most of the retrieves were fine, but there were exceptions. Like when I landed the Kestrel in a field late one afternoon...

Taking a circuitous path from the field to the road, I waited for Chris Lewis-Cooper and the minibus to arrive. At dusk we realised that the only way out for the glider was across two ploughed fields. We called for the 4x4. By the time it arrived, it was 21.00hrs and well and truly dark. Noticing headlights, torches and voices at the roadside, the landowner turned up. We asked if he knew a route in and out for a vehicle. "No worries, mate," he said, "I'll use me ute" (utility truck). In the dark, we needed GPS to locate the glider; the ute then got the glider safely to the roadside. The 4x4 crew departed, leaving Chris and me with DJ for help. But none of us had ever de-rigged a Kestrel! We stood perplexed, hoping someone had a cunning plan. "Fancy a beer?" chirped our local friend. We had not noticed that he had been emptying his large box of beers and now felt he could be useful. For the next two hours, it was reminiscent of a Marx Brothers' scene. "Shall I pull this pin out?" "No, no – please don't touch that." "Want a beer, mate?" "No thanks, just hang on there, please." "Why d'ya land in my field, d'ya want a beer?" "No, just ran out of lift." "I'm quite strong y'know." "OK, carry the wing, thank you". We made it home – eventually.

On the second Thursday, four of us declared 300km and set off north-west. DJ shot ahead, crossing a 30km blue hole; I made it across on the third go, having logged a good less-than-500ft low point. Richard and Werner Stroud tiptoed across and joined me in a thermal over Dalby airfield. At 6,000ft, we headed on to Chinchilla, the first TP. We all rounded Chinchilla at various heights, although Werner got so low he put his wheel down. Following an impressive demonstration of scratching, he continued but about 20km behind. Sharing a climb with a bird of prey (far better than me at soaring), I left at 5,000ft heading south-east towards Brookstead, the second TP. We made good progress until discovering the ideal track went through airspace.

Werner sensibly landed at the club, but we three pushed on again into the blue. In deteriorating conditions, DJ was the first to greet *terra firma*, at the TP. I was still just within range of the club myself but it was possibly my last day so I pressed on. Thirty minutes later I listened as Richard, clearly looking for someone to share his landout beer with, joined DJ in his field. I prepared to land out, rounded Brookstead at 1,800ft, moved 3km up track and picked a field. My 300km bid and last flying day ended after nearly six hours, 37km short of goal!

That day, Allan and Bod claimed the expedition's longest flight. They were on task in the DG-500 at about 10.30, working weak thermals from 800-1,500ft. An hour later they were 50km up track at 4,000ft. At 150km, conditions were exceptional, with thermals averaging 700fpm, to 9,000ft. After rounding the TP at 15.00hrs, the 285km return leg started well but progress dwindled. The final 100km was too sluggish: they would have arrived in the dark. So with 30km to go, out came the engine. We think Allan just didn't want the bar tab for the retrieve! In 8hrs 45 minutes, they did 540km of 570km. The expedition's last flying day was the Thursday of the third week and was a success – Richard did his 300km.

Introducing novices to cross-country flying and advancing each individual's experience were the expedition's main aims. It achieved them. Experienced members managed at least 300km every flying day. Allan recorded an impressive 413km having taken off after 13.30 as well as his 540km with Bod. Andy, Trip and Bod also registered 400km-plus flights. DJ, arriving with Bronze and a week-old Cross-Country Endorsement, flew Silver height, distance (112km) and duration in one flight. He then flew 220km of a 300km. Craig arrived with a week-old Bronze and Cross-Country Endorsement, and completed a 100km, with Silver height and five minutes short of duration, on the first day to find his logger had failed! Doing it all again (twice), he went home with Silver. Chris, another new holder of a Cross-Country Endorsement, landed out a sickening 3km short of Silver distance on an early flight, but did go on to achieve Silver. While not climbing the badge ladder, Werner and I flew complicated gliders and blew away our previous best cross-country speeds and distances.

We all progressed in confidence and experience – feeling we accomplished more than during a whole UK season. We are now planning more space in the silver cabinet and looking forward to making a sizeable impression on the Inter-Services next year – watch out, RAF!

Useful tips on organising an expedition

TO ENCOURAGE the inexperienced, costs had to be low (many of the pilots earn £15,000-£20,000 pa). A personal contribution of £800 was set and we were encouraged to seek additional contributions. These were mainly grants from Corps and association funds. Of huge benefit was the generous donation by Westland Helicopters. It enabled us to worry less about flying times and helped on a day-to-day basis with, for example, taking higher tows when needed. To obtain a donation/ sponsorship, study the articles of the fund or association to see if you can meet their aims, even slightly. Most were extremely helpful but they do need something in return: say an article as a minimum and usually good publicity material, too.

To make an expedition of this nature work, although it should be centrally co-ordinated, all members must take an active part in the planning and eventual delivery. Use people's experience to detail jobs such as trailer roadworthiness, food supply, glider airworthiness, and website update and PR. Forward planning and up-front payment allow for block booking rates on airlines, and discounts for car hire. As you are there to fly, the accommodation needs only to be warm and dry – the bunkhouse was excellent for this, with the added benefit of a washing machine. Central bulk purchase of food was co-ordinated but we all took turns cooking. Those claiming they couldn't produce a meal for ten got the washing up – they soon learned!

As well as the financial benefits, the expedition approach means that a range of pilot experience can be matched to a balanced club fleet; and the group's instructors, knowing pilots' abilities, can ensure these are exploited.

The Army Gliding Association has now visited DDSC twice and been made very welcome. Most of the flying has been in the working week allowing some exploration of the local area at weekends. Local pilots can fly as normal. The best time to visit Queensland is October-December since thunderstorms are more prolific as summer progresses.

Allan Tribe and Simon Bennett



Left: The AGA team at the Darling Downs Soaring Club in Queensland, Australia:

(back row) Trip Rogers. Craig McDougall, Bob Blanchard, Werner Stroud, Allan Tribe, Andy Hill, Richard Misselbrook

(kneeling) DJ Graham, Simon Bennett, Chris Lewis-Cooper



Above: Chris Davison with the AC4 (or Russia) in which he finally secured his Gold distance ... after several abortive attempts and in a season blighted by foot-and-mouth

Why span is for wimps

Below, Chris Davison shares his diary of achieving that elusive 300km – in a 12.6m AC4 – while Geoff Bridgewater (opposite) argues that Gold height is easy

DECEMBER 31, 2000: I welcome in the New Year with a traditional combination of hangover and good resolutions; the former have a better track record of longevity than the latter. Decide to make a resolution that will last until at least early October this time: fly 300km before hitting 20-years-of-gliding anniversary. Will use Jack Harrison's internet weather service to pinpoint the days he rates "five," the top rating, and book them off work. Plan is underpinned by that man on television forecasting "best summer since 1976" according to his seaweed or something. Marvellous, a resolution that will last nine months and is based on hard science.

February 20: the BBC news introduces foot-and-mouth – something to do with farmers up north and recycled airliner sandwiches. Ignore and wait for football results. Days and weeks go by and the internet is full of doom and gloom: "sell your glider now," "move abroad," "buy engine"... Clearly the rantings of idiots and fools. Resolution still intact as it's too early in the season to have missed any good days yet.

March 2: BGA bans cross-country flying. Period. Decide to focus on that other futile quest, reducing my golf handicap. Others are plotting a fiendish plan to keep flying, known as pylon racing. Inter-club League announces that the May Bank Holiday competition is ON and that we will be flying around small squares with very complicated rules. Golf rules are even more complicated so decide to give pylons a go. Three laps: 151km, start, finish and 13 turnpoints at 57km/h. No sign of the FAI ratifying a 25-turnpoint format for goal flights and am concerned about dizziness in any case. Note that Jack has started to forecast "five" days. Great.

May 2: the BGA announces "airfield hopping". A glimmer of hope dashed only by the realisation that my beloved AC4 has just 12.6 metres of span and the nearest airfield to hop to is 50km from my home base of Saltby. Next few weeks spent working out elaborate ways of hopping via disused airfields, licensed airports and farmers' strips. Golf handicap goes up and I never get close to hopping anything.

June 8: Hallelujah! BGA lifts cross-country ban in parts of Britain. Grab map and pen; can't find Lyme Regis. Discover the only bits out of bounds are too far away to give me the slightest problems (unlike golf). Plan multiple 300km tasks and consign golf kit to garage. Combination of work and family conspire to keep me grounded. Eventually blow cobwebs off trailer, inflate tyre and fly to Bottesford, almost 15km away, technically out of range under the rules of pylon racing. Not quite 300km though. Second inter-club competition is moved due to foot-and-mouth restrictions and then scrubbed due to the British summer.

July 16: third inter-club has been rained off... but fret not, Weatherjack has hailed a forthcoming "five". Hastily reschedule meeting and bunk off work. Rig, launch and declare one of my many paper 300kms. (A theory based on infinite number of monkeys, and Shakespeare.) Fall out of sky after 55 minutes. "Five," my pants. Discover that Jerry has set off on his 300km in the DG-600. Rats. Relaunch and decide to follow him, come what may. Slow crawl to Hus Bos, where nothing is flying due to 7/8 cloud cover. Look for DG-600 on ground but can't see it. Press on with Hus Bos as a fallback, nothing, so turn back and hit lift. Now step to Towcester, Turweston and first TP at Bicester. Still no sign of the DG. Head for Aston Down. Hop via closed, then unlandable airfields; bad tactics. Climb to cloudbase at Aston Down and marvel at view of Bristol Channel, still no sign of Jerry, turn for home and look for next climb. Nothing. Down, down, deeper and down. Twitchy glide to Enstone, where I encounter Booker LS4 and Libelle pilots who met a similar fate. Still no sign of the DG I am following; I assume he made it home. Comedy aerotow retrieve back to Saltby to discover that the DG turned back after 10km and Jerry now has his feet up at home! 227km in four hours but not the magic 300. In trouble with the wife again.

July 23: Final inter-club scrubbed, so it all came down to a weekend's pylon racing in May. Usual suspects won, must be something in "ability" after all. Jack pronounced another "five" today. Managed 75 minutes this time before falling out of sky. Note that the forecast is not Saltby-centric and think rude thoughts about sending Jack my infinite number of monkeys. De-rig and head back for work. Marvel at the forecast for the

beginning of August and then realise I can't get time off work and am instructing at the weekend. Naturally, every other pilot has whole week booked off just to annoy me. Weekend comes; I demonstrate cloudbase to five different pilots and notice in passing the huge number of landable fields. Much gnashing of teeth. P1 hours go up, cross-country miles stubbornly static.

August 10: Another "five" – plead to boss and book day off work. Ponder the effect on British industry of Jack's website. Marvel at low overnight temperature and high amount of sunshine as I drive to the club. Open car door and get blown to ground. Rig in record time due to 09:30 task week briefing. Adrian (Hatton) laughs at my selection of task and orders me to fly a first leg downwind to the east, due to 15kt wind. Clearly the man is deranged. Settle on Saltby (SBY), Caxton Gibbet (CAX), and Moreton-in-Marsh (MOR) triangle: 305.3km. Launch at 10:45 and fly like idiot. Next 45 minutes spent getting back to release height. DG-600 and DG-300 already started on same task. Eventually find climb and drift through start line. Conditions poor, so stay high and drift downwind. Adrian promised me strong conditions for the second, into-wind leg. Avoid NOTAMed aerobatics display and turn CAX after an hour and a half of bumbling. Start second leg and look for strong conditions; instead find headwind that lives up to its name.

Next 3hrs 40 mins are spent emulating leaping salmon up 112km waterfall. Humorous-in-retrospect 45 minutes spent over Newport Pagnell covering minus two kilometres whilst conditions cycled. Scratch with SHK and a nondescript glass glider over big field. At last a small wisp ahead, 5kts to 4,500 feet, say goodbye to field and hello to Silverstone and Turweston. Murky ahead so divert south towards Bicester then back up to Enstone.

Turn MOR after plucking up courage to go under huge area of dark cover. Can now land in field with honour and open packet of Werthers Originals. Head towards Edgehill and notice some clown has put a huge lump of airspace between me and home. Debate around or under, look out of cockpit at

'All the local landmarks seem somehow bigger. Relax: landable fields seem correspondingly larger, too'

wings and decide around.

Now 17.00 and still nearly 100km to go. Climb to 5,000ft – best of day – and head for Hus Bos. Think of large mug of tea at Hus Bos clubhouse then realise I have yet to make pee system work. Regret thought. Climbs getting noticeably weaker or pilot getting noticeably more tired. PalmNav tells me I can make Hus Bos, where local gliders will be marking lift. Local gliders not marking lift, local pilots in bar. 18.00 and need just one climb to 5,500ft to make it home. So near, yet so far. Hus Bos is very tempting. One big cloud just east of me, very weak climb to 4,000ft but not an inch further, keep trying, keep topping out 1,500ft below glide. Mentally strip out 800ft circuit allowance and 440ft QFE versus QNH. Will regret not trying if I turn back now. Recall availability of landable fields and set course for home. Watch altimeter unwind whilst GPS ticks off the kilometres. All the local landmarks seem somehow taller. Relax: landable fields seem correspondingly larger, too. Seven hours forty two minutes after launching and I am in a large ploughed field, having decided that identifying crop from a profile view is not sensible. GPS tells me I am 3.4km from home. Exit glider and assist farmer with irrigation. Retrieve arranged once laughter subsides. Final tally – 301.9km. Tired, happy, Gold.

Epilogue: Jonathan in the DG-300 made it back in just over 7hrs for Diamond goal. Jerry in the DG-600 sped round as far as Husbands Bosworth but succumbed to the temptations therein. (Two weeks later Jerry too flew his first 300km flight and is still smiling.) Weatherjack's feedback changed the day from a "five" to a "good three" – just glad no one told me during the flight. At least the "five" prompted me to give it a go.

My wife, who is supremely indifferent to anything glider-related, just said: "Does this mean no more days off trying to get your 'three hundred' thing?"

"Yes, dear," (I paused) "sort of...".

Recent articles by Chris Davison include *Breaking the site barrier* (December 1999–January 2000, p24) and *Fields and dreams* (October–November 2000, p40). Back issues available from the BGA on 0116 253 1051

How any middle-aged idiot can get Gold height

I HAD TAKEN my lovely little K-6E on a club sortie to Aboyne – little being the operative word, *writes Geoff Bridgewater.* My six-foot, 200lb frame had to be squeezed in like the proverbial quart into a pint pot! A few months earlier I had done my Silver duration in it: my shoulders on the cockpit sides and my knees pressed so hard underneath the panel that I haven't straightened my legs since.

But there I was, glutton for punishment, again crammed into my little flying prison, only this time I also had a portable oxygen bottle for company. Nervous soul that I am, I was going to be quite happy trying a 3000-metre (9,843ft) height gain, or even just finding that mythical wave lift I'd heard real pilots waxing lyrical about.

Pre-flight briefing from Aboyne's CFI was simple: "If you have to land out, don't land on Balmoral's cricket pitch. One of our members did last week and Her Majesty was not amused..." So, checks done, with a dry mouth I nervously called: "Braketh clothed and frocked, gable on, pleeth" and off we shot, like Blue Streak. With the combination of the K-6's featherweight and their powerful tug, we hurtled into the sky. The vario was on the stop, my feet felt higher than my head and I was bobbing about like a leaf in a gale. It was a very rough ride at 70kt up to 2,000ft. I was glad to pull off, slow to 45kt, and take my first breath for five minutes.

I'm breathing again, at 3,000ft. How on earth did I get that high? Am I over the site? Hang on a minute, Take a look down, I'm over – a lunar landscape! – and I'm at 4,000ft. Where am I? And I'm – over 5,000ft – and going up like a high-speed lift. At last it registers that tuggy, bless her heart, left me in stonking lift! Trouble is, I'm at 7,000ft now, there's quite a lot of cloud below me and I'm convinced I'm over the Sea of Tranquillity! Out with the chart: that water-filled crater looks like Loch Orrible. And look, through a gap in the cloud cover, there's Her Majesty's humble abode, by the River Dee. So, whether She likes it or not, I've got somewhere to land.

I start to concentrate on the job in hand – I'm now at 10,000ft, time for oxygen. Off with the woolly hat, off with the gloves, off with the specs, now how do you turn the gas on? I was told but, in all the excitement, I seem to have forgotten. What flow rate? I'm now at 12,500ft and trying to get the mask over my head when my head is firmly pressed against the canopy and I cannot lower my chin because I'm wearing ten sweaters under my duffel coat. At 14,000ft I finally breathe oxygen. Despite the cold I'm sweating profusely and, like the canopy, my specs have now frozen up. I keep telling myself that I am doing this for pleasure – what a joke, it's a nightmare!

The cloud cover below seems to be total, I've got my Gold height with about 1,500ft to spare (did I turn the barograph on?) and I decide it's time to come down. But where? I see a gap about the size of a postage stamp and dive for it at something approaching VNE, hoping for the best, with full airbrakes.

Although the cloud gap was smaller than my wingspan, I plummeted through it, the ice cleared, and I could see familiar ground. I headed for high key at 1,500ft, through the most horrendous rotor (I really thought the wings were going to come off) to find that, despite full airbrake, I had gained 1,000ft – so, I started my circuit at 2,500ft and I can assure you, dear reader, I needed all of it.

All this proves that, despite myself, my Gold height was easy – at the right site and in the right conditions. And if you have never flown in wave, it's fantastic. There are some problems to consider, so a good briefing or even a dual flight, is essential. But the smoothness of the lift, the rate of climb and the great heights are worth all the effort – and you can bore everyone rigid with your story for years afterwards!

Geoff has 450hrs gliding/450hrs power, and flies gliders from Bidford and Snitterfield

New kid on the block

Sarmed Mirza describes how he is fulfilling a long-held dream – by learning to fly



Above: Sarmed Mirza, of Cairngorm GC, dreams of the day he will be able to soar in a single-seater like this

THERE WAS a time when I was 15 years old (it seems like a lifetime ago, and somebody else's lifetime, at that) and I had this urge to learn to fly. Like any young kid, I used to dream about having the ability to just take off. I used to soar every night from my bed to distant lands over mountains and valleys along with majestic birds, climbing ever closer to the skies. The clouds were my friends and I had a wonderful life...

I never had an opportunity to turn my dreams into reality since in Pakistan there were no clubs; even if there had been I could not have afforded it at that age. In those days I was interested in powered flight, as I had not yet been introduced to the concept of gliding in sailplanes.

Then life happened to me... years went by and I travelled all over the world. After an adventurous decade, I decided to go back to studying as I had found the one subject that could hold my attention for a longer period of time than any other, and so I became a student of computing in Glasgow.

Scotland was a fair choice, since it was the home of many of my family members, a factor in my decision. Apart from this, there was the scenic beauty, the valleys, lochs and mountains – but, ah, the rain! Weather was the price I had to pay for all this, but it was still a bargain. I love it here!

So, once my college life was running smoothly and I had experienced the night-club existence, the student party community, and attended enough rock concerts, I knew what I had to do...

I had read about gliding when I was in the UK in 1998. I immediately knew that what I wanted to do was gliding and not powered flight. Why?

First of all, the beauty of the soaring glider was second to none. I felt that to be in such a magnificent craft was a privilege few could understand, appreciate and experience.

'Here I could see as far as the distant horizon... I had been waiting for this all my life'

Secondly, powered flight was much more expensive... This is the first reason for many, but then they get hooked on gliding. To me powered flight seemed similar to driving a car on a motorway with your foot on the pedal and fighting off sleep. On the other hand, soaring in a sailplane seemed like a real challenge, since it needs more presence of mind as you search for invisible air currents to lift you and as you follow birds and clouds. It seemed like a fascinating ability to have, to be able to read the weather and to understand the nature and the movement of the sun. It felt like being a bird, free and in tune with life.

I could recognise it all by just imagining it. I did not really know if it was close to reality, but I knew I would find out one day.

At that time I was still under financial restraints. I had to wait another three years until I could come closer to a situation where time and money permitted me to make a beginning. I started searching on websites, and surprisingly I did not find many UK soaring sites right away. The results



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from the search engines were mostly confined to American sites and some Australian and New Zealand ones. Finally, I found contact information for some Scottish clubs and the comparison began.

The Cairngorm GC was my choice in the end. I went to see them and found a very friendly and supportive set of members. I have to say that the beauty of the site was enough to make anybody want to stay there and never go back.

I first visited them in May and received a very warm welcome. My first flight was in a yellow Bocian with Andy Carter, the Chief Flying Instructor, who has all three Diamonds, years of flying experience in both gliders and powered planes and a great love and enthusiasm for the sport. Nick Norman (who is a brilliant VB programmer, also has all three Diamonds, is a Senior Regional Examiner for Scotland and a training captain for Bristows helicopters) flew the tug. I was in good hands.

Still, on my first flight I could not stop my heart from racing. A flood of emotions engulfed me as I went through my first pre-flight check, strapped into the parachute which I wanted to think of as a nice back cushion rather that a piece of emergency equipment, and stepped into the glider. Fear, nervousness, anxiety, excitement, adrenalin... and disbelief that I was finally going to do this.

The runway was grass and I had been wondering since my arrival how on earth this could not be bumpy, both going up and coming down (I was used to imagining concrete runways). The glider finally began to move, being pulled by the tug, and I was pleasantly surprised by the smoothness of the run. We and the tug, a Robin DR400, both left the ground and slowly we started to gain height. I did not know what to expect, and so a few bumps made me feel just a bit nervous (later these bumps were to become unnoticeable). Finally we were left on our own on the top of the mountain, known by the Feshie pilots as the bowl. The view was absolutely gorgeous: the mountain tops, partially covered by snow, looked as if they were just a touch away and as if I could easily count the stones scattered on the surface of the mountain. I didn't count them, instead I looked away and enjoyed the tranquil feeling pouring into me as, unlike in cities, here I could see as far as the distant horizon; the accumulated tension of years of claustrophobia began to ease off. I had been waiting for this all my life.

Then Andy explained the controls to me. It all seemed very easy: move the stick to the left and you turn left, and vice-versa. But my joy only lasted only a few moments – until the rudder was introduced.

The combination of the stick and rudder is probably the trickiest thing in learning to fly a sailplane. As time in a glider is mostly spent turning, it is very important that the skill is taught and learned well... when one has mastered this, then the rest seems much easier (except for flying straight, but that's another story).

'I was turning the big yellow Bocian myself – I was flying an aircraft for the first time'

I felt comfortable with the controls right away. Andy had explained them well. I had to take my mind off the surrounding view and concentrate. That is another thing I found out had to be developed and it came gradually. I did some turns and flew straight for a while which actually I managed quite well, as Andy complimented me (it was later that I found out that consistency only develops with practice, practice and more practice). I wasn't nervous or scared or worried any more. I was moving the stick on Andy's directions but I had the controls and I was turning the big yellow Bocian myself... I was flying an aircraft, for the first time!

After about 20 minutes, we were heading back. The landing was something about which I had not thought during the flight, but now I began to worry again about how this glider was going to come down safely. With only one chance of landing, I was tense till the glider landed smoothly in one piece on the ground and I was surprised at how the whole process was carried out with consistency by everyone else who flew that day. By the end of the day I, too, was quite relaxed about it all.

This was just the beginning. I could see myself getting hooked right from the start and I did indeed get hooked. I returned the next weekend and now I am flying regularly and my skills are rapidly progressing.

One thing I admire about gliding is that all pilots help one other and there is a comradeship between them. Theirs is a responsible attitude, as safety is a priority in this sport. It brings people together and is a great social activity on sunny or grey days.

Initially, when I was trying to get more information about gliding, I was quite surprised at the ignorance of the general public in the UK. When I mentioned gliding to anyone, they would respond with a: "Oh, hang-gliding?" and could not fathom the concept of the sailplane until I showed them a photo along with a brief summary of the idea. I feel that soaring is very under-advertised and more people would join clubs if it were promoted more in the UK. The average person has no knowledge of the existence of the sport and resources for information on this subject are quite limited as well. I myself stumbled upon this sport, but chiefly because I had a general interest in aviation and so I found about it in a magazine about flying. Many people aren't that fortunate. It could only do good to the sport in Britain if there was more of a mention in the media about gliding.

I feel quite lucky to be able to experience soaring and hope to continue this wonderful and most exhilarating sport as long as I can.

Since writing this article in the summer of 2001, Sarmed has been prevented by his work and study commitments – and the autumn weather – from progressing to solo. However, having just given up his job, he has great plans for next season...



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Illustration shows the presentation of thermal analysis results. Maps are copyright © Bartholomew Digital Data (1998-2001)

Exploiting opposing airmasses

In the third article of his series about soaring in the mountains, Gavin Wills offers advice on using lift that can materialise when all else fails



How could Gavin be sure he would make it home? Ripples on Lake Pukaki (in the top left of the picture, right) indicated a 15kt easterly, but on track by Mt Benmore another pond was calm, revealing a convergence zone that always forms in that wind direction

British pilot Luke Roberts took this photo on another day, soaring Southlands GC's Hornet from Omarama

IT WAS late afternoon and we were going for gold. Preparing for the 90km final glide home to Omarama, we milked the last lazy thermals off the hot rocks at Tin Hut Creek. Ahead the eastern sea breeze had already crossed the Mackenzie Basin. Out on track the air would be calm and stable. To make the winner's podium we would need all the height we could get.

But we wanted more than the thermals had to give and so, with Jeff muttering expletives, I set off on the long glide home. We were well below glide slope.

"How can you be so confident?" he asked.

"Convergences," I said, "we'll find a convergence."

Like the Eskimo who has 42 words for snow the glider pilot needs a dozen different names to describe convergences. In mountain regions, especially, there are more examples of convergences and associated subtleties than in any other soaring environment.

We recognise convergences as the meeting place of different airmasses. These airmasses may differ in any or all of the variables like temperature, stability, and moisture content and/or wind velocity. Convergence zones may be synoptic in scale and include all the frontal systems that characterise our weather patterns. Or they may be small and local as when a breeze meets itself upon flowing around a hill.

The classic mesoscale convergence so characteristic of island nations is the sea breeze front. But its close relatives can move unnoticed across entire continents and interact with mountain ranges along the way.

Consider first the sea breeze moving into a mountainous area. Figure 1 *(opposite, top left)* illustrates how inland heating can draw a tongue of stable sea air many kilometres into the mountains and far ahead of the main sea breeze convergence.

This sea air is cool and dense and flows like water into the valleys and around obstacles. It slowly fills the inter-mountain basins with stable air. At the tip of the tongue the cool air acts as a trigger and induces a frenzy of thermal activity. Further back, the tongue wedges up the warmer air mass and prolongs activity in clouds already cut off from their heat sources.

The canny glider pilot will map the progress of this low level tongue knowing that behind it the thermals are dying and the clouds are slowly shutting down.

Imagine this tongue of cool air a few hundred feet thick flowing all the way around a mountain massif and colliding with itself on the leeward side. The two airmasses are essentially the same except for the nearly opposite directions of arrival. At their meeting place the air on the ground is calm. This encourages heating and the formation of convergence thermals – see Figure 2 *(opposite, top right)*. These thermals bubble like sparkling water, at first triggered but then shut down by the opposing airmasses.

'Given similar winds, convergence thermals usually occur in much the same place. On a blue day, this is worth remembering'

In convergence thermals it pays to search for your own bubbles of lift. Other gliders may mark the convergence zone but each is likely to be climbing in its own discrete bubble. When clouds are present they will mark the convergence zone. But because the clouds are formed by small fast-cycling thermals they, too, will come and go.

When the prevailing wind approaches a large range of mountains, such as the San Juan Mountains of Colorado, the flow becomes complex *(see Figure 3, opposite)*. The wind not only flows over the mountains and is funnelled by favourably-orientated valleys but it flows around the block of mountains as well. Thus multiple meeting places are created for the mighty mountain winds.

In the mountains convergence thermals may form anywhere opposing winds create calm on the valley floor. Likewise, the airflow around the mountain massif may converge with the valley winds and form strong – often well-marked – thermals. Given similar prevailing winds each day, convergence thermals usually occur in much

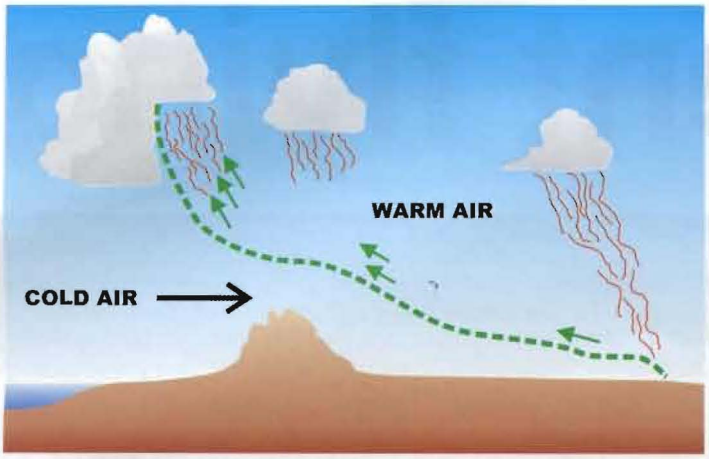


Figure 1: sea breeze front with a tongue of cold air protruding ahead. The canny pilot will map the progress of this tongue, knowing that behind it thermals are dying

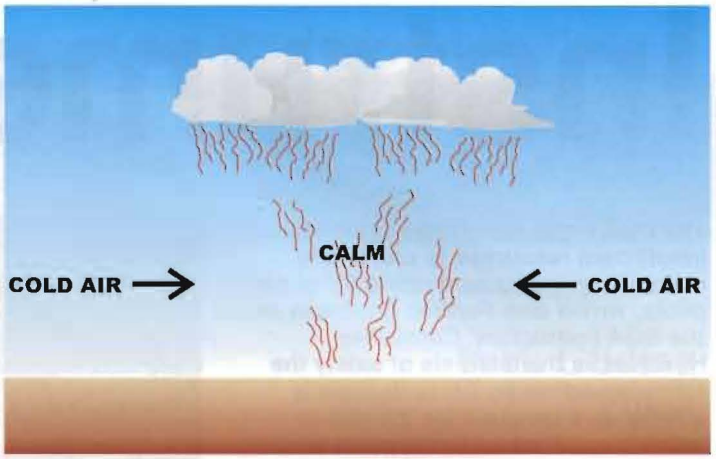


Figure 2: when similar airmasses collide, at their meeting place the air on the ground is calm. This encourages heating and the formation of convergence thermals

the same locations. On a blue, cloudless day this is worth remembering.

Converging mountain winds shear and create eddy lines as if in a river. These eddy lines often contain convergence thermals and may form bands of lift in otherwise unfriendly air.

In continental landmasses, mountain areas greet the sun and generally heat up before the cooler inter-mountain basins. This causes breezes similar to the sea breeze effect to be drawn into the mountain valleys as an anabatic flow.

The main difference between this and the sea breeze is that the sea breeze has a never-ending flow of lifeless air from the ocean while the continental anabatic flow heats with the day and often becomes unstable itself. Both the anabatic and the evening katabatic flows will create convergences in mountain areas at opposite ends of the soaring day.

One of the most spectacular convergences known is the giant north-south line lying west of the Rocky Mountains that divides the moist eastern air of the continental United States from the dryer western air.

This line is perhaps the clashing of the remnants of two sea breeze fronts and may be traced south into Central America where Caribbean air meets Pacific Ocean air in one of the most active (and wettest) convergences in the world.

Mountain convergences can be recognised by stepped clouds, a single line of cloud whiskers or cumulus, by unusual changes in wind direction on the ground, lines of haze or dust rising across a valley or even by changes in the colour of the air. Sometimes when the light is just right one can see the denser air flowing like water into the inter-mountain valleys.

When clouds are present, convergences are often marked by stronger or even hyperactive clouds with stepped bases and cloud tendrils. Remember to stay under the higher bases on the warmer side of the convergence, beside the rising cloud tendrils and out in front of any low-level cloud that may form beneath you.

"So where's this bloody convergence then?" pipes up Jeff from the back of the Duo Discus.

The homeward glide has been ominously blue and smooth and we are now only 1,200ft above the ground. The sea breeze has swept across the Mackenzie Basin, shutting down the thermals and greatly

'*There is a convergence about 10km ahead*, I announce as nonchalantly as possible. *You'd better be right*, mutters Jeff'

reducing our chances of getting home at all, let alone winning anything.

I scan the lakes and ponds for tell-tale wind signs. Beneath us, Lake Pukaki shows a 15-knot easterly. Suddenly, ahead near Mt Benmore I spy what I am looking for – a pond with no wind. I alter course. "There's a convergence about 10km ahead," I announce as nonchalantly as possible. "Damn, you'd better be right!" mutters Jeff.

Six hundred feet above the ground, 15km from home and just past the calm pond we meet the wind coming around Mount Benmore from the other side and the air begins to bubble. We pull up into 3kt of smooth lift, gain a thousand feet and head for the finish line.

"How in the Hell did you know that was there?' blurted Jeff

I didn't like to say it, but it always happens there when the easterly blows! Once again the great glide of the Duo Discus and a subtle convergence had given us the winning edge...

Details of Gavin's mountain soaring school can be found at www.GlideOmarama.com

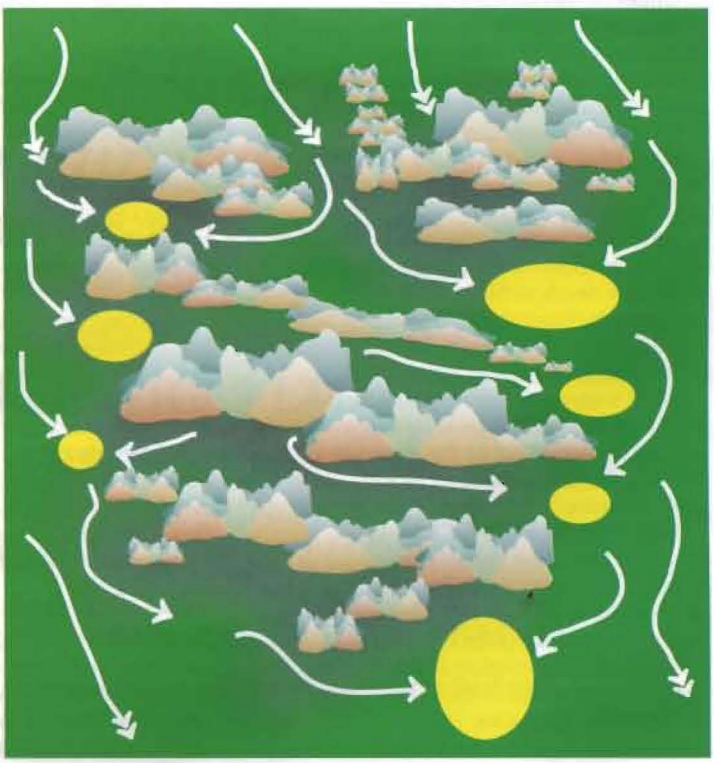


Figure 3: Mountain convergences created by the prevailing westerly winds flowing around the San Juan Mountains and through some valleys

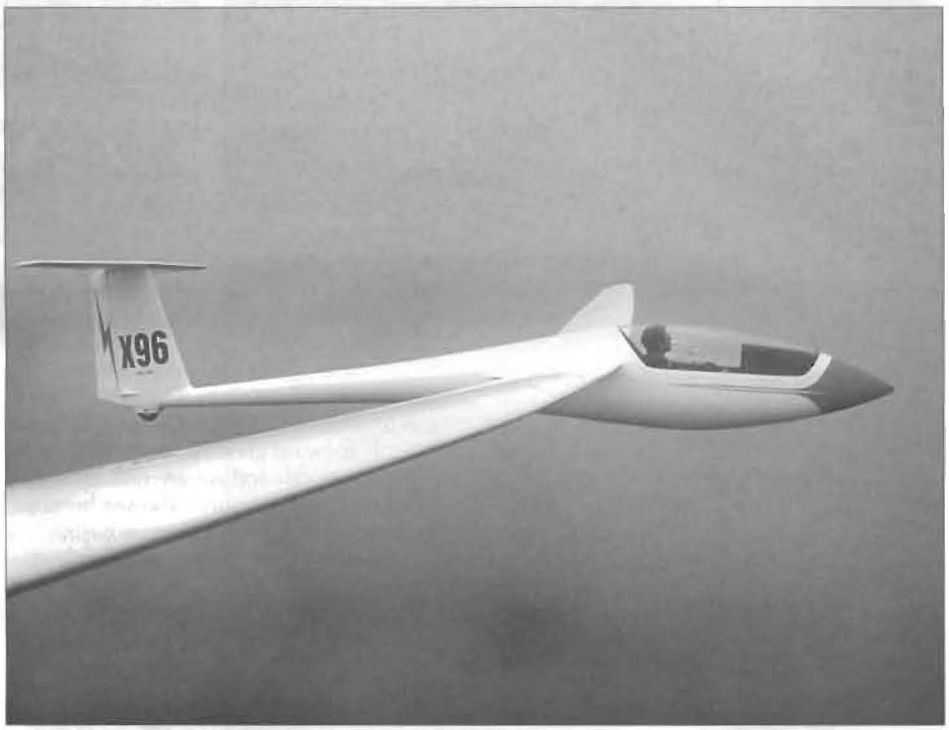
When the prevailing wind approaches a large range of mountains such as these, in Colorado, the flow becomes complex

The wind not only flows over the mountains and is funnelled by favourably-orientated valleys but it flows around the block of mountains as well. Thus multiple meeting places are created for the mighty mountain winds

Diagrams: Jon Hall, HRA

Instrument flying

The BGA organisation has at present insufficient resources to create and maintain an instrument rating for glider pilots, *writes Bob Pettifer, Chairman of the BGA Instructors' Committee.* However, in the interests of safety the following article by Chris Heames is offered as a template for the sort of training required for those pilots who want to cloud fly or who inadvertently find themselves in or above cloud due to a lapse in awareness



Chris Heames suggests a structured, progressive training programme to ensure that a pilot is fully competent to cloud fly before attempting to do so in a glider on their own (the ***White Planes*** picture co.)

INSTRUMENT flying can be a difficult and confusing area of our sport; I hope the following suggestions will help to clarify the subject. As instrument flying represents a tiny proportion of the overall gliding effort, it needs to be very closely supervised and controlled.

Each proposed training flight, or series of flights, should be individually sanctioned by the CFI or a nominated deputy.

Instrument flying training can be flown in any suitably equipped two-seat glider. The front-seat pilot has two vital functions.

- Firstly, he is a safety pilot – responsible for lookout and collision avoidance.
- Secondly, he has to be considered competent to instruct instrument flying.

Any suitable means of obscuring the vision of the rear seat pilot is acceptable provided it in no way interferes with the field of view of the front seat pilot.

Under no circumstances are any simulated instrument flying exercises to be conducted in the front seat of a two-seater.

Since the exercises I have suggested below require a great deal of concentration, it is entirely inappropriate that they be conducted in an area of high traffic density as in the circuit area or in a thermal with other gliders.

Additionally, modern gliders are seldom fitted with speed-limiting airbrakes. Thus, great care needs to be taken in practising the recovery from unusual positions as a small mistake could easily lead to a rapid and dramatic excursion through VNE.

Pilots wishing to undertake instrument flying training should be taught in a progressive way. That is, the exercises they attempt should be made more difficult as skills improve.

Each trainee should pass a suitable practical test at the end of each phase of training. This test can be flown with any suitably qualified instructor, preferably not the one who conducted the training.

Successful completion of these tests should be recorded in the pilot's logbook by the checking instructor.

It is obviously the case that some military or civil instrument ratings will obviate the need for training and testing.

However, the individual will need to demonstrate a sound knowledge of how to apply his, or her, already proven skills to this new application.

My suggested outline for progressive training of instrument flying for glider pilots is as follows:

Stage 1

On successful completion of this stage of training a pilot will be able to recover the aircraft safely after inadvertent entry to cloud.

The requirements for the successful completion of this stage of training are for the pilot to be able to recover the aircraft to wings level by sole reference to the instruments and subsequently fly a controlled descent at constant speed to achieve visual contact with the ground.

Additionally, the trainee must be able to fly a 180° turn, at constant speed, roll out of the turn and maintain a heading to exit the cloud.

Stage 2

On successful completion of this stage of training a pilot will be able to fly a controlled descent through a layer of cloud (as in a recovery to the airfield from above cloud whilst wave flying). The pilot is to have a good understanding of relevant factors in safety altitude calculation, and the use of GPS or other navigational aids, to achieve a safe descent to overhead a nominated point.

The test for this stage of training should include straight descents and turns on to nominated headings whilst showing positional awareness in relation to the nominated point.

Stage 3

This stage includes all of the above exercises plus the use of cloud climbs for tactical gain as on cross-country soaring flights.

To pass this stage of training, a pilot must be able to maintain a continuous turn with good speed control.

He must also be capable of recovering the aircraft to straight and level flight from a variety of unusual positions by sole reference to the instruments.

Chris Heames, a member of the BGA Instructors' Committee, is a military pilot with 6,000-plus hours, currently flying Tornado F3. He was previously an instrument rating examiner on the Tornado GR1. A glider pilot since 1968, he has 2,000-plus gliding hours and three Diamonds. He became a Regional Examiner in 1987 and a Senior Regional Examiner in 1994. He is also a member of the BGA's accident investigation team



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THE BARE rock face of the Wilderkaiser (7,690ft) is just a few metres away. The view from the Duo Discus is amazing. A sheer rock face of some very hard-looking limestone. The wingtip looks frighteningly close to the rocks as we cruise along at 70kt looking for lift. Suddenly, a tremendous surge and the vario goes wild. All too quickly, the vario settles down as we now fly through the lift into more settled air. John Stuart starts his demonstration of how to fly in the mountains. He has had several seasons mountain flying in France so I feel in very safe hands. He begins with a very steep turn away from the rocks back to the area of the recent surge. I feel the g beginning to increase. Driving through the lift again, the vario sounds like I've never heard it before. He now demonstrates a figure of eight, allowing the speed to reduce as we turn away from the rocks. (Turn too gently and you fly out of the lift.) As the turn continues, speed is again increased and then another hard turn and more g. I attempt to capture the moment on film but the increased g and rough air make photography difficult. I look down to see that we are now flying above a spur. Here the air is sucked up like a chimney from the surrounding mountain sides. I could hardly believe the climb rate despite the aggressive flying. *This is fun!* Having climbed above the razorback ridge, it was possible to relax a little and admire the view. Lift from both sides of the ridge pushed us up to cloudbase at 9,000ft. I could hardly believe that I was finally sitting here enjoying myself...

Above: the Wilderkaiser in Austria, a close-up view from the cockpit of the Duo Discus



It all started several years ago when I was shown some photographs of a small gliding club a few kilometres south of Kufstein (between Munich and Innsbruck). The airfield and surroundings looked perfect – a well-maintained grass strip next to the River Inn, surrounded by wooded slopes and high mountains.

After 10 months of dreaming and planning, my gliding experience of a lifetime was about to begin.

Not wanting to arrive in Austria exhausted, we took nearly two days to complete the 660-mile journey. This continental section consisted of good clear roads, which were a delight to drive on. We routed around Munich then turned south to Kufstein, following the wide River Inn. As you approach the Austrian border from the flatlands of southern Germany, the mountains rise up dramatically to 6,500ft. Kufstein is in a valley between high mountains, one of which has a near-vertical rock face – very impressive indeed.

The small flugplatz was just a few kilometres south of Kufstein town.

After introductions were done and we had made known our intentions – no paperwork involved – it was time for the site check. Not an unreasonable requirement, considering the terrain. This was done in a four-seat Robin that doubled as the tug; it was a truly impressive flight. I'm sure the tug pilot delighted in flying directly at a vertical rock face. Finally, after what seemed an age, he turned through 90° and flew parallel to the cliff and climbed in the rising air. We were shown the Pülven, a smaller wooded mountain that acts as a springboard for the larger and hugely impressive Wilderkaiser. Then around the north side to the 'Little' Kaiser and finally across the Inn valley to attempt to mark the cables of the cable car (which are almost impossible to see). We landed and quickly made our way to rig the Duo. The six visiting Germans thought that we were mad to fly in such poor conditions.

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Thermalling above the valley of the River Inn



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Left: the Wilderkaiser from rather higher, on a wave flight
Above: Launchpoint at Kufstein in the Austrian Alps

To us, though, this was a reasonable English summer's day!

After getting our bearings during day one, conditions deteriorated leading to three duff days; the last two were continuous heavy rain. It was cold, wet and miserable. Finally, the locals said: "tomorrow will be hot and sunny". This was very difficult to believe when there had been 48 hours of near continuous rain. I very much doubted their optimistic forecast.

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We were invited to a barbecue that evening to drown our sorrows. Our aim that night was to avoid drinking too much local cabbage moonshine without upsetting our guests. We likened this bright clear liquid to rocket fuel, as it was served in nozzle shaped glasses and had similar effects!

The following morning was bright and clear, as were our heads (much to our surprise).

It was remarkable how dry the air was, considering the recent downpour (very un-British). With clear skies, the temperature steadily increased from 10 to 28°C. It was hot. Finally the weather was improving for us.

At the airfield it was a perfect morning. The 800-metre grass strip was perfectly adequate for the Duo, but after all that rain we began to worry about the surface. Soft ground and wet grass are not kind to a heavy Duo. Throw in a few houses and trees at the far end, not forgetting the HT wires, then there is the possibility of exciting launches. Fortunately, after our long deliberations, the wind increased and the grass quickly dried.

During the next few days we experienced some absolutely fantastic flying. Each day started with a relaxing breakfast in the local Gasthaus. Our wives would help us rig and they would then head off for some sightseeing. We wondered what tactics the visiting Germans would use for the launch queue. Would it be the towel-on-the-sun-lounger approach? Surprisingly, order of launching rode on the time of rigging. This became a consideration on two days, when one of the tugs was unserviceable. The launch rate then became quite protracted due to towing each glider to about 3,500ft. A 20-30 minute turnaround for each glider was the norm. With only one tug operating, you don't pull off tow too early.

The Germans we met were all very helpful and appeared to be very relaxed about the launching arrangements. We weren't so sure about some others when we landed out at St Johann. After enjoying a refreshing ice cream on a hot day, we decided to push the Duo back along the taxiway to the launchpoint. The German glider pilots sat in deckchairs next to their trailers and watched our every move through binoculars. A two-finger salute ran through our minds. After a quick aerotow home we arrived to much leg pulling from our German friends. "Zo, you had to land at St Johann, eh?"

We soon get into the rhythm of flying in this new environment but when it is my turn to fly, I notice that my grip on the stick has become vice-like. How can one relax under these circumstances? With plenty of coaching from John, I make reasonable upward progress. I feel less at ease when the rock face is vertical. Somehow, distance appears easier to judge when it is sloping. Frequently, I use the crosses that appear on most peaks as a height and distance reference. Circling just above one of the many pinnacles, I see a climber perched precariously a few thousand feet up. I'm sure we both think that the other is mad.

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Right: the flying and the scenery are spectacular

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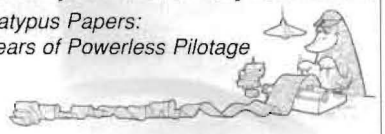
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impressive local mountain we start to explore the surroundings. In the distance to the north are the flatlands towards Munich and Salzburg. To the south is a bright, snowy mountainscape that fills the horizon. This is the Großglockner range. In the near distance is the Kitzbüheler Horn with the inviting runway of St Johann nearby.

Without wasting any time, John heads for the Kitzbüheler Horn. I relax and admire the views and look down on the famous ski runs. Staying high, we see the gliding/flying centre of Zell am See at the south end of the lake. Here the very impressive Salzach valley runs east-west. The Austrians call this valley their 'highway' as many glider pilots race up and down along its length.

Heading further east along the Salzach valley, we note the unlandable areas our Austrian friends warned us about. We continue eastwards. An 8kt average thermal is met with delight. Suddenly we are not alone, three 15-metre gliders join us. John is determined that we are not outclimbed. He curses as he can't figure out these alpine thermals. They're so different to the ones we get at home. He experiments with 70kt thermalling turns. The g is pronounced. The other gliders stick with us. With the lift falling to 3-4kt we break off and follow the valley. One of the 15-metre gliders drives eastwards. We expect to catch up with him in the glide. To our surprise, we don't. We gradually fall below his glide path. One can only assume that the other glider is filled with waterballast.

Time to turn around and head back along the valley towards Zell and then Innsbruck. The northern sunny side of the east-west valley produces fantastic lift. We race along with the MacCready set on 5 and Zell appears in no time. There are paragliders, hang-gliders and gliders everywhere. We are both concerned about other traffic and maintain a heightened vigilance. To the south over the Großglockner there is a long line of dark clouds. Isolated thunderstorms are predicted for the afternoon. The weather looks bright to the north and west so we continue towards Innsbruck. Approaching the Zillertal valley, we notice more snow on the mountains. The snow is patchy and dirty. Due to the cloud cover in the south, the light is dull. It becomes increasingly difficult to see other gliders, perfectly camouflaged against the patchy snow. After two gliders appear from nowhere, it is time to depart. We turn north into better light and head for Innsbruck and the peaks beyond.

In clear air we are joined by a couple of racing 15-metre gliders. We follow their lead across the Inn Valley. The runway at Innsbruck can clearly be seen. The two other gliders enter the control zone. Perhaps they know something we don't...

It was now late afternoon and time to head home. I started to soar a sunny near-vertical mountain face...but the vario showed 8kt of sink. The wind had changed and we were now going down like there was no tomorrow. John took over and we dived into a valley that led towards a large beautifully-blue shimmering lake. I could now clearly see the waves indicating that the wind had increased significantly. It wouldn't be too long before we were choosing somewhere to land. A small spur reached out across the valley. On the other side was an into-wind wooded bowl, here the lift gradually increased from 1kt to 6kts. The lone walker on the ridge watched us and I'm sure even he was impressed at the climb rate. Instead of looking up at him, we could now circle above him. I doubt he could see the silly grins on our faces.

A gentle 30km glide back to the airfield. If we had been back at the Mynd I know we would have done a beat-up. Thinking better of it, we landed in the deepening shadows of the mountains. Another 300km flight over.

Having put the glider away we walked 100m to the terraced restaurant that overlooks the airfield and superb mountains. We enjoyed another excellent meal and a welcome beer. Our ground crew were also in high spirits having had a superb day sightseeing. We watched the mountain peaks change colour as they caught the last rays of sunshine. Another great day over and personally, I don't think it can get any better than this.

Richard, 44, is married with a six-year-old son. He glides at Midland GC, the Long Mynd, and has shares in a Pegasus and Duo Discus. He has about 500 gliding hours and 110 PPL hours. He can be contacted on *rwabennett@ntlworld.com* John Stuart is a professional instructor at Midland GC and was Richard's "minder" on his first trip to Austria

And the family can enjoy themselves, too

ARRANGING a 10-day gliding holiday in Austria to coincide with half-term week was asking for trouble. My wife's view was that it was too far, too expensive and, quite frankly, a ridiculous idea. As I am planning our third visit, I feel that I can claim to have proved her wrong. While it is a long journey towing the glider, to maximise my family's time in Austria, I went to *www.travelocity.co.uk* Scheduled flights to Munich for £66 + tax (2001/2 price). For transport on arrival, simply collect a hire car for the week and make the short drive to Austria. While I flew, the rest of the family enjoyed day trips to the mountains. The accommodation was first class and availability was simply not a problem (approx £10/night B&B). Flying and scenery were spectacular. As you know, weather cannot be guaranteed. But even if it rains, I am sure that you would still have a good holiday. If you want a flavour of the flying, have a look at 494's web page: *http://homepage.ntlworld.com/rwabennett*

What a birthday present

Roger Fothergill celebrated his first half-century in style...



MOST OF US approaching milestones in life think about how we shall mark them. Approaching 50, I had planned to climb Ben Nevis. However, this changed when I was unexpectedly given two weeks' holiday – with my birthday right in the middle. Since my wife was working, and my mother is Austrian-born, I rapidly altered my plans to a stay in Austria with some Alpine soaring – and since Mum offered to pay for it as a birthday present... this was an opportunity not to be missed.

I contacted the Austrian Aero Club, which handles gliding as well as other light aviation, and it sent me a list of clubs. We hoped to stay self-catering near Villach in Karinthia, just west of Klagenfurt; quick calls narrowed the suitable clubs down to Nötsch (about 15 miles west of Villach) and Feldkirchen (about 15 miles north-west of Klagenfurt).

The journey out was seamless – BA to Salzburg and Avis hire car, then a three and a half hour drive through stunning scenery to Villach. I popped in to visit the secretary of the Villach gliding club, Bernhard Plasonig, who runs a car dealership (it wasn't clear what I was being sold in the showroom: cars or gliding!).

The club is not full time, but during the summer folk turn up midweek at about 15.00hrs (working hours are earlier on the continent than in the UK). It operates a bit like Lasham: one club owns the airstrip and operates the aerotows (and a Blanik for training) and two others use the facilities.

We were with one of the latter, so all we had to do was get the gliders out of the hangar to the launchpoint and advise when a tug was required.

The appeal of this club is the nearby mountain, which is in very close proximity. Dobratsch at 7,106ft (2,166m) is like an upturned blancmange, half cut away: the cliff is right next to the airstrip. You are aerotowed as far up as you wish, then ridge soar all the way up this 6,000ft wall until thermals take over at the top, going up to 8,000ft in average fair-weather cumulus.

The club I flew with (Segelfliegergruppe Villach) has a Twin Astir, an Astir Jeans, a Club Astir and an LS1. On my first check ride



The Ossiacher See (lake), which Roger soared over from a club at Feldkirchen



The ASH 25 that Roger flew in, OE 5432, photographed from Twin Astir OE 5653

we soared up the cliff, then on to about 8,000ft, went over the summit and soared along the ridge to Hermagor and back. My instructor was Leopold Guldenbrein, a local policeman – he booked you on the spot if the speed was more than 5kts more or less than it should have been.

For me, the 50th birthday present came in three ways. Firstly, Leopold owns a bright orange SZD 22C Mucha of 1960 vintage, with a large, roomy cockpit. He let me fly this: a very enjoyable 90 minutes' soaring. I felt that the performance was much better than the published 1:27.5 glide angle. Could this be due to my flying capabilities...?

Secondly, Captain Herber Mayerböck of Lauda-air was visiting the club with his club's ASH 25 and offered me a flight – a stunning machine, which we had the greatest of difficulty in forcing downwards in the evening wave; five flap settings and a max speed up near the BAe advanced turbo prop I fly for a living.

Thirdly, we drove over to the club at Feldkirchen and got another 90 minutes' soaring in the club's Duo Discus (another superb sailplane) by ridge soaring above the Ossiacher See (lake) to the mountain to the west called Gerlistzen. It couldn't have been a better way to enjoy a 50th birthday and the views were superb: not only of the Austrian Alps but also of the Karavanken mountains to the south in Slovenia and the Dolomites to the west in Italy. (The border joining Austria, Italy and Slovenia is about two miles to the south of the Nötsch club.)

If you are thinking of visiting Austria and gliding there I should make a couple of points. Being part-Austrian I speak fluent German, which was essential for the check flight. You would need to establish if the club you are proposing to visit has English speakers if you don't speak German. I also felt that using a club's single-seaters is just not the done thing here – most people bring their own gliders. Don't assume that if a club has the same single-seater types that you fly at home you will have no trouble getting into them: the club may be very reluctant. Having said that, the scenery is amongst the most awesome in the world, so a flight in a high-performance two-seater is hardly a disappointment!

Roger has 70hrs in gliders, a Silver height and collects types (27 so far). A pilot with BA City Express, he flies BAe ATPs out of Glasgow. He is a former member at Sutton Bank, Ulster, Lasham, Odiham and Farnborough



On aerotow from Nötsch, you climb as far up this 6,000ft cliff as you want – then pull off and soar past the top



"The scenery is among the most awesome in the world," says Roger



Nötsch, looking west – the glider parked in the foreground is the ASH 25

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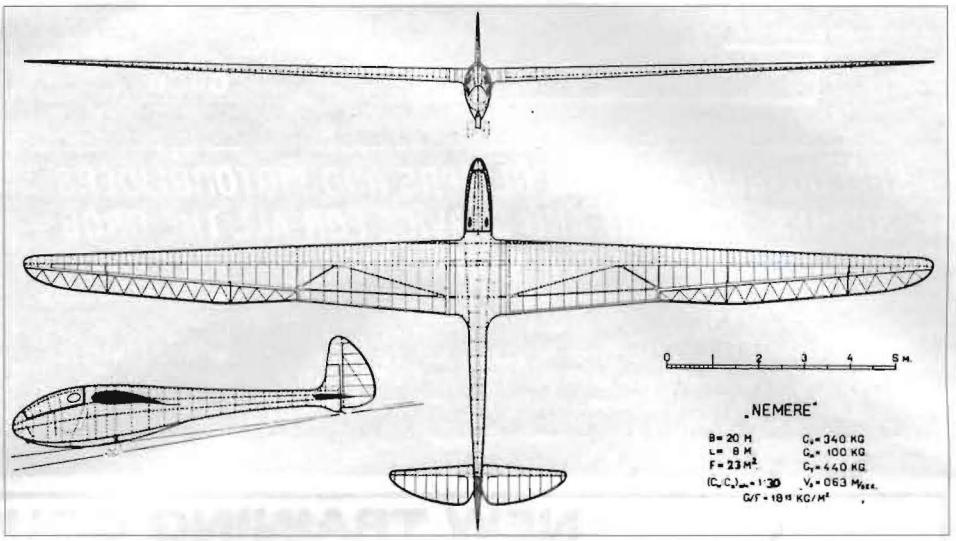
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Remembering a legend

Louis and Lazlo Rotter recall the achievements of their father, Lajos, a century after his birth

SUMMER 2001 marked the 100th anniversary of the birth of Lajos Rotter, Hungary's leading gliding pioneer. He designed and personally supervised the building of his "super ships" with which he set national and world records in time, goal distance and altitude at the dawn of gliding's rapid development worldwide. His engineering genius and sporting achievements are remembered to this day, and his legend lives on.

Lajos Rotter was born in 1901 in Budapest and took a keen interest from an early age in flying. Even before reaching school age he was always looking for photographs about flying, in newspapers and magazines. He was barely seven when he built his own kites, and a year later he started building models of aeroplanes.

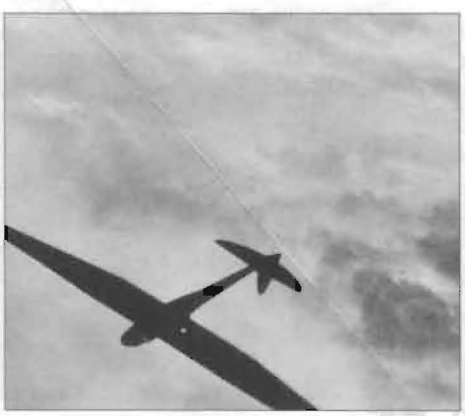
In 1909, Bleriot, following his famous cross-Channel flight, visited Hungary and performed three demonstration flights. These had a lasting impact on the eight-year-old boy: he decided there and then to design and fly aeroplanes when he grew up. The event was etched so vividly in his mind that throughout his long life he could remember Bleriot's plane in all its detail, and the flying manoeuvres he performed.

Lajos Rotter qualified as a mechanical engineer. At university he was instrumental in establishing its aero club. Aged 20, he designed his first glider: it had a 13-metre wingspan, a thick wing profile, and a dope-and-linen covering. Shortly afterwards, he designed a motorglider with the general features of a high-wing strutted glider with a tailplane, similar to the 1920 German Vampyr. It had an 18hp engine on a pod in front of the pilot, and it also had a wheel.

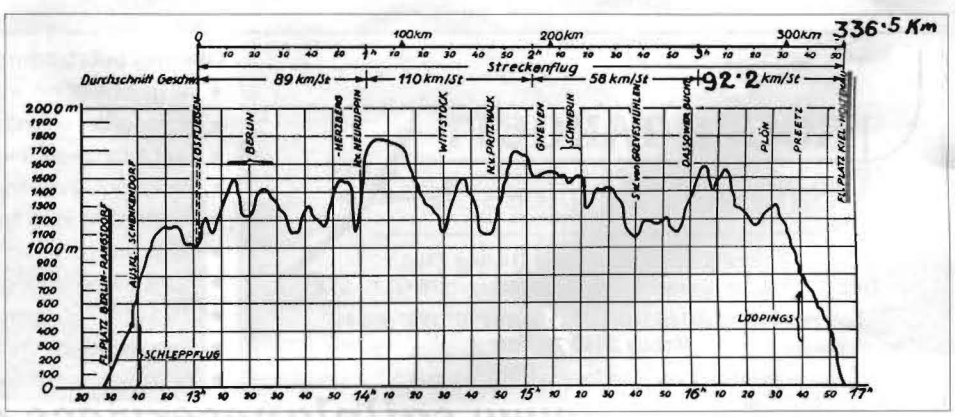
In 1923, at the age of 22, he set up the FEIRO Company (Feigle-Rotter) to design and make single-engined two-seater biplanes and four-seater monoplanes. Plans for one of his designs, the FEIRO I (Daru) were published in 1924; they apparently influenced the *Spirit of St Louis*, the plane that Charles Lindbergh flew on his historic transatlantic flight. The FEIRO I's design specifications differed from those of the *Spirit of St Louis* by only 3/8", though the latter used a bigger engine.

From 1929 Lajos took a serious interest in regular gliding and by 1931 gained his "three seagulls" – the C Certificate. Soon after, he set up Hungary's leading gliding club in the hills surrounding Budapest (Harmas Hatar Hegy). It was to be the venue of his famous endurance flight of 1934 in a sailplane of his own design, the Karakan. He stayed aloft for 24 hours and 14 minutes – a national record and runner-up for the world record. In 1935 he set a national distance record in the Karakan, flying 275km – then the world's fourth longest flight. His national altitude record of 1,850m (6,069ft) in 1933, also in the Karakan, was one of the highest glider flights in the world at that time.

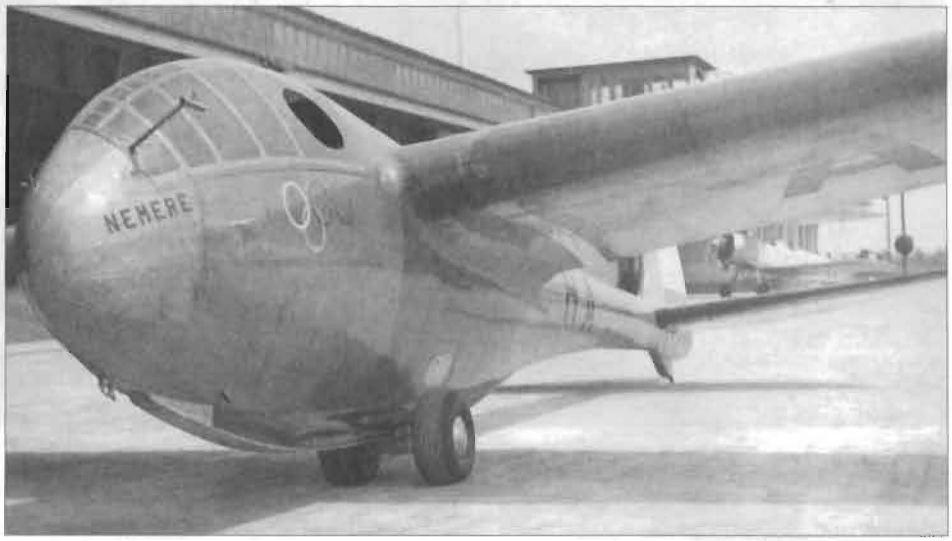
The Karakan, of plywood and wood, had a 20-metre wingspan, a wing area of 27.7m² (298sq ft) and a max take-off weight of 297kg (655lb). It had wing stubs about 9in



The Karakan in flight, pictured in 1933



Barograph trace for the Nemere's record 203-mile (336.5km) flight in August 1936 from Berlin-Rangsdorf to Kiel





Far left: Lajos Rotter at Kiel in the Nemere, designed for the Berlin Olympics. Left: three-view; above: Nemere at Rangsdorf before its record flight; above right: airborne, 1937. This "super" sailplane was designed by Lajos, who also supervised its building. It took the honours at the 1936 Olympics. Its wingspan was 20m (65.6ft); the wing area 23m^2 (248sq ft). The empty weight was 340kg (750lb) and the wing loading 19kg/m2 (3.9lb/sq ft) The wheels were detachable. The cockpit canopy was fitted from front to back, so that when opened it would be torn away by the airstream. It had a wooden frame, so that in an emergency it could be broken through by hand. This gave it an advantage over cockpits designed to open sideways, which couldn't be opened at all in a steep dive and which, being made with steel tubing, could not be broken open

(23cm) on each side of the fuselage with a perspex fairing enabling the pilot to check in flight that the connections remained secure. It was the star glider of the World Jamboree gliding convention, attended by 24,000 Boy Scouts from across the globe. Lajos proposed bringing the Jamboree to Hungary to promote gliding there and abroad. Its patron was the country's Prime Minister, Count Paul Teleki, and many international statesmen came, as well as Baden-Powell. The Karakan was flown and praised by leading pilots, including the Austrian Robert Kronfeld. It was an outstanding glider of its time and became an exhibit in the Hungarian Aviation and Transport Science Museum. During World War Two, the museum took a direct hit, which destroyed the glider.

As well as his flying achievements, Lajos promoted and helped develop motorless flight internationally, giving lectures on glider construction and gliding meteorology. ISTUS (the International Commission for the Study of Motorless Flights) was prompted by his work to meet in 1936 in Budapest, where it awarded him the ISTUS Gold Ring in recognition of his outstanding achievements in and out of the cockpit. Only four of these were ever given. It was to the credit of ISTUS that the International Olympics Committee agreed to introduce gliding at the 1936 Olympic Games, with a view to including it subsequently among officially-recognised Olympic sports.

The Hungarian Aero Union invited Lajos to represent Hungary at Berlin in 1936. He felt that despite the Karakan's remarkable achievements a better glider was needed. So he was commissioned to design (and supervise the building of) another "super glider" and the Nemere, named after a Hungarian Föhn wind, was born. It was based on the idea that the speed and gliding performance of sailplanes ought to be increased and the range of speed and of sinking speed should be extended by making the ailerons adjustable in flight, both for flying in weak thermals and for fast flight with a good glide angle. Also, the cockpit had to be roomy for comfort on long and difficult flights, to allow the pilot easy handling of maps. So span, weight and wing loading were increased.

The Nemere had a full cantilever shoulder wing design and was calculated throughout with a safety factor of 12. The rudder was balanced and the differential elevator was of pendulum type. The elevator, ailerons and all their controls worked on ball bearings. The wheels were detachable; there was a tail release for bungy launches and a Rotter-type quick release at the nose.

The Nemere was a truly super sailplane and gained its place in gliding's almanac. On August 12, 1936, despite unfavourable meteorological reports, Rotter launched the Nemere from Rangsdorf, next to the Berlin Olympic Village, on a record-breaking pre-declared goal flight to Kiel. His fastest speed was 87mph (140km/h) and he went as high as 5,860ft on the flight of 203 miles (326.5km). He completed it in three and a half hours, which was the best time at the Olympics and a world record, too. It was the longest flight in Germany that year, and a substantial increase on the Hungarian national record of 170.5 miles (274.4km). International acclamation resulted and it was reported in *The Sailplane and Glider*, this magazine's forerunner, in Dec 1936 (p253).

Following the war, Lajos Rotter's Nemere was proclaimed reactionary and imperialist, along with its designer, who was quickly humiliated for his antipathy to the Russian-style Communism imposed on his country. As a result, in 1946 the Communist leadership destroyed his famous sailplane, barred him from flying and forced him out of his job. He was also stripped of his position as joint Chairman of the Hungarian National Flying Club. Despite that, his interest in flying never diminished. He regularly went to see gliding at Harmas Hatar Hegy, where he was always welcomed and respected by old and new generations of glider pilots.

In 1969, visiting his son Louis in the UK, his dream again became reality: aged 68, he re-soloed at the Long Mynd (where Louis is still a member today) and at Portmoak.

Sadly, in 1973, a serious stroke put paid to any hopes of ever gliding again. Lajos died a decade later, aged 82. By this time, Glasnost was creating a more relaxed, liberal political atmosphere, and Hungary gave him a State Funeral in recognition of his pioneering gliding achievements. He was the only Hungarian to ever hold a world record in this wonderful sport.

After his death, a statue was erected for him by the State at his old gliding club at Harmas Hatar Hegy, where last year on the 100th anniversary of his birth he was remembered by pilots young and old. His legacy lives on.



Louis, Ervin and Zoltan Rotter in the Nemere

African Silver

Storms brought mixed fortunes to British pilots at Mafikeng, where we achieved six day wins, Team Bronze and a Silver medal



Ed Johnston

TRUE TO form, the opening ceremony of the 27th World Championships at Mafikeng enjoyed sunshine, 5/8 cu and a 10,000ft cloudbase. Quite a contrast to the stormy first day, when 61 of 71 pilots (from 21 nations) landed out; two classes were scrubbed and Open Class Briton Russell Cheetham got back to site at 2am.

The next day, December 19, was a contest day only for the 15-Metre Class; a violent crosswind drifted a tug off the runway, and storms cut the day off. Justin Wills came 2nd but had to wait for the wind to abate before taking his aerotow retrieve.

December 20 was blue, and all three classes flew. In the Standard Class Andy Davis and Mike Young were bounced by a gaggle. They changed tactics for December 21, when Andy achieved 130.9km/h over 360.5km to win the day. Mike came 4th.

A headwind on December 22 affected all classes' last 70km, in rapidly decaying thermals. Justin came 3rd; Russell and Pete were 6th and 7th. French pilot Laurent Aboulin won the Standard Class to keep his overall lead, with New Zealander John Coutts 2nd and Mike 4th.

Only the Standard Class flew the next day. A strong northerly and low cloudbase meant everyone landed out, but Mike won the day. He rocketed to the furthest downwind edge of the first area and staggered back as far as he could. Laurent Aboulin had a terrible day, landing just 17.5km out. John Coutts took the overall lead with Mike second.

On December 24, Mike stayed 2nd and Andy was 11th overall. Ed and Justin placed 5th and 11th overall, and Pete and Russell were 5th and 8th overall.

Christmas Day was a rest day. On Boxing Day, British results ranged from Pete's 2nd to Justin's outlanding. Pete was now 4th overall. Mike and Andy came 2nd and 3rd on the day, eroding John Coutts' lead. Laurent Aboulin won the day, pulling up to 4th overall.

December 27 (day 7) was more like South African weather: good thermals beautifully aligned in streets. The Open Class team circled only twice in the last 240km.

Russell won the day at 152km/h to rise to 6th overall and Pete was second to secure 3rd place on the leader board. John Coutts extended his lead by winning the day but Mike dropped to 3rd overall.

Jubilation ruled in the British camp after an excellent December 28 for the Standard Class. Andy romped home in first place at 139.5km/h on an assigned area task, with Mike second for the day and first overall. The whole team was genuinely sorry that New Zealander John Coutts, who has spent some time flying in Britain in recent years, dropped 500 points to put him 3rd overall.

By December 29 (day 9) it was getting very exciting: two days left, all the podium

The view from British newcomers to worlds

	What did you learn from the contest?	What abiding memory do you have?
*Seven years ago, **Pete Harvey** had only 50hrs gliding – but 3,000hrs in hang-gliders. He has flown four hang-gliding worlds (best result 6th/Team Gold). At Mafikeng on the last day he was lying second in the **Open Class**, team-flying with Russell Cheetham. Pete, a member of London GC, says:*	"Being relatively new to this gliding lark, I learn from every flight. The difficult bit is remembering and applying it next time! The main learning points for me were: 1) Everyone is well beatable. 2) A happy crew and team make all the difference (ours were fantastic)! 3) I need to practise flying in storms more.	I missed my family so much during the meet (we moved into a new house AND had a baby boy a week before flying out). Forget the "what-might-have-beens" – I already have a fantastically supportive wife, Christine. We'll be together for future competitions.
***Ed Johnston**, 39, has won two nationals and flew the 2001 Europeans. Fiancé Maryse Canaudin crewed at Mafikeng. He and Justin Wills flew the 'Vintage Club' (LS6 gliders) in the **15-Metre Class**. Ed felt that his 16-year-old glider was disadvantaged only in weak end-of-day conditions. Ed, a member of London and Booker GCs, says:*	"I learned a lot about soaring in South Africa, building and bodging trailers, and fixing waterballast bags. Many pilots spend more time thinking about the competition while I think more about the soaring. Sometimes that helps me and sometimes not! However, it took me some time to start trusting my own judgment and, looking back, the days I did were the days on which I did better.	Winning a day among the rain and lightning. After a lot of mistakes, I somehow managed to get it right on the least likely day. Keeping it simple and positive certainly helped. When there was no easy way into the second sector, I went 70° or more off track to find it, gently pressing on between the storms (a decision I had made earlier). I am still very pleased we didn't have too many other days like it, though!
***Standard Class** Silver medallist **Mike Young**'s other experience includes two European championships; he has won five nationals. At Mafikeng, Paul Mason ("Baldrick") crewed. It was a cunning plan – Mike attributes his success to good crewing, having Andy Davis as team-mate and being well prepared for and relaxed about the comp. Mike, of Cambridge GC and the European Soaring Club, says:*	"You learn new lessons at every comp, whether it is a technical point about soaring, or developing a strong mental attitude. One thing particular to all comps (even a worlds) is the herd instinct. I think it is important to always look for a situation where you can do something different. But if 20 of the world's best pilots want to go one way, you've got to have a bloody good reason not to go the same way!	Lack of decent trailers meant that we were constructing and installing fittings to trailers right up until the competition started; it is essential that we don't find ourselves in the same situation again. It was an outstandingly run competition. Brian Spreckley and Dick Bradley, did an excellent job of ensuring it was smoothly and efficiently run and immensely enjoyable.

British places/points	Glider	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Russell Cheetham	ASW 22BL E2	12	13	2	6	13	11=	1	12	2	17
		336	885	975	824	810	879	1000	771	920	422
Pete Harvey	Nimbus 4T N1	14	15	1	7	8	2	2	4	4	16
		311	867	1000	821	871	997	994	880	887	493
Ed Johnston	LS6 721	10	8	12	12	10	9	13	5	21	1
		679	949	789	741	859	936	771	852	590	982
Justin Wills	LS6 1	2	5	20	3	11	21	5	7	14	18
		866	962	615	985	858	397	935	791	845	443
Andy Davis	Discus 2 80	8	1	23	18	11	4	2	1	8	11
		900	887	689	324	733	946	985	1000	936	815
Mike Young	LS8 57	10	4	9	1	12	3	11	2	9	5
		891	852	846	679	724	960	907	944	931	862

Left: South African storms. As Ed was flying round one on the last day, lightning hit the ground a few km away, leaving a violet ball persisting for 5-10 seconds. "You really don't want to be at the wrong end of that!" he says



all pictures this page: Harry Middleton

Above: the podium, with Silver Medallist Mike Young
Below: Mike (left) and Open Class pilot Pete Harvey
Bottom: the grid at Mafikeng

places in contention and the British in the hunt. Pete was 2nd overall in the Open Class. John Coutts came 2nd to erode Mike's lead and Laurent Aboulin was 3rd overall.

December 30 (day 10) had classic storms. All classes were set tasks that took them into a spectacular storm area. Justin landed out. Pete had to start his engine – costing him a podium place – and Russell took five hours to stagger back from a three-hour task. In contrast, Ed won his day. In the Standard Class, the Frenchmen Jean-Marc Caillard and Laurent Aboulin team-flew superbly to win the day by 8km/h.

The day put Laurent Aboulin in the overall lead – an impressive comeback after his 27th place on Day 4 – with Mike a handful of points behind. The scrubbing of the final day meant Mike had no opportunity to recover his lost lead.

This article is based on reports by Reb Rebbeck and Harry Middleton first posted on *www.glidingteam.co.uk*

15-Metre Class (22)	Country	Glider	Points
1. W Meuser	D	Ventus 2AX	8867
2. S Raimond	NL	ASW 27	8779
3. J Centka	POL	ASW 27	8619
10. E Johnston	GB	LS6	8148
16. J Wills	GB	LS6	7697
Open Class (20)	**Country**	**Glider**	**Points**
1. O Goudriaan	RSA	ASW 22BLE	8625
2. M Sommer	D	ASW 22BLE	8509
3. A Kunath	BRA	Nimbus 4	8414
9. P Harvey	GB	Nimbus 4t	8121
12. R Cheetham	GB	ASW 22BL	7822
Standard Class (28)	**Country**	**Glider**	**Points**
1. L Aboulin	F	Discus 2	8609
2. M Young	GB	LS8	8596
3. J-M Caillard	F	Discus 2	8592
4. J Coutts	NZL	LS8	8455
5. A. Davis	GB	Discus 2	8215
9. P Crabb	IRL	LS8	7793
11. S Crabb	IRL	LS8	7611







How did it feel to fly your first worlds?

Being in contention has done my confidence the world of good. Russell was a pleasure to team fly with. We have a really good understanding of each other in the air. We're flying together in the Europeans, so we're looking forward to properly delivering the goods!

It is such a privilege to be able to fly international competitions like this. BGA funding makes it practical for us to go, and I am very fortunate to be in a position to afford to pay the remaining cost, which is still substantial. We owe a great debt to those people who gave up their time: crews, Harry, and Andy and Elaine Townsend and Rory Ellis

Fantastic, especially after nine days' flying. Yes, I guess that because I was leading there was more at stake, but I'd got myself into that position by being relaxed, so I just treated each day as it came, and put all my effort into concentrating on the flying, rather than the thinking of the possibility of becoming world champion.

What's your reaction to the end result?

Kicking myself about the final day result, when I bombed out, but after some analysis, realise that the decision to push on into the first assigned area sector wasn't so daft, I was just a little unlucky on the storm's timing on the second sector. It happens.

Slightly disappointing. I had the chance of getting right up there, but had one disastrous day. The rest of the time, I was just making little mistakes that cost enough to keep a lid on any upwards progress. Still, it was adequate for a first attempt.

Had somebody told me before the competition that I would be second, I would have said that that was an excellent result. But, having had a taste of being in the lead, finishing second is tinged with a little disappointment. Nevertheless, I am very proud to have won a Silver medal.

Any final comments?

Mike's my hero! Justin Craig, my crew, was brilliant. The glider was always ready and he said exactly the right things at the right time. The team was a very focussed, yet laidback group – a pleasure to be with for three weeks – I suspect a lot of [Team Manager] Harry's influence there."

I also managed three traumas in a row. Firstly, on the grid, a wing bag failed, dumping water in wing and fuselage. The next day, at 20 minutes before take-off, I found that the glider's tyre was flat – I had to pull off to repair it. After I was airborne the next day, I had a radio failure. I ripped off the PTT switch and managed a couple of transmissions by putting two bare bits of wire together."

Team flying with Andy Davis was a great privilege, and we certainly benefited from our co-operative approach. Obviously the French flew superbly throughout; although I felt they were flying a very high-risk strategy, it paid off in the end."

Safety and instructor currency

Graham Morris outlines his study of instructors' currency and safety, which he presented to the Instructors' Committee of the BGA last autumn

AVID *S&G* readers may have noticed my article *How Good Are Your Instructors?* in the June-July 2000 issue (page 22). While preparing it I looked for existing evidence of instructor safety versus currency but unfortunately none was available. I considered conducting a study of the subject then, but instead restricted my comments to the quality of instruction.

Subsequently, I decided to see what could be learned from accident reports and annual instructor renewal returns. Was there any evidence of a link between instructor flying currency and instructing accidents? I amassed and analysed a large amount of data for a two-year period and it appears that there is indeed a strong connection.

I started the study by obtaining a list of instructing accidents between 1/10/98 and 30/9/00 and, having established who had suffered accidents, obtained their club's renewal statistics. This provided their annual renewal returns and a very large number of other returns. I used a previously published figure of 1,766 instructors for both years (438 Basic, 639 Assistant and 689 Full Instructors). Based on this figure 54 per cent of all returns for the two-year period were employed in the study. This provided an interesting insight into instructor currency and the amount of instruction undertaken. The chief facts and figures are in the table below.

	Basic	Assistant	Full	Total
Number	438	639	689	1,766
Averaged annual totals:				
Inst Hrs	7,529	19,470	27,638	54,637
Inst Flts	28,039	85,730	103,701	217,470
Solo Hrs	14,065	20,262	25,869	60,196
Solo Flts	12,173	16,184	16,090	44,447
Instructor averages:				
Inst Hrs/yr	17.2	30.5	40.1	31.2
Inst Flts/yr	64	134	151	124
Solo Hrs/yr	32.1	31.7	37.5	34.2
Solo Flts/yr	28	25	23	25

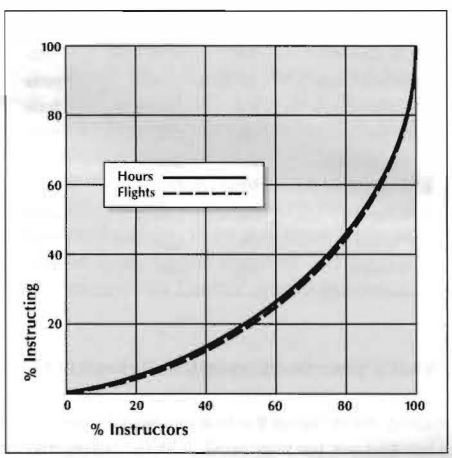
As you can see, a considerable amount of instructing is done each year and the average annual hours for all instructors is 65 hours, almost evenly split between instructing and solo flying.

Accident details were then added and a spreadsheet used to sort the instructors into numerous differing currency orders. Graphs of accidents against currency were then produced to reveal the underlying trends.

In the process of this I tried dozens of different ways of sorting the data and it was noticeable that all of the sorts pointed to less current instructors being less safe, albeit to differing degrees. At that stage a report was produced and this article is a very short précis of its findings and those of a subsequent study examining instructor's solo accidents. The space constraints of *S&G* prevent reproduction of all but a few of the resulting graphs and those included here are those that show the clearest correlations.

The first figure illustrates the very wide range of activity amongst instructors. It is a cumulative total of instructing, commencing with the least current instructor at the left, who was probably a new Basic Instructor (BI) instructing only for part of a season. It appears that it takes the least active 50 per cent of our instructors to do just 20 per cent of the instructing.

All the subsequent graphs are plotted



Above: Figure 1 illustrates the very wide range of activity levels among UK instructors. The least active half of instructors do just one fifth of the instructing

similarly. The width of the horizontal axis represents the average total annual instructing, either in hours or flights. Each column width represents a quarter of the total annual instructing, or in the case of solo accidents, one third. The height of the columns represents the accidents in the two-year period. The figures below the bottom axis indicate the number of instructors per column and their annual average hours or flights. Flying in the left-most columns was conducted by a large number of the least current instructors and in the right most columns, a small number of the most current. Each column represents the *same amount of instructing* and therefore the *same degree of risk*, despite widely differing numbers of instructors.

The first two graphs *(Figs 2 and 3 opposite left)* represent all instructors; the second two *(Figs 4 and 5, opposite middle)* just assistant and fully rated instructors who do much the same job, all sorted on total flying. There were just five accidents involving BIs, not enough to draw separate conclusions from. In all cases, the clearest correlation was to total flying, instructing plus solo, but the correlation to just instructing was nearly as strong.

The difference between the least and most current groups is striking. Obviously the most current group includes the professionals, but comparison with the intermediate groups is still unfavourable. Without BIs (as in the middle pair of graphs), the picture is very similar, although the difference between the correlation to hours and to flights, whilst still slightly clearer to hours, is smaller.

The final two graphs illustrate instructors' own safety, comparing solo accidents to currency *(Figs 6 and 7, opposite right)*. There is a very clear correlation between solo currency, as measured in hours, and safety. However, I could not find a connection to the amount of instruction undertaken. For instructors (and I would imagine for non-instructors) being current in hours terms seems to be important. However, the final graph relating solo accidents to solo flights is much less clear. There is still a tilt against the less current, but it appears the middle group is at the greatest risk. I do not know why this is, but I doubt that the low currency group, averaging just 14 flights per year, is actually doing the same sort of flying as the others.

WE ARE in general having more gliding accidents per year than we want, which is zero.

In order to try to understand what we should do to reduce accidents we have had articles in S&G where concerns are voiced in order to elevate awareness and stimulate discussion and also hopefully to reduce accidents.

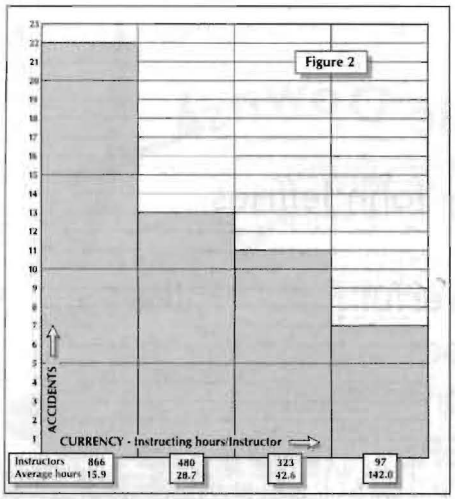
This article is filling in the background to Graham's previous article on instructor hours and hopefully generating more constructive interest. We need to do something to improve our statistics and we realise utopia is hard to achieve due to the limitations of the real world

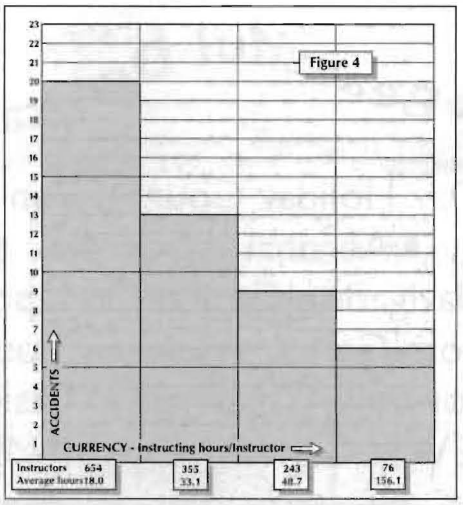
So if this stimulates you to offer a way to improvement in the real world, let us know. By the way, take a look at your own club's statistics on all pilots – it may make you think.

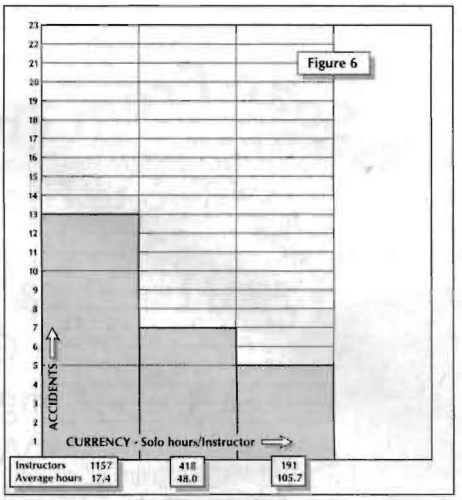
Bob Pettifer, Chairman
BGA Instructors' Committee

Conclusions

Several of the study results surprised me. The

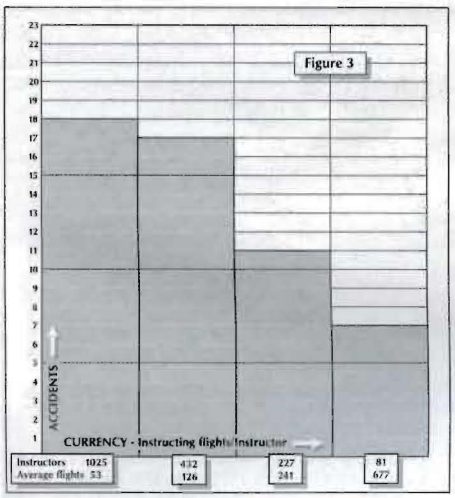


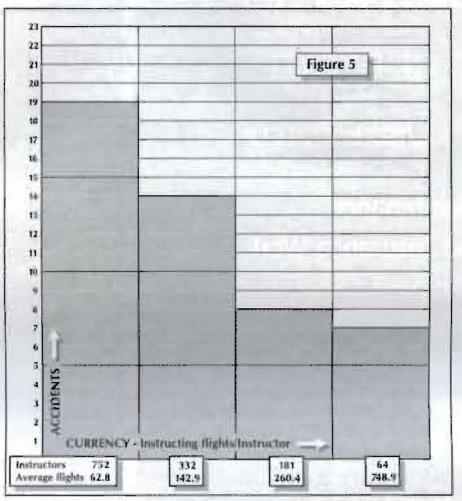


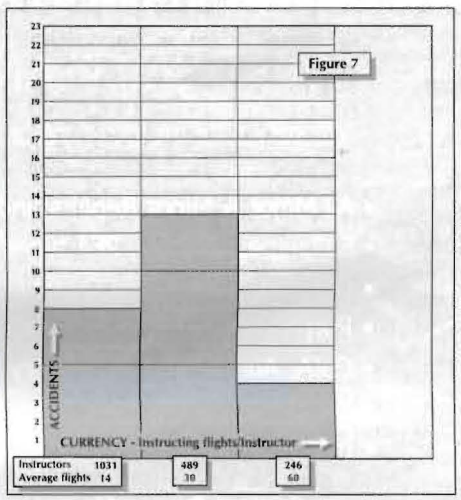


all graphs enhanced by Steve Longland

Diagrams on this page illustrate instructors' accidents over a two-year period. Instructors were ordered according to the total amount of flying they did. Then the amount of instructing done was split into quarters, and instructors were allocated to each quarter according to their currency. The numbers in boxes at the bottom of each graph show the number of instructors and the average annual instructing hours or flights in each column. Thus, in Fig 2, 866 of the least current instructors did a quarter of the instructing, with an average of 15.9hrs per instructor. Figs 2 and 3 include all three instructor ratings, with currency measured by hours (Fig 2) and flights (Fig 3). Figs 4 and 5 represent the same information for just full and assistant rated instructors. A similar process created Figs 6 and 7, looking at instructors' solo hours (Fig 6) and flights (Fig 7)







accident ratio, worst to best, was far bigger than I had anticipated. I had expected it to be apparent, but not by a factor of two to three. There appears to be a slightly stronger correlation to total – rather than just instructional – flying, implying that extra solo flying improves instructional safety.

I had assumed that the number of flights conducted would contribute more to safety than the number of hours. However, a slightly better correlation to hours than flights throws some doubt on this.

Clearly, it would be quite impossible for all instructors to achieve the averages attained by the safest instructors, or even the current overall averages. Nonetheless, the significant difference between the lowest currency group and the more current groups does suggest that a higher renewal target for instructors should have a beneficial effect on instructional safety.

Validity of study

How dependable are the results of the study? As with any statistically-based study it must be imperfect, but we can make an assessment of its accuracy. Firstly, the database of instructor renewals. This did not cover all instructor renewals in the period, but the sample size was a large one. Also as a crosscheck, I compared the ratio of the three ratings in the 1,766 to that in the sample. The largest error was 1.4 per cent, so I believe it is very unlikely that the instructor renewal database is significantly in error.

I was able to include all the relevant instructing accidents for the period, except for one that was not attributable to the reporting crew. The first year experienced 14 accidents, the second 39. I do not know why there was such a large difference, but it suggests that expanding the study by a year or two would be desirable. In the study of instructors' solo accidents, the sample of 25 is small. A few more occurred, but it was not possible to include them due to difficulties in tracking down the participants through the BGA paperwork system.

Instructors suffering accidents are automatically suspended and will probably instruct less in that year. Suspensions are intended to be as short as possible, but to minimise any bias they may have caused, I examined the previous year's figures in each case and if they were higher used those. That sounds rather arbitrary I know, but we are creatures of habit and low currency instructors, in particular, frequently report very similar figures year on year.

An unavoidable problem of both studies is that inevitably they are of 'reported' accidents only. Some accidents, generally less serious ones, go unreported, so at best the studies are of *reported* accidents only.

I have considered the likely errors in the studies and would be very surprised if the ratio of the accidents in the various currency groups were in error by more than plus or minus 20 per cent in for instructing accidents or somewhat more in the case of solo accidents. I would like to see the Safety Committee pick up what I have started and extend it. Adding in further years should refine the results and increase confidence in them and if future changes occur, hopefully for the better, they can be tracked.

My thanks to Dave Wright, keeper of the BGA Accident Database, who provided me with the lists of accidents and Colin Childs in the BGA office who answered many queries for me

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ANNUAL STATISTICS

GLIDING CLUBS	AIRCRAFT				ALL LAUNCHES	NO. OF AEROTOWS	HOURS FLOWN	KMS FLOWN	MEMBERSHIP		
	Club 2s	Club 1s	PO	Tugs					Full Flying	Estimated No. of Temporary Members	No. of Female Members
Andreas Gliding Club	1	0	3	1	331	0	39	0	18	2	0
Angus Gliding Club	3	1	5	0	0	0	74	250	28	38	4
Aquila Gliding club	3	2	26	2	1461	1461	693	1175	91	231	6
Bath Wilts & North Dorset Gliding Club	3	3	27	1	2986	897	1485	4000	119	248	7
Bidford Gliding Centre	3	3	45	2	2908	2878	0	0	118	477	6
Black Mountains Gliding Club	3	1	26	1	1236	1236	2210	0	45	171	1
Booker Gliding Club	7	8	86	5	8108	8108	200000	223	1600	33	
Borders Gliding Club	2	1	27	2	1721	1591	1506	1500	117	105	9
Bowland Forest Gliding Club	2	4	34	0	4005	0	1529	0	127	298	9
Bristol & Gloucestershire Gliding Club	3	4	67	1	6357	1555	3054	105000	200	287	
Buckminster Gliding Club	3	3	23	1	3150	2036	1496	4719	74	213	5
Burn Gliding Club	5	4	29	1	5595	1220	1935	3000	126	437	6
Cairngorm Gliding Club	2	0	14	1	1058	937	1073	1310	44	68	6
Cambridge Gliding Club	4	6	0	2	9067	1886	5800	140000	236	1096	18
Carlton Moor Gliding Club	1	1		0	5	0	1	0	8	0	
Channel Gliding Club	3	1	6	0	2117	0	295		33	719	4
Connel Gliding Club	3	0	7	0	139	0	54	620	15	43	0
Cornish Gliding Club	2	2	10	1	1675	1485	572	0	62	531	9
Cotswold Gliding Club	3	5	48	0	9410	413	2592	25000	227	763	18
Crown Services	1	2	5	1	278	248	141		34	21	3
Dartmoor Gliding Society	2	2	8	0	943	0	191	0	51	93	0
Deeside Gliding Club	2	3	23	2	3760	3677	3811	17948	160	393	16
Denbigh Gliding Centre	3	1	12	0	3650	250	1500	3500	53	142	1
Derby & Lancs Gliding Club	4	3	41	0	5987	0	2681	4355	194	641	19
Devon & Somerset Gliding Club	4	2	45	1	5905	342	2348	345	195	231	14
Dorset Gliding Club	2	2	11	1	1372	522	627	0	50	134	2
Dukeries Gliding Club	2	2	8	0	2310	0	1241	1000	30	149	2
Dumfries & District Gliding Club	1	1	1	0	238	0	73	0	19	21	1
East Sussex Gliding Club	4	4	18	1	3550	28	940	6500	112	626	7
Essex & Suffolk Gliding Club	5	4	34	0	4385	17	1650	19908	127	262	7
Essex Gliding Club	4	2	27	1	2205	900	757	3600	95	266	6
Herefordshire Gliding Club	1	1	8	1	685	685	510		23	75	1
Highland Gliding Club	2	2	0	1	2555	514	1067	0	50	63	10
Imperial College Gliding Club	1	2	0	0					23	27	5
Kent Gliding Club	4	3	31	1	4903	1156	0	0	179	314	14
Lakes Gliding Club	2	2	12	2	768	758	414	0	50	59	4
Lasham Gliding Society	12	0	188	5	24676	9733	7279	225036	483	2180	54
Lincolnshire Gliding Club	3	1	4	0	2671	64	255		51	77	5
London Gliding Club	7	4	121	4	15280	8007	6384	31875	256	2335	20
Mendip Gliding Club	3	2	8	0	2278	0	442	300	77	451	3
Midland Gliding Club	4	4	43	1	4435	232	1977	0	148	246	16
Needwood Forest Gliding Club	3	2	11	0	1915	0	505		59	94	4
Nene Valley Gliding Club	3	2	16	0	3020	15	871	3591	57	247	6
Newark & Notts Gliding Club	3	4	16	0	2811		641	1910	74	364	8
Norfolk Gliding Club	3	2	43	2	3705	2584	2057	43400	163	353	11
North Devon Gliding Club	1	0	9	1	222	222			10	50	
North Wales Gliding Club	3	3	3	0	401	78	88		26	20	0
Northumbria Gliding Club	3	2	16	1	2100	592	560	0	84	325	8
Oxford Gliding Club	4	4	19	0	3077	0	800	1500	97	464	9
Oxfordshire Sportsflying Club	0	0	10	0	0	0	1356	15000	53	36	2
Peterborough & Spalding Gliding Club	3	2	24	2	1802	1802	1154		70	262	6
Rattlesden Gliding Club	3	2	22	1	3154	501	1016	3580	109	290	23

OCTOBER 1, 2000 TO SEPTEMBER 30, 2001

GLIDING CLUBS	AIRCRAFT				ALL LAUNCHES	NO. OF AEROTOWS	HOURS FLOWN	KMS FLOWN	MEMBERSHIP		
	Club 2s	Club 1s	PO	Tugs					Full Flying	Estimated No. of Temporary Members	No. of Female Members
Sackville Gliding Club	1	2	11	1	620	350	450		20	12	1
Scottish Gliding Union	5	4	53	1	9925	925	5623		264	535	
Shalbourne Soaring Society	3	3	38	0	3570	20	1159	6000	101	446	11
Shenington Gliding Club	3	4	32	1	8429	499	1884	0	162	376	20
Shropshire Soaring Group	0	0	11	1	417	417	693	2600	21	0	1
South Wales Gliding Club	2	4	31	1	2566	923	1569	7400	91	170	5
Southdown Gliding Club	3	3	43	3	5723	4838	3762	32843	207	482	22
Spilsby Soaring Trust	4	3		1	600		100	200	4		2
Staffordshire Gliding Club	3	4	21	1	3609	108	761	400	112	328	9
Stratford On Avon Gliding Club	4	3	26	0	4411	0	1345	7448	108	471	22
Strathclyde Gliding Club	1	2	6	1	477	126	83	0	15	28	0
Surrey & Hants Gliding Club	0	11		0	1843	707	1732	0	147	0	3
Surrey Hills Gliding Club	4	3	4	0	3397	0	530	0	76	668	0
The Motor Glider Centre	0	0	0	0			356	2000	22	0	2
The Soaring Centre	6	7	92	3	10640	6200	5620	26500	330	876	19
Trent Valley Gliding Club	4	2	0	1	3460	593	1293	10000	61	174	7
Turweston Gliding Club	1	1	1	0	205	0	26	0	9	23	1
Ulster Gliding Club	3	1	18	2	1557	1481	1070	2650	57	205	5
Upward Bound Trust Gliding Club	2	1	4	0	1209	0	236	0	25	30	3
Vale of Neath Gliding Club	2	1	3	1	185	169	137		17	6	1
Vale of White Horse Gliding Club	2	2	12	0	1050	103	355	461	40	160	3
Vectis Gliding Club	2	1	8	1	668	668	280		33	103	2
Welland Gliding Club	4	3	17	1	3362	262	1169		71	202	5
Wolds Gliding Club	4	3	42	2	9974	1172	2774	8537	165	1320	15
York Gliding Centre	4	3	27	2	5451	2744	3600	2000	197	677	17
Yorkshire Gliding Club	3	5	51	3	4735	3619	3765		216	804	12
CIVILIAN CLUB TOTAL	228	197	1871	77	264453	84554	108116	978961	7744	26734	616
Anglia Gliding Club	3	3	1	0	2204	3	505	1540	51		
Bannerdown Gliding Club	3	3	2	0	5680	119	2056	16964	108	347	20
Chilterns Gliding Club	3	4	10	0	4631	24	1650	4361	108	140	14
Clevelands Gliding Club	3	4	15	2	1938	1298	823	5880	80	152	14
Cranwell Gliding Club	3	4		1	4558	433	1404	12114	82	150	12
Crusaders Gliding Club	3	1	1	0	2603	10	366		36	1	3
Fenland Gliding Club	2	3	4	0	1208	0	372		37	41	3
Four Counties Gliding Club	3	4	16	1	4253	528	1763	32605	68	150	6
Fulmar Gliding Club	2	1	2	1	271	183	139	540	16	27	4
Heron Gliding Club	2	2	6	0	1801	73	542	0	47	35	3
Kestrel Gliding Club	2	3	4	0	1495	41	399	1600	35	105	1
Portsmouth Naval Gliding Club	6	6	9	3	8498	2206	1942	1800	113	1079	2
RAF GSA Centre Bicester	5	6	34	3	12370	5800	6500	94000	121	0	0
Seahawk Gliding Club	3	3	3	1	1634	931	489	300	45	207	3
Wrekin Gliding Club	2	4	4	1	2639	509	825	500	104	55	9
Wyvern Gliding Club	3	4	9	0	6022	101	1346	300	53	120	
SERVICE CLUB TOTAL	48	55	120	13	61805	12259	21121	172504	1104	2609	94
CIVILIAN CLUB TOTAL	228	197	1871	77	264453	84554	108116	978961	7744	26734	616
GRAND TOTAL	276	252	1991	90	326258	96813	129237	1151465	8848	29343	710





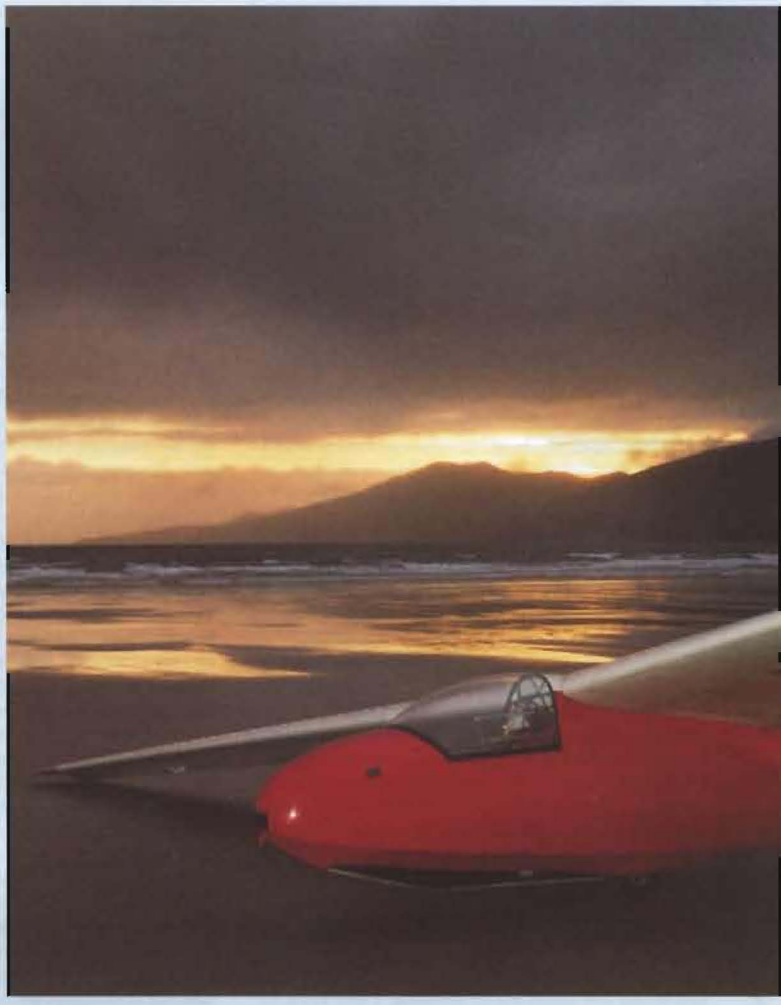
Left: the latest watercolour that American artist and pilot Stephen Nesser has sent us is of the well-known US instructor, Bob Wander, in the Woodstock glider he built

Above: Eggborough and Ferrybridge power stations, on the river Ouse, seen from over Drax power station (Mike Fox)



Above: the Wolds GC's K-21, GBV, with John Simpson (rear cockpit) and Simon Barker, shows that winter gliding can be fun (Mike Fox)

Wherever you roam



Right: Dublin GC's K-8 on safari where the mountains meet the sea (Ian Dunkley)



Above: landout in College Valley, Milfield. Do you have a better field landing picture?



Above: end of the day at Wolds GC, Pocklington, Yorkshire, with mist forming over the field. We hope someone managed to use that cloud during daylight hours (Mike Fox)

Club news

Anglia (Wattisham)

THIS has been one of our most successful years for some time, with promising recruitment drives at local military units and the University of Essex; more are planned. Derren Francis, the outgoing CFI, achieved a notable third place in the Inter-Services, beaten by a mere three points. Mark "Robbo" Roberts, having soloed in January, completed Silver in August. In doing so, he has moved up into the Open Cirrus he shares with his father Brian ("Robbie") – to the relief of everyone else (we can get a seat in the Astir again). Craig MacDougall and DJ Graham both soloed on the same day in May and gained Bronze in parallel, too. David Levien has resoloed, as has Brian Fitton. Gino Sabatini eventually managed his two-hour Cross-Country Endorsement flight, having previously returned 19 minutes too soon because he thought someone else wanted the glider... Andy Hill takes over as CFI shortly and we are confident that, under his watchful eye, Anglia will continue to go from strength to strength.
DJ Graham

Angus (Drumshade)

WE had a fairly slow summer and early autumn, due to a lot of bad weather this season. Unfortunately we are still rigging and de-rigging all gliders on every flying day, as the hangar repairs take a lot longer than expected. First it took a while to settle the insurance claim and now it takes the contractor much longer than expected to get moving. We were hoping the hangar would be usable before the winter, but at the time of writing (early November) there is still no roof on the hangar and the first snow has just started to fall.
Some highlights of the last few months included two of our members landing out on the same day less than 100 yards from their respective front doors. Well done, Roger and Charlie. Unfortunately for Roger, this was a Silver distance attempt, but he ran out of lift and had to land out closer than planned. At least by choosing the field next to his house, he did not have far to go for a refreshing cup of tea and help to de-rig. The affiliated Abertay University GC is thriving with many new members, now that a new academic year has started.
Wolf Rossmann

Aquila (Hinton-in-the-Hedges)

2001 has been a good year for Aquila, membership is stable and there has been plenty of activity with group flying evenings and Red Letter Day trial lessons, as well as normal club flying. Newly elected chairman Ian Hammonds takes up the reins from Richard Collings, while Peter Fincham takes over from Tony Boyce as club secretary. By the time this goes to press, our K-21 will have been refurbished, and we plan to re-cover our K-8 in a new workshop. We are considering the purchase of a glass-fibre single-seater to fill the gap between the K-8 and the ASW 19, increasing our fleet's cross-country capability. We will continue to run our Learn to Fly package (£325 for 25 aerotows and six months' membership) into 2002 as it has proved a real winner. In addition to group flying evenings and trial lessons, Aquila will host a regional task week in August 2002 – see the website (*www.aquilagliding.co.uk*) for details. Visitors and pilots alike may be interested to know we have secured a bar licence to further the cause of Clubhouse Bar Heroic Gliding Stories. Picture this – as you gaze starry-eyed over the rim of your glass, a fellow pilot starts his tale: "...so there I was, 600ft over this confounded stubble field, scratching away for all I was worth..." Ah, happy days!
Hugh Gascoyne

Please send your entries to *helen@sandg.dircon.co.uk* or Helen Evans, 7 Ollney Road, Minchinhampton, Stroud, Glos GL6 9BX to arrive by **February 12** for the April-May 2002 issue. **Please note the new postal address for *S&G* editorial.** Thank you

Bath, Wilts & North Dorset (The Park)

OUR fleet has been updated. When our contribution to the last issue was due our president Mervyn Pocock and Mike Edwards were on their way to Poland to collect our new Puchacz. We are indebted to Heron GC who kindly lent us their trailer for the purpose. Mike and Mervyn were greatly helped by Stan Kochanowski who not only helped with the purchase but went along as interpreter. The Puchacz is now in our hangar being fitted with instruments and weighed by Ed Gunner and should be flying before Christmas. Our usual informal club dinner, organised by Sue and Jan, was held in the clubhouse. Trophies were presented to Mike Edwards, who won the Keevil Cup, and the Four Cathedrals and 100km trophies. The annual height gain was awarded to Bob Hitchin, best progress by a junior member to Alec Baldy, and the Gordon Mealing Trophy to Pete Thornbury. On November 10 we welcomed David Roberts, who spoke to a large group of members about the activities of the BGA on our behalf. A new glider has appeared on the scene at the Park, a DG-505 owned by Bob Bromwich. Peter Hales and Richard Hales have soloed recently.
Joy Lynch

Bidford (Bidford)

WE would like to welcome our new CFI, Frank Jeynes, who took over from John Watson in October 2001. Good luck, Frank! The Fox from Dunstable (including pilot Andy) was a welcome sight in November, giving all onlookers and P2s a great show – when it was flyable, that is. We are all looking forward to our club dinner and dance (aka Nosh and Booze-up) at the end of January – photos may be published on a website or two: keep a look-out. Thanks go to Gordon Burkert (our course instructor last year) and Will Robinson (our tuggy) for a busy weekday season of flying. Let's all look forward to a much better start to the season this year.
Lynne Taylor

Black Mountains (Talgarth)

WITH the imminent departure of our Gerry Martin, our CFI for the last 11 years, John Clark (Standard Cirrus C34) has accepted the challenge to replace him and is currently being grilled and cajoled towards his full rating under the eye of multiple examiners. John has thrown himself with 100 per cent enthusiasm into this and is currently brushing up his winch launching skills at Usk and other clubs (we are an all-aerotow site). Martin Langton is now the proud owner of a super tipped Cirrus that used to belong to Greville Earl, who has put a deposit on something very slippery (but won't tell us what!). We await its arrival in March. As Greville is getting married to a non-gliding lady soon, timing is clearly critical. The autumn has been kind to us and we have seen the usual wave and thermal and have been joined by expeditions from several flatland clubs. We always look forward to welcoming visiting clubs and can offer unsurpassed winter and spring fun in unrestricted airspace with miles and miles and miles of ridges. See you soon at Talgarth.
Robbie Robertson



***Booker GC** member Alan Smith (in the back seat) has just gained his Full Rating as an instructor*

Booker (Wycombe Air Park)

DURING the winter we're concentrating on training and planning for next year's activities. Recent results of the training have been first solos for Mike Andrews, Arne Jorgenson, David Lewin Peter Cross and Richard Toyne. We've also trained some instructors: Alun Jenkins and Richard Starey are now Assistant Rated, with Mike Philpott renewing his rating after a few years' gap. Alan Smith has gained a Full Rating. Next year's plans include ad hoc early spring expeditions to Shobdon and the Mynd, and the first overseas club expedition for a while, to Jaca in Spain at the end of April. That will be run by Jed Edyvean, our deputy CFI, and will include our Duo Discus and several single-seaters. Our traditionally free regionals will be held at the end of August, and entry information should be available on our website: *www.bookergliding.co.uk/*
Roger Neal

Borders (Milfield)

RICHARD Abercrombie soloed in style during the last of our wave weeks, spending just over two hours in the Alliance, and climbing to 7,000ft. He followed it by yet another wave flight in November and another two hours under his belt. Work has started on a memorial for all the flyers who lost their lives in accidents around the WW2 airfield on our site. There will be a list of names engraved on the memorial, and it will be topped off with an airscrew from a Merlin-engined aircraft.
It has generated a lot of interest from ex-service personnel. Bill Stephen has taken over the post of CFI, giving Robin Johnston a well-earned break.
Bob Cassidy

Bowland Forest (Chipping)

THE weather has restricted flying somewhat, but we have flown on several occasions. The motorglider has



*Marcus Shirley, who soloed at the **Bristol & Glos GC** at the age of 16*



***Deeside** tuggie Andras Soproni receiving a tankard from Colin Wight; DCFI Roy Dalling looks on*

taxied around the field, but the ground is sadly still too soft for its inaugural flight. Socially, we held a very popular Battle of Britain night, where our pundits played out dog fights on five networked computers. Bonfire Night was followed by a typically 'oop North' supper of tatey pies and mushy peas. Finally, because of the recent influx of new members to the club, membership has been closed on a temporary basis to new pre-solo pilots.
Eileen Littler

Bristol & Gloucestershire (Nympsfield)

A DIFFICULT trading year was reported at the AGM, due to foot-and-mouth and non-availability of some aircraft. But Andy Beatty and Danny Goldworthy had done sterling work in keeping flying going. We have lost business rate relief but are still lobbying. The club is also trying to get a payment from the government's foot-and-mouth business hardship fund. A survey showed that 95 per cent of trial lessons enjoyed the experience and five per cent joined. Steve Parker took over as chairman from Barry Walker, who became vice-chairman. Eric Smith and Nick O'Brien were voted honorary life members. Pete Bray is acting as treasurer until a new one is found. The committee stays the same, with one vacancy. A replacement Pawnee has been bought to replace our written-off one and our Supacat winch is being re-engined; meanwhile we are borrowing North Hill's spare. Marcus Shirley went going solo a few days after his 16th birthday. Two new BIs have been appointed – John French and Jim Wilson. More are in the pipeline.
Bernard Smyth

Cairngorm (Feshiebridge)

CONGRATULATIONS to our Octoberfest visitors who departed Feshiebridge nursing their various badge



***Cambridge GC**'s Tony Cronshaw looking more than delighted after his first solo in the motorglider*

claims and hangovers. See you all again same time next year! Congratulations also to Nick Norman on having been awarded the prestigious Bob Kerr Trophy for the most memorable flight in Scotland 2001 (500km in thermals within the geographical boundaries of Scotland). Our annual Christmas dinner was also memorable, for its hilarity and mirth (the barrel of beer kindly donated by Bill Longstaff may have had some bearing on this), and thanks go to Maggie for the wonderful culinary spread. Ray and Nick are busy in the hangar attending to the C of As (deja vu?) and keeping the fleet ship-shape and Bristol fashion. We will be flying right through the winter every weekend, and mid-week by arrangement, so if you feel inclined to sample the pure delights of Scottish mountain flying, and maybe pick up a Gold/Diamond height on the way, telephone the club on 01540 673231 or our secretary Ruth on 01667 493459. For more details check out our web site at *www.gliding.org* We look forward to seeing you at Feshie.
Chris Fiorentini

Cambridge (Gransden Lodge)

WE have organised two trips already this winter to Sutton Bank with full-time instructor Kevin Moloney showing club members the pleasures of less flat terrain. Up to four club gliders have been on these trips, which are becoming very popular. The winch engine has been rebuilt after over 10,000hrs running. Particular thanks to Mike Collins for seeing this through. Andrew Watson and Johan Schoeman have completed their Basic Instructors' course. A clutch of autumn solos included Steve Kaszak, Tom Rushton, Geoff Adderley, Stephanie Smith, Mike Collins, Simon Searle, Richard Baxter and Alex Lloyd. Julian Bane has re-soloed after a very long absence from gliding.
John Birch

Chilterns (RAF Halton)

CONGRATULATIONS to Derek Jones on his appointment at our AGM as CFI. They say no news is good news, but as I have been away (camping in the desert) and none is forthcoming. I can only say well done to all those who won awards and trophies this year. Keeping our fingers crossed for a dryer winter we hope to utilise the west- and north-facing ridges a little more than last year!
Dave Sale

Clevelands (Dishforth)

TWO of our club members sneakily achieved Diamond distances this year but chose not to blow their own trumpets about it. So, a belated congratulations to Paul ("Baldrick") Mason and James Prosser. Our move to the north side of the airfield is now complete, with the re-siting of the caravan park conveniently next to the clubhouse complex. Our winter visitors have already been enjoying some of the North Yorkshire wave, and we are ever hopeful of sending some of them home with shiny new Diamond heights following the traditional Christmas Wave Camp.
Polly Whitehead

Cotswold (Aston Down)

AUTUMN is that time of year when you hope to catch up on outstanding work so thanks are due to Simon Lucas for rebuilding the engine in our Skylaunch winch in double-quick time. This was despite the difficulties in obtaining spares by mail from America, caused by the terrorist activities. Heating to the clubhouse has also been restored following the purchase of new natural gas units. The club had a memorable autumn visit to Portmoak when a total of 19 (members, wives and children) ventured northwards. Gliding achievements included Silver height for Mark Verden and five hours for Stan Przeleski. Heights of 15,000ft were achieved by Tony Parker and Richard Burgoyne but they already have their badges. We welcomed back the University of the West of England GC in October and have been busy



*Thomas Holloway, seen on his 16th birthday after going solo, is the son of **Deeside** CFI Graham (Colin Wight)*

training students to go solo. We have added a Pilatus B4 to the club fleet which may well replace the K-6. Brian Birlison goes to Australia in January for three weeks with George Lee to polish his cross-country flying skills.
Frank Birlison

Cranwell (RAF Cranwell)

ALTHOUGH we have seen some excellent flying weather, very little of it has been during our weekend operations. We have been fogged off, rained off and generally... remained in good spirits, achieving a great deal of maintenance. We have also learned to DI the hangar drainage system following heavy rainfall and flooding of the clubhouse and some storage areas. Nevertheless, we have committed aviation at every opportunity and achieved a number of type conversions and one solo. With insurance premiums rising significantly, the club held an EGM to establish a financial action plan. On a lighter note and despite thick freezing fog, our Christmas dinner was extremely well attended and our thanks go once again to Kiera Evans for her painstaking organisation.
Paul Skiera

Dartmoor Gliding Society (Brentor)

WE found very little autumn wave but there were some surprisingly good thermals in October. While the weather remained dry our landlord generously allowed us to continue to use the field that extends our strip. This combined with steady Dartmoor winds enabled our old winch to provide very high launches. We pulled off at 1,999ft, of course, but it gave us some enjoyable flying. November as usual brought us back to earth with circuits and bumps. But Gus Pearce went solo. Some said the width and persistence of his grin alone made the annual subscription worthwhile. Another pleasure was the visit for the first time since February of our vice-chairman, John Hanwell, a government vet. He had clearly been earning his pay. Best of all, Devon has at last been declared infection free. Restrictions on the site should end and farm stock return. We shall have to relearn those ancillary gliding skills of sheep driving and dung wiping.
Phil Brett

Deeside (Aboyne)

OUR visitor season had its ups and downs, but was successful for many who gained their Diamond heights. Congratulations to Neil O'Gorman and Thomas Holloway on first solos, Thomas on his 16th birthday, aerotowed off by his dad Graham (CFI). We said goodbye to our seasonal tug pilot, Andras Soproni, from Budapest, with a dinner held in the Boat Inn. He received an engraved tankard in appreciation of his sterling service. Some club members are already planning an expedition to Hungary.
Colin Wight

Borders





Bill Stephen congratulates soloist Richard Abercrombie

At a glance

Launch type and cost:
Aerotow, £15.50 to 2,000ft

Club fleet:
K-21, Alliance, Club Astir, Motor Falke

Private gliders: 25

Instructors: 9, plus 4 BIs

Types of lift: wave, ridge and thermal

Operating days:
Every weekend and Bank Holiday
plus six full weeks during the year

Contact:
01668 216284 / *www.bordersgliding.co.uk*

BORDERS GC *(pictured above)* is located in North Northumberland near the East Coast, within gliding distance of the Scottish border. In one of the least populated areas of England, the club has access to all-year-round soaring due its unique location.

The field is only 150ft above sea level and eight nautical miles from the magnificent Northumberland coast (and Harry Potter country). Finding us is easy, just follow the A697 through Wooler and turn off just before Milfield village.

Five years on, our new field is maturing nicely with options to take off in almost all wind directions. The Cheviot hills and College valley are less than five minutes away by aerotow and generate good hill and wave soaring conditions. We have a glass fleet, consisting of a K-21, Alliance 34, and Club Astir. We also have a Motor Falke for glider training, Bronze exercises, and SLMG PPL training. We are an all-aerotow site, launching by a Supercub 180 or Pawnee 160.

The field is on the site of a WW2 airfield used mostly for training missions during the war years, and claimed over 40 pilots' lives, a number of which were attributed to the often violent conditions around the site. Fifty years on, glider pilots have learned to understand and respect wave and rotor conditions and we now enjoy good climbs all year round.

The ability to launch at the site in most wind directions has opened up the area's soaring potential and we are able to fly when tricky crosswind conditions would have grounded us on our old Galewood site.

Gold heights are fairly easy to achieve, and we have had Diamond climbs in all seasons. Our worst wind directions are from the east, which normally bring in low cloud; just as well this is not the prevailing wind direction.

On a typical wave day – in this case, October 13, 2001 – following the passage of an occluded front, indicated wind speeds and direction on the ground were 260° and 10kt. At 24,000ft they were 240° and 65kt. All the signs suggested a good day.

For once the aerotows were uncannily smooth, which is not the norm, and all the pilots were towed into strong lift at 2,500ft, and enjoyed climbs over Wooler of 12,000ft. Several pilots ventured forward towards the Cheviots and entered the primary wave, where they climbed to over 20,000ft.

Robin Johnston, until recently our CFI, sums up the site as a "nursery wave site" – based on the ability to enjoy good height climbs with lots of safety options. If you get trapped above cloud, it is easy to head north/east and avoid the hills, providing you don't go too far and end up in the North Sea!

We are building up regular visiting groups each year, and have attracted many country members, who fly with us during autumn and winter weekends when many clubs pack up. Our season lasts all year, but you do have to wrap up warmly. Our modern clubroom and our heated, double-glazed bunkrooms offer visitors cheap accommodation. Local pubs and hotels offer good rates and a few of those essential extras like good food and ale.

We have been very fortunate to have had superb facilities built for us due to the need for British Gas to build a pumping station at Galewood, our former site, where the club was founded in 1969. Founder member and president Jim Hogarth is still flying with us and we now have 110 members.

We look forward to sharing our site and soaring conditions with more visitors over the coming years.

Bob Cassidy

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*Eoin Cassels, who soloed at **Essex** at the age of 16. The photo was taken by his father, Bob, also a pilot*

Club news

Derby & Lancs (Camphill)

CAMPHILL has had a remarkable number of flying days this autumn and pilots have contacted wave on a high proportion of days. There have been no spectacular heights (often 3,000ft–5,000ft) but the frequency was notable. Congratulations to Fritz Dittman on his first solo. There have also been a number of conversions from the busy K-13 to the Junior and our shiny refurbished K-18 has just returned and is ready for action. Visitors are always welcome at this spectacular ridge site in the heart of the Peak District. Bonfire night was a great success and we're looking forward to the AGM, Christmas dinner and New Year party.

Diane Reid

Devon & Somerset (North Hill)

WITH the AGM under our belt, and talk of a new glider, there is a new air of optimism at North Hill. Although reduced in number there were a number of worthy recipients for club trophies, namely Bronya Shales from Exeter university for best improvement, Dave Reilley for his Diamond goal (in Spain), John Pursey for best flight in a wooden glider and his Diamond height. John Burrow received the shield for the best flight in a club two-seater, being foolish enough to believe me when I managed to persuade the L-Nav that we would get back with "loads of height" from the far side of Dartmoor. Mike Fairclough has been responsible for improvements to the disabled access to the clubhouse and the fitting of a hand-operated rudder facility to the K-21. This has enabled our treasurer Don Jones to obtain a considerable reduction in the local rates. In addition, Don, assisted by John "Bogsbee" (in a complete change of role), were responsible for a comprehensive kitchen refit. Flying has been looking up, too, we have had days with almost the entire club fleet calling off wave climbs at 5,000ft to avoid the nearby Airway and can even report the first field landing of the season when an enthusiastic pilot took the search to its limits. We are looking forward to hosting the re-scheduled Competition Enterprise in July and days of glorious sun. In fact the only down side is the sheep are back; and Gladys isn't among them!

Phil Morrison

Dukeries (Gamston)

OCTOBER brought our club expedition to Portmoak where we enjoyed the rain. Nick Ashton flew the Vega on a five-hour attempt and nearly didn't take a barograph as it didn't look that good. One of only four pilots to find the wave, he managed Gold height as well as his five hours on a day when the ridge was not dependable. Robert Thompson managed a Bronze leg on his first solo flight in a K-21. As usual we all put on weight due to the superb catering. Paul Nadin went solo at Gamston with a 14-minute flight in weak wave. We are now running a successful Christmas advertising campaign publicising our £300 fixed-price-to-solo deal.

Mike Terry

Essex (North Weald/Ridgewell)

WELL done to 16-year-old Eoin Cassels on going solo. The clubroom at North Weald, since its renovation, has seen an increase in its use with well-attended get togethers and quiz nights. The refreshments provided and the hard work done by members to make these evenings a success is appreciated. Eagerly-awaited future activities include a presentation by the Army Air Corps Blue Eagles. A warm welcome to new members Stuart Perry, Reg Standcombe, and also to Paul Regeli who has not only rejoined the club after an absence of several years, but is also organising a radio course for members to obtain their R/T licence: welcome back! Peter Berridge found that his K-6 seemed reluctant to leave Ridgewell when the trailer tried to part from its chassis. Peter had a quiet word in its wing so it's now happy in winter quarters at North Weald after being assured it would return in the spring. We made our annual weekend pilgrimage to The Mynd in November and whilst members were unable to fly they enjoyed the unique experience of being able to see what cloud flying is like without leaving the ground. Our sincere thanks to all the Mynd members, who once more made our visit most enjoyable despite the weather. The Squadron North Weald has again kindly consented to let us use their mess for our annual dinner in February and members are now in serious training to do justice to what is bound to be a memorable occasion

Peter Perry



*Les Mills, recently soloed at **Kent**, always takes his flight adviser to the field. They are, of course, in a "Puch"...*

Essex & Suffolk (Wormingford)

BY the time you read this Christmas will be over and we will all be looking forward to (we hope) a better soaring season in 2002 than we endured in 2001. What with foot-and-mouth and the generally poor weather it can't get much worse, can it? Steve Carter went solo at the end of October and Rob Lockett finally got his 500km Diamond distance. Andy Booth and Eric Hibbard are the latest of our club to achieve BI status and particular mention must be given to Tom Brenton, George Green and Robbie Nunn who all did well in the Junior Nationals. We have been in negotiations with our new landlord for some time now and have at last reached agreement to lease some more land from him. This will allow us to extend both the length and the width of the runway at both ends of the strip and will thus enable us to maintain the launch length whilst enabling returning flights to land into wind behind the launchpoint: so no retrieves to block the runway. This should facilitate a much more efficient launch rate.

Steve Jones

Four Counties (Syerston)

OUR AGM was well attended, with trophies going to Adrian Hatton, Sheila Weston, Sue Armstrong, Dave Bromley, Terry Moyes, Ian Craigie, Bryan Delmer, John Wilton, Huw Williams, Alan Ellis and Dave Palmer. Special thanks were also made to Rose Thomson, Mike Howard, Tony Povey, Hillary Davey and Sue Armstrong for their hard work throughout the year. We have now computerised our flying fees, which has made life much easier for our two field treasurers, who will be forever grateful to Mike Howard for designing the programme. We are also looking forward to the arrival of a new Skylaunch winch next year, which will replace one of the ML winches that we have recently sold.

Sue Armstrong

Herefordshire (Shobdon)

BOTH the AGM and subsequent Christmas dinner were well attended, with Neil Layton lifting the Most Promising Newcomer Trophy, (Or the Member Most Likely To Trophy, if you prefer) despite some stiff competition. The most interesting cross-country of the year was Peter Greenway's Shobdon to Chauvigny trip, which must have drawn several "La flame d'anglais!" type comments from our Gallic cousins. Peter wanted to get to Chauvigny and fly back to Shobdon in the Falke with John Cox, so he decided to ride his pushbike down, which could then be returned home in a glider trailer. A most impressive 500km really, but there must be an easier way to convince the French that you are worthy of a medical! One of the girls from the Aero Club canteen asked me recently about the club, how many members we had and why there seemed to be so many more back in the summer. Thinking we had a potential new recruit, I enthusiastically explained about our membership and the increased influx of summer visitors, due mainly to foot-and-mouth this year. When asked about a trial lesson she quickly retorted: "Oh, no thank you! I just wondered where all the good-looking ones had gone..." Life can be so cruel!

Mike Hayes

Highland and Fulmar (Easterton)

WE have enjoyed a good October and one of our best Novembers on record with wave or ridge soaring every weekend. This autumn has produced the following achievements: Ian Thomson (Fulmar) Silver height, Julian Mainstone Bronze leg, Alan Hughes (Fulmar) one hour, Jim Marshall two hours, and Roy Scothern five hours in his K-8. Congratulations to Tim Griffiths who had his first solo in a glider and did his first Bronze leg on his third flight. David Chalmers has completed his Basic Instructor's course.

Teresa Tait

Imperial College (Lasham)

C OF A work has now been completed on our Discus (296) and ASW 24 (96) and our thanks go to Frank Irving and Afandi Darlington for overseeing the work and to all the students who helped. Congratulations to Hemraj on being awarded a week-long mountain soaring course in Rieti, Italy, next summer by the Ted Lysakowski Trust. Congratulations also to David Moriarty, who was the first (of hopefully many) to solo this academic year – considering the amount of flying he's done this term, I think we'll have to sell a glider or two in order to afford to pay him his subsidy! Our third Annual Scrubbing Day will take place this term when we'll be washing trailers at Lasham to raise money for Imperial College RAG. I think Captain's privileges mean that I get to be in charge of the power washer – better bring your waterproofs, guys! Our annual dinner will also take place this term and will be held in Alton, near Lasham – not sure how many of us will be at briefing the next day, though.

Katie Sykes

Kent (Challock)

THERE has been a lot of activity at Challock in recent weeks both in the air and on the ground. An *ab initio* course resulted in first solos for Brian Molloy, Les Mills, Dave Shearer, Terry Webster and Gerry Puttock. These successes were quickly followed by a 100 per cent pass rate at one of our regular Bronze theory courses. Brian

Club news

Tansley is our latest Basic Instructor and Bob Burden is now a tug pilot. All told, the bar is certainly getting well used and will be receiving a facelift in the near future. The annual dinner and a fireworks party were well attended and there are plans for a Christmas party and a dinner. In the New Year we will be holding an evening revision session for Official Observers but open to anyone who wishes to attend. Once the working part of the evening is over we will be having yet another party.
Caroline Whitbread

Lakes (Walney Island)

THE hangar door saga has now been resolved: we can now open them with just a little more than finger pressure! The club trip to Portmoak was a bit of a washout: we obviously forgot to put in the request for westerly winds and dry days, consequently people came back with better handicaps than when they left. Golf, that is. Steve and Irene were at their usual best; our thanks to all who looked after us during our stay. Our annual dinner dance was once again held at the Grange Hotel and a good time was had by all. The prizes for gliding achievements were presented so here are some of the highlights, Robert Morris won the Dodd Trophy for best flying progress: he joined the club at 14 and has to wait for his 16th before he can go solo. Lyn Martindale won the best flight of the year for 301km from Hus Bos, and Neil Braithwaite got best gain of height of 12,000ft. Graham Welch was awarded the Duddon Trophy for his services to the club. We hope that over the winter the weather, although colder, will be drier, and so boost our flying figures.
Peter Seddon

Lasham Gliding Society (Lasham)

DIAMOND heights were gained at Aboyne by Gordon MacDonald, Gerry English, Mike Sedgewick and Dave Sinclair; Deputy CFI Gordon now has all three Diamonds. Chris Starkey won the BGA Weekend Ladder. Cadet Sian Lane soloed on her 16th birthday. On November 26, a K-13 kited to 2,600ft from our medium runway, winched by Graham Skelly (our max winch height is 3,000ft). The Lasham Regionals will be from July 6-14. Our K-21, 778, has been towed to Poland by Bob Bickers and John Hoskins for repainting and fitting a new canopy. Our Robin, G-BJUD, is being factory refurbished, and will be fitted with a new engine in house. The tug hangar is now waterproof, with new insulation and lights. A CAA audit has been completed for authorisation to JAR 145, in association with our neighbours, Aviation Tool Corporation. A meeting of the JAR 22 Study Group, responsible for preparing mandatory Airworthiness Requirements for gliders, was held at Lasham. Among those attending were Helmut Treiber (designer of the Duo Discus), Martin Volck (designer of the Diamond motorgliders) and Helmut Fendt (responsible for German certification of gliders, motorgliders, balloons and airships). BGA Chairman David Roberts gave a presentation on the structure and role of the BGA. An audience of 250 members attended astronaut John Young's talk, which was organised by Nicki Marchant and Bruce Nicholson. When asked if he would land on the moon again, he replied: "No, it would be far too dangerous. My wife said she would kill me if I went again!"
Tony Segal



*Sian Lane, a cadet who soloed at the age of 16 at **Lasham**, is pictured with instructor Bob Thirkell*



*Ian Phillips of **Mendip GC** after his first solo, in November 2001. Instructor Brian Headon leans against the leading edge of the K-13 (Keith Simmons)*

Mendip (Halesland)

WE are making progress in our recovery from foot-and-mouth and in both October and November our launch rate was ahead of last year's figures. Work has at last started on our long-awaited MT building. One of the members turned up in a JCB instead of his usual car and levelled the site. The same member also provided a tipper lorry, which not only allowed us to fill a hole on the airfield with the surplus soil but also fulfilled the chairman's childhood dream when he was allowed to operate it. Although final decisions have not yet been taken, there is a firm commitment to aerotow launches for 2002. Ian Phillips arrived at the club in October and has already flown solo.
Keith Simmons

Midland (The Long Mynd)

IT MAY be a first rule of business to lock in your assets but you would have thought the priority would have been to get the treasurer out of his Ventus when the canopy jammed shut on landing. Instead members summoned each other from far and wide to bring cameras and jeer at the pathetically gesturing David Rance. He's good value. The wave has granted its winter favours sparingly. Roger Andrews reached 17,000ft in October and on the 31st of that month five pilots made notable climbs: Chris Harris reaching 15,600ft and Ann Parry gaining Gold height. Congratulations also to Steve Collins, Andy Davis (no, not that one) and Alan Marshall on going solo. We are preparing for a serious spring recruitment drive and need, like other clubs, to be highly innovative to fill in the gaps in the *ab initio* programmes caused by foot-and-mouth. No one has suggested getting advice from the Government's teacher recruitment agencies...
Roland Bailey

Needwood Forest (Cross Hayes)

IT IS extremely encouraging to see how much better the site is standing up to the wetter weather this year; fertilising has promoted a much healthier carpet of grass and we look set to lose fewer flying days due to a waterlogged pitch. It is noteworthy that we have already flown considerably more this autumn than last. Work is continuing on the retrieve winch Mark II, thanks to all those concerned, it looks like a very workmanlike tool. Berian Griffiths did his first solo, congratulations on reaching this milestone. We look set to move a number of new solo pilots through to Bronze during the coming months. Instructors are delivering appropriate lectures on non-flying days in preparation for the exam. In our ongoing efforts to recruit new members and bring income into the club we took a stand at the National Exhibition Centres Festive Gifts Fair; this proved to be an excellent publicity exercise with many flyers being distributed and over £2,000-worth of course and trial lessons being sold.
Andy Chapman

Nene Valley (Upwood)

NOW that we are into the New Year, all the members at Upwood are looking forward to the forthcoming soaring season. None more so than a small group of competitive flyers led by Steve Codd. Steve and his merry band (Barry Meech, Mike Roberts, Peter Seymour, and Gary Nuttall) made their mark on the East Anglian scene last summer with some excellent performances. The team was ably backed by a keen ground crew of Jane Roberts, Tracy Meech, Steve Flowett-Hill and Paul Daly. All of them are itching to get going again and renew old acquaintances. However, the excellent news for us is that Steve has become a full rated instructor. This is no mean achievement – well done, Steve. The Thursday Pensioners Club missed Roger Morrisroe, who managed to escape from the instructors' cell and fly to Australia for 10 weeks. However, some kind-hearted instructors took pity on the old boys and managed to keep them going while Roger was away. Our peritrack has again proved invaluable and allowed us to fly, despite the sometimes unusable condition of our strip. At the AGM, held in November, David Mansfield and Les Walsh relinquished treasurer's and secretary's responsibilities respectively. Tracy Meech volunteered her services for treasurer. David, who can't survive without committee work, took on the task of secretary from Les Walsh. Both David and Les have put in sterling work on behalf of members and we owe them a very well-deserved vote of thanks. Steve Myall has taken over publicity and will be writing the future Upwood notes. Finally, please come and see us – we love visitors.
John Pike

Newark & Notts (Winthorpe)

THE annual dinner was a great success, thanks to Julie Starling's efforts (again). Chairman's Award went to Bob "the mower" Tatlow; best duty pilot was Jim McAdam. The CFI's Trophy was shared between Drew Evans and Amy Sentence, our two newest soloists. The cross-

country award, despite valiant efforts to massage the handicap figures, went to Dave "Span Man" Prosolek, with a huge score. Steve Payne clocked his nine hours, and Noel Kerr achieved a perfect score in his Bronze paper. Thanks to Shirley Maddex, Mike Davies and all who helped in getting the K-13 back on line so quickly.
Chris Dring

Norfolk (Tibenham)

AFTER the indifferent summer weather, autumn has been rather kind, enabling 48 days of club flying since September 1. Although aerotows still dominate, the winch was quite busy; even the Wednesday Senior Citizens are beginning to take an interest in wire launching. (We might try half-price on the production of a bus pass.) Twenty-five wartime aircrew veterans of the 445th Bomber Group, with 50 friends and family, spent the day at Tibenham, having attended the opening of the 2nd Air Division Bomb Group War Memorial in the new Norwich library and received the Freedom of the City. This most poignant occasion, so soon after the September 11 tragedy, reinforced our links with the 445th. A sudden, violent hailstorm curtailed the outdoor service at the Tibenham airfield war memorial and reminded the airmen of the sort of weather they had endured in the 1940s. Roy Woodhouse (Woody) is well on the way to full health after a short but painful spell in hospital. We wish him well. Pete Ryland achieved Diamond height at Aboyne (22,000ft above site) in October: congratulations.
Geoffrey Haworth

Oxford (RAF Weston on the Green)

THIS year, OGC's AGM saw the longest distance travelled by the most glider pilots – from the bar to the meeting room, where we heard chairman Pete Brooks give his state-of-the-nation address to a hushed audience. Heroes of the year turned out to be Dave Weekes, who won the club ladder in his Skylark (which apparently is made out of old club ladders); Cris Emson for achieving the best flight in a club glider; Andy Butterfield got the Deep Breath trophy for soaring to excessive heights (again); Stuart Otterburn was the first person to stay aloft for five hours and Neil Swinton was voted the instructor most likely. The Flying Brick was also awarded to some plonker for failing to grasp the basic premise that wide things don't go through narrow openings. The "you should have been here last week" trip to Sutton Bank was just that. In that first week, Toni Hoskins and Steve Trussler got their Gold heights and managed to frighten a passing RAF Hawk pilot, and Paul Morrison and Steve Trussler both achieved their five hours to complete Silver. The following week the assembled pilots managed five hours in the National Railway Museum and an out-and-return to Gothland on a steam



***Nene Valley** GC's new treasurer, Tracey Meech, with instructor Martin Reynolds after soloing in the K-7*



*Amy Sentence, one of two winners of the **Newark & Notts** CFI's Trophy. She is seen just after soloing, on her 16th birthday. Her co-winner was Drew Evans, another recent soloist at the club*

train. On a sadder note (sadder than that?), the winch hydraulics finally cried enough and are now being replaced with an automatic gearbox. Winch drivers will be retrained and volunteer pilots with a strong belief in the afterlife are being sought for the first launches.
Steve McCurdy

Peterborough & Spalding (Crowland)

NOT much to write about – the usual winter stuff. We all enjoyed a soaring day on November 3, the last chance before next season to use our soaring skills – apart from Kevin Fear, who has gained a place on a GSA expedition to Australia during November and December. Lucky devil! A pair of ASW 19s have arrived on the airfield, owned by Jim Crowhurst and Adam Laws. Watch out for them in comps this year. The dinner dance and prizegiving will be on March 23.
Pete Goulding

Portsmouth Naval (Lee on Solent)

WINTER has been particularly lazy in coming this year, the mild weather being of much relief to the inspectors working to C of A the fleet. Thanks mainly to the efforts of Stuart Pollard and his team they now have a new workshop constructed in our hangar. Chipmunk VH has left to be fitted with a bigger elastic band and although we will miss that glorious Gypsy sound, no one will be complaining about the increased performance and reliability. In the New Year we hope to go on many more expeditions around the country, a group of us recently trying out the Nympsfield ridge in a south-westerly – well, I guess we'll learn! Congratulations to Andy Durston and Richard Parker from Southampton University on their recent first solos and to John Bradbury on becoming a full rated instructor.
Pete Smith

Rattlesden (Rattlesden)

WE'RE using the quieter winter months to catch up on maintenance around the club. Our hard runway surface allows flying to continue on any fine day and a couple of members have used the "dark months" for personal achievements. So congratulations to Dawn Goldsmith, who has soloed at the age of 16, and Kevin Western on completing his Bronze Badge.
Pat Gold

Shalbourne Soaring Society (Rivar Hill)

SEVERAL members enjoyed our regular club expedition to Aboyne with our treasurer, Richard Dann, obtaining higher interest for his investment (wince – sorry) and obtaining his Diamond height. Terry Smith and Richard Thevenon have both re-soloed. Gordon Shepherd has converted to the K-8 and Chris Gough has to be forcibly removed from the Astir now he has converted to it. Well done to Pete Ballard for obtaining his Bronze – and to think his dad just wanted him out of his hair for the summer hols (this could be an expensive mistake, Tim). Kay Draper survived the charms of Charlie Kovac (many thanks, Charlie) and has completed her BI rating. Our site licence has at last been agreed, many thanks to all board members past and present who contributed to this. At our AGM in January we will be discussing how to develop the club further.
Kay Draper

Shenington (Shenington)

CLAIRE Margetts and Jim Wade have gone solo, and John Vella Grech gained Gold height at Feshiebridge on his first trip to Scotland. We have a new BGA Inspector in Dave Heath. We've just purchased another K-13 for the fleet, and our winter maintenance programme has started in earnest. We've also had a First Aid course held on site, thanks to Roger Tyrrell, as well as an autumn safety visit from the BGA. We are operating midweek on the good days over winter, so check with the office if you plan to join us – otherwise we welcome visitors at the weekends. We will be running intensive courses once again from March: call or email for details or a brochure. Our annual dinner dance is on Feb 8. You can keep up with our club's news at *www.gliding-club.co.uk*
Tess Whiting

Shropshire Soaring Group (Sleap)

THERE have been a few good wave days in the past two months but most flights were more notable for duration than gain of height. Quite often the cloud showed no distinct wave patterns and several flights have been followed by descents through cloud when wave slots have disappeared. Even so, flights in excess of an hour are not to be sneezed at, at this time of the year. We even managed a little thermal flying in November. Generally we have had more luck with weekday rather than weekend flying since we have some choice in the selection of a favourable forecast. Our forethought in having two Chipmunk magnetos overhauled proved a flop when both were found unserviceable after over a year on the shelf (and out of guarantee). John Catmur, who bought a share in the Twin Astir a few months ago, has now gone solo.
Keith Field

Southdown (Parham)

IT may have been global warming, or simply a hiccup in the weather machine. Whatever the reason, thermals to more than 4,000ft were more than welcome at the end of October. Then, as if to compensate for past neglect, the northerlies arrived in strength during

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Club news

November. This brought our own cross-country pilots out of hibernation, as well as visitors from neighbouring clubs. With winds of up to 30kt straight on to the South Downs, and crystal-clear visibility, it wasn't surprising to see so much glider traffic between Lewes and Petersfield. What was alarming, however, was the number of radio-controlled models operating along the route. There were many fine performances, but the 300km by Rod Walker and Chris Blackwell in the Duo Discus was outstanding. Newcomers to gliding were amazed to see the T-21 taking advantage of the autumn sunshine, and the public arrived in strength to view the phenomenon. The treasurer was delighted to have an unexpected cash input so late in the year, and with members taking refreshment outside the clubhouse in the sun, it hardly seemed like a prelude to winter.
Peter J Holloway

South London (Kenley)

WINTER once again – how long it seems compared to summer! We are fortunate to have hard runways so at least we can stay current when it is flyable, and being a winch site does mean we get plenty of practice at launches and landings. Congratulations to Simon Smith, our latest Basic Instructor, who is already notching up an impressive launch total. Plans for a return visit to Jaca in northern Spain by some members are taking shape for next Easter, and weekend trips to various sites around the English countryside between now and then will no doubt keep some of us busy. Thank you to Ringmer, who came to our rescue by lending us one of their K-7s while ours was indisposed. If we can return the favour... A Happy New Year to all our members and all those who have paid us a visit – come again soon!
Alan Seear

Staffordshire (Seighford)

AUTUMN'S good weather has seen us surpass our revised launch targets for 2001, aided greatly by the regular and enthusiastic Friday Flyers – thanks to Ian Davies for instructing, and also for his equally-popular weekend *ab initio* course. The tug is proving a very popular acquisition, especially with the programme of instructor training that is currently being undertaken. Thanks to Roger Bostock (tugmaster) for his efforts in training new tuggies (Don Rhodes, James Fisher, and Andy Oultram), and to Steve Baggaley for his help. Keith Ward is now our winchmaster – thanks to Paul Hodgetts and Graham Burton for their previous efforts with the winch. The Friday Flyers (when not flying) and other members are doing sterling work on refurbishing the club's K-7 fuselage. Mark Burton is now Safety Officer – thanks to Graham Bowes for his efforts; he has had to relinquish the position since starting full-time training for his Commercial Pilot's Licence. Joe Westwood, Brian Pearson (to complete his Gold Badge), and Paul Crump all have Gold heights. Ian Davies and helpers deserve thanks for their efforts in laying new drainage pipes on the field – it has made a noticeable difference compared to this time last year. Thanks to Alice Oultram, we are currently looking forward to our annual dinner and presentation evening, on Friday, February 8 at the Stone House Hotel. This event also marks the tenth anniversary of our move to Seighford Airfield (from Morridge). For any past members lurking out there who wish to participate, full details of the event can be found on *www.staffordshiregliding.co.uk*
Paul (Barney) Crump

Surrey & Hants (Lasham)

THE last few weeks of 2001 have seen several new members join us, fresh from newly soloing at Lasham, and we look forward to seeing them make rapid progress. Although days of heavy rain threatened to return the airfield to the muddy state it reached in last winter's downpours, S&H's gliders now operate from the billiard-table smoothness of Lasham's resurfaced runway! The C of A programme is well under way and at the time of writing



***Welland GC**'s Great Paper Aeroplane Competition was won in both categories by non-solo pilots...*

we look like getting our Grob 102s (grounded by an Airworthiness Directive) back in the air as well. We look forward to another successful year in 2002, encouraged by no increase in our soaring charges over 2001.
Graham Prophet

The Soaring Centre (Husbands Bosworth)

CLUB members have once again been visiting Aboyne and there have been a number of successful wave flights by Derek Abbey, Richard Large and Richard Cartwright, with maximum heights of 22,500ft, 18,500ft and 14,000ft respectively. The recent "student gliding weekend" was very successful and was well attended by students from both Warwick and Loughborough Universities. To follow up on this, gliding courses designed exclusively for students will be held at the club at Easter and during September. Phase III of the new clubhouse is now complete and looks excellent. Many thanks to all those club members who gave up their time to work on it. We shall be christening it with our annual dinner in February. We once again have an SLMG PPL instructor on site, in the form of new club member John Leighton. This will enable us to make even better use of our new motorglider. The club will once again be holding the popular Midland Regionals this summer. Places are going fast, so book early to avoid disappointment.
Siobhan Hindley

Trent Valley (Kirton in Lindsey)

THE annual migration north of the border was a success: Brian Griffin gained Diamond height and Barry Pridgeon Silver duration. On the home front Phil Hornby has gone solo and Pete Rocks and Dave Britt have an ASW 20 for which the queue of full cats awaiting their go would not look out of place at Alton Towers. We look forward to having use of the BGA DG-500 in February. Bob Kmita and Rocky have taken up residence in the generator shed or it must seem that way. They can rebuild it!
John Kitchen

Ulster (Bellarena)

BGA regional safety officer Al Eddie visited us in the closing weeks of the year: he thought we had an impressive site and that Bellarena was a lovely place to fly. There was some wave flying at the back end of the year, but nothing particularly remarkable by our standards. K-6 owner and Monerai builder Louden Blair distinguished himself in another airsport, RC modelling, participating in the world championships in Thailand in November. At the AGM chairman Jeremy Bryson stood down after a three-year stint and was succeeded by Laurence McKelvie, who was already a director, so the committee was reduced by one. Ulster club notes will now pass to other hands; after more than 30 years the undersigned is returning to soar English West Country skies. They've been a wonderful three decades.
Bob Rodwell

Vale of White Horse (Sandhill Farm)

LIKE many clubs, we have seen a reduction in new members and activity over recent years. At our AGM it was agreed to investigate ways in which this might be reversed, and if we are successful in this it could be a model for other small clubs. As one of the steps in this process we are investigating ways in which we might rent or purchase a tug so as to provide a reliable aerotow facility. To this end a number of our members who are also power pilots are being checked out for tugging, and we expect to be able to increase the availability of aerotows significantly in the New Year. We are always very pleased to see you at our site east of Swindon – on any weekend or Bank Holiday this year.
Graham Turner

Welland (Lyveden)

THE annual dinner dance and awards ceremony played host to the Great Paper Aeroplane competition and, as predicted, there was more skulduggery than is to be found even on a 500km day! Mrs Streb took glory in the ladies' final, and resident falconer Wayne Davies proved he'd learned something from his feathered friends, taking the prize for the men. It is interesting that neither is a solo pilot – shame on our so-called hotshot pilots! In the ceremony for the real planes, Streb, not to be outshone by his wife, received an award. Sadly, this was the rigging pin award for salutary-soaring type escapades! Alan Bushnell won the Chairman's Cup for overall contribution to the club. Jason Hammett won the CFI's shield; Paul Porter the Sedburgh trophy for best *ab initio*; Michael Neal the Best in Wood; Lisa Shepherd the Ray Clark Cup for duration; and Werner Leutfeld the 267 trophy for doing his second Diamond Badge and numerous kilometres. Werner also won the Club Ladder.
Jane Cooper

Wolds (Pocklington)

COLIN Stevens is investigating the science behind club launch rates with the aim of reducing the amount of time members spend on the ground. He would love to hear from other clubs who have done similar work. We hope that a new access road on the airfield boundary will not create a problem for us, and appeals to the local council to reduce the height of the lighting will be heard. Congratulations to Patricia Ridger on achieving her assistant instructor rating and Graham Walker for going solo. Other awards were also presented at our excellent Christmas dinner dance including most progress to Steve Ruffell, most notable flight to Colin Wiles, and the "you don't want to fly like that" award to Andy Thornhill. Monet Chana would not pass the microphone to anyone else all night and declared his curries could have made him a fortune.
Ged McCann

Wrekin (Cosford)

AT THE November AGM, Mike Gagg was awarded life membership of Wrekin GC. Mike has been aircraft member for a number of years and although he spends each summer in France he duly returns and undertakes the C of As of club gliders and general repairs during the winter months. The younger members have renovated a large caravan to increase overnight accommodation, a welcome addition for next summer. Angela and Gareth Evans have soloed within a week of each other and Scott Richmond has also gone solo.
Sheila Russon

York (Rufforth)

THE club is delighted to have been selected as one of the host sites to operate a DG-505 glider on behalf of the Faulkes Flying Foundation. The new aircraft should be arriving at the club as this issue reaches you, which will mean that many young Scouts will have the pleasure of flying at Rufforth into the foreseeable future. Its website is: *www.fffoundation.co.uk/index_main.html*
The club AGM was held in December: Richard Smith

returns as chairman, Paul Hepworth remains treasurer and Howard McDermott-Row continues as Honorary Secretary. The other management committee members for the coming year are Les Hey, Tony Lee and Peter Ramsden. Mike Cohler remains as CFI. The BGA Duo Discus continues to be popular for both experienced pilots as well as those new to high-performance glass gliders, and the additional benefit of the single Discus for more experienced members over the winter gave excellent preparation for the coming season.
Mike Cohler

Yorkshire (Sutton Bank)

CONGRATULATIONS to Alex May on going solo on October 28, and to her father, John, for gaining his Basic Instructor rating a few weeks earlier. The winter dinners done by Liz and Derek have gone with a swing, as usual. The annual dinner dance and presentations were held at Solbergh Hall; congratulations to all winners in what proved a difficult year with foot-and-mouth.
Marian Stanley

Obituaries

Harry Cook – Derby & Lancs, Booker

WE ARE sad to report that Harry Cook (1923-2001) passed away in November after a short illness. Harry learnt to glide at Camphill and was an active member there until the early 1970s, when a house move led him to join Booker. Here he gained Diamond Badge No 58 in a Kestrel in 1976. He is one of very few Booker pilots to have turned Lake Vyrnwy in the heart of Wales.
A Chartered Engineer, he will be remembered by many pilots as the inventor of the Cook compass and the Cook variometers. The compass was developed to minimise turning errors, particularly useful when cloud flying. Philip Wills used one in the 1956 World Championships – his account of using it to climb in cloud up the side of a ridge is a compelling testament to the trust he placed in the instrument (*S&G*, August 1956, p172). The original Cook vario was amongst the first electric varios and used an audio output as well as a needle display. They were remarkably accurate and highly valued as instruments to help "scratching". A man of massive integrity, ingenuity and determination, Harry held a number of senior roles in industry. He was involved in developing autopilots for aircraft such as the Canberra and Saab Viggen; and aircraft engines including the Rolls Royce Spey, Avon and RB211 (for which he was Chief Engineer). Harry will be hugely missed by his family, including his wife Diana, three children John, Anne and Diana and eight grand-children, as well as by his many friends in the gliding community.
Paul Brice

Reg Curwen – Deeside, Fenland and Shenington

IT IS with great sadness that we report the death last November of Reg Curwen (1923-2001). Reg was the inaugural CFI of Shenington GC in 1990, and has been an integral part of the club ever since. He devoted a large proportion of his spare time to the club, and only recently stopped instructing. He began flying in the RAF during WW2, and came into gliding at Fenland GC in 1958, was CFI at Aboyne in the late 1960s, and was also involved with competitions. His contribution to gliding was recognised by a BGA Diploma in 1994. He was always the perfect gentleman and for many years the touchstone for a soaring day, being a master of our local ridge. He could always be relied on to help out if we were short of people, and to support the CFIs who followed him. He enjoyed solo flying until prevented recently by illness. He will be sadly missed; we send our sympathies to his wife Ivy and to all his family.
Tess Whiting

BGA Badges

	Pilot	Club *(place of flight)*	Date
DIAMOND BADGE			
608	Anne Stotter	Soaring Ctr *(Aboyne)*	04/10/01
609	John Whiting	Shenington	24/07/01
610	Ashley Birkbeck	Booker *(Aboyne)*	01/10/01
Diamond distance			
1-865	Robert Lockett	Essex & Suffolk	28/07/01
1-866	John Whiting	Shenington	24/07/01
Diamond goal			
2-2800	Alan Head	Cambridge	28/07/01
2-2801	Simon Armitage	DLGC *(Aston Down)*	27/08/01
2-2802	Mark Dalton	London	21/06/01
2-2803	Albert Freeborn	Portsmouth Naval	28/07/01
Diamond height			
3-1539	Anne Stotter	Soaring Ctr *(Aboyne)*	04/10/01
3-1540	Julian Day	Wolds *(Aboyne)*	01/10/01
3-1541	Ashley Birkbeck	Booker *(Aboyne)*	01/10/01
3-1542	Robert Tait	Highland *(Aboyne)*	21/08/01
3-1543	Richard Smith	BGGC *(Minden)*	05/09/01
3-1544	Gerald English	Surrey&Hants *(Aboyne)*	11/10/01
3-1545	Ian Ashton	Bowland *(Aboyne)*	11/10/01
3-1546	Paul Marriott	Southdown *(Aboyne)*	06/10/01
3-1547	Brian Griffin	Trent Valley *(Aboyne)*	11/10/01
3-1548	Andrew Taylor	Southdown *(Aboyne)*	03/10/01
3-1549	David Sinclair	Lasham *(Aboyne)*	03/10/01
3-1550	Werner Leutfeld	Welland *(Aboyne)*	16/10/01
3-1551	Peter Ryland	Norfolk *(Aboyne)*	11/10/01
3-1552	George Goodenough	Burn *(Aboyne)*	11/10/01
3-1553	Arthur Leach	Lasham *(Aboyne)*	11/10/01
3-1554	Peter Carpenter	Kent *(Aboyne)*	03/10/01
3-1555	Dave Richardson	Booker *(Aboyne)*	03/10/01
3-1556	Philip Punt	Bowland *(Aboyne)*	11/10/01
3-1557	Peter Belcher	Kent *(Aboyne)*	01/10/01
3-1558	Richard Dann	Shalbourne *(Aboyne)*	26/10/01
3-1559	Michael Sedgwick	Lasham *(Aboyne)*	16/10/01
3-1560	Kenneth Marsden	Wyvern *(Milfield)*	12/10/01
GOLD BADGE			
2192	Andrew Thornhill	Wolds *(Portmoak)*	14/04/01
2193	Jeremy Pook	Buckminster *(Aboyne)*	01/10/01
2194	Paul Marriott	Southdown *(Aboyne)*	06/10/01
2195	Pete Desmond	Bowland *(Aboyne)*	11/10/01
2196	Peter Kingwell	Cranwell*	22/06/01
** with apologies for the error in badge number allocation*			
2197	Peter Ryland	Norfolk *(Aboyne)*	11/10/01
2198	Brian Pearson	Staffs *(Milfield)*	12/10/01
2199	Andrew Warbrick	Cairngorm	07/10/01
2200	Richard Lovett	PNGC *(Aboyne)*	26/10/01
2201	David Housley	Buckminster *(Portmoak)*	09/10/01
2202	Andrew Mason	4 Counties *(Aboyne)*	16/10/01
2203	John Appleford	Wyvern *(Aboyne)*	26/10/01
2204	Martin Parsons	Vectis *(Aboyne)*	01/10/01
2205	Patrick Farrelly	Wyvern *(Aboyne)*	26/10/01
2206	Michael Roberts	Nene Valley *(Aboyne)*	26/10/01
Gold height			
Andrew Thornhill		Wolds *(Portmoak)*	14/04/01
Robert Forrest		Cairngorm	29/07/01
Jeremy Pook		Buckminster *(Aboyne)*	01/10/01
David Thompson		Scottish GC	09/09/01
Gerald English		Surrey&Hants *(Aboyne)*	11/10/01
Paul Marriott		Southdown *(Aboyne)*	06/10/01
Andrew Taylor		Southdown *(Aboyne)*	03/10/01
Robert Linee		Dorset	14/07/01
Steven Trusler		Oxford	11/10/01
Brian Allen		Denbigh	02/10/01
John Vella-Grech		Shenington	09/10/01
Anthony Hoskins		Oxford *(Sutton Bank)*	11/10/01
Pete Desmond		Bowland *(Aboyne)*	11/10/01
Adrian Kamp		Bowland *(Aboyne)*	11/10/01
Colin Wiles		Wolds *(Aboyne)*	03/10/01
Stephen Sanderson		Yorkshire	02/11/01
Brian Pearson		Staffs *(Milfield)*	12/10/01
Jeremy Harris		Booker *(Aboyne)*	01/10/01
Andrew Eddie		Deeside	02/09/01
Andrew Warbrick		Cairngorm	07/10/01
Richard Lovett		PNGC *(Aboyne)*	26/10/01
Peter Carpenter		Kent *(Aboyne)*	03/10/01
Michael Sedgwick		Lasham *(Aboyne)*	16/10/01
Roger Hamilton		Buckminster *(Portmoak)*	09/10/01
David Housley		Buckminster *(Portmoak)*	09/10/01
Matthew Crane		BGGC *(Aboyne)*	11/10/01
Andrew Mason		4 Counties *(Aboyne)*	16/10/01
John Hutchinson		Booker *(Aboyne)*	04/10/01
Philip Punt		Bowland *(Aboyne)*	11/10/01
Peter Belcher		Kent *(Aboyne)*	01/10/01
Ann Parry		Midland	31/10/01
John Appleford		Wyvern *(Aboyne)*	26/10/01
Martin Parsons		Vectis *(Aboyne)*	01/10/01
Patrick Farrelly		Wyvern *(Aboyne)*	26/10/01
Martin Hands		Buckminster *(Portmoak)*	09/10/01
Michael Roberts		Nene Valley *(Aboyne)*	26/10/01
Peter Ryland		Norfolk *(Aboyne)*	11/10/01
Gold distance			
Alan Head		Cambridge	28/07/01
Richard Friend		The Soaring Centre	01/08/01
Nigel Pocock		Lasham	01/08/01
Jeremy Pook		Buckminster	28/08/01
Simon Armitage		DLGC *(Aston Down)*	27/08/01
Mark Dalton		London	21/06/01
Peter Kingwell		Cranwell	22/06/01
Albert Freeborn		Portsmouth Naval	28/07/01
SILVER BADGE			
10967	Stewart Otterburn	Oxford	27/07/01
10968	Nigel Clarke	Rattlesden	27/08/01
10969	Peter Warner	Cambridge	17/08/01
10970	Alan Hopkinson	Burn	05/08/01
10971	James Kellerman	Cambridge	15/05/01
10972	John Tyrrell	Shenington	06/09/01
10973	William Laine	Scottish GC	06/09/01
10974	John Parr	Burn	04/07/01
10975	David Thomas	South Wales	01/09/01
10976	Michael Powell-Brett	Bidford	26/06/01
10977	Timothy Clubb	Lee on Solent	17/08/01
10978	Jonanthan Sherman	Shenington	01/08/01
10979	William Jones	Anglia	14/09/01
10980	David Thompson	Scottish GC	09/09/01
10981	Robert Linee	Dorset	01/09/01
10982	Steven Trusler	Oxford	11/10/01
10983	Emma Norris	Bowland Forest	09/09/01
10984	Paul Morrison	Oxford	09/10/01
10985	David Britt	Trent Valley	27/08/01
10986	Chris Lewis-Cooper	Wyvern	06/11/01
UK CROSS-COUNTRY DIPLOMA			
Pt1	Alison Mulder	Bristol & Glos	05/08/01
Pt1	Tony Cronshaw	Cambridge	23/07/01
Pt2	Robert Tatlow	Newark & Notts	29/08/01
AEROBATICS			
James Allen		Unlimited Known	31/05/01
Ashley Benjamin		Sports Known	04/06/01

Would you survive?

LAST WINTER, two events involving light aircraft in Scotland emphasised the need for electronic beacons on all light aircraft, including gliders. The first aircraft, reported missing on a pre-Christmas flight, did not carry a beacon. Its pilots perished. In the second incident the aircraft, with four people on board, crashed 2,500ft up a mountain in blizzard conditions. All four survived and were found quickly when rescue aircraft picked up the emergency beacon transmissions.

In this day and age, with gliders costing tens of thousands of pounds, I would argue that it is now time for safety equipment, in addition to a parachute, to become standard in all high-performance gliders.

Probably the best way to emphasise my concerns is to create a possible scenario of the kind that rescue co-ordinators could face at any time.

A glider is towed up from a site. This could be your own site or one where you are on an expedition. It is late morning, mid-December and the glider is dropped in weak wave 15 miles away, where the weather is good, with snow lying above 1,000ft. The next radio call you receive from the pilot is: "10,000ft going onto oxygen and climbing in steady 4kts". After one-and-a-half hours you realise that nothing has been heard from the glider so you talk to the tug pilot, who informs you that he has dropped other gliders in the same area but has not sighted your missing colleague. You have made several radio calls but received no reply. Time is passing; you convince yourself that he is an experienced pilot and has probably landed out and he will phone in soon or maybe he has lost track of time in this wave and will turn up shortly.

It is now mid-afternoon, the light is fading, dusk is just an hour away and the cloud gaps are filling.

As duty instructor:

What are you going to do? When are you going to call someone? And whom are you going to call? Could this happen at your club or on your expedition? There are a few points I would like you to think about.

First put yourself in the shoes of the rescue services, having to search for this missing glider. Also put yourself in the shoes of the pilot who has been forced to land out, heavily or otherwise, in a remote area with no contact with the outside world – there are many places still within the UK where mobile phones do not work.

The rescue services will be asking:

Where should we start the search? Does anybody at the club have an accurate last known position for the missing aircraft?

From where the glider was dropped off tow back to the club is 15 miles. Using just two miles either side of track as a minimum margin of error, a search co-ordinator would be looking at 60 square miles to search. A helicopter searching at 60kts with a half-mile track spacing would take four hours to search this area. A search area can expand to many hundreds of square miles when the position and time is not known.

You could be searching for a white glider in very possibly white surroundings. Does the aircraft carry any high-visibility strips? A hand-held emergency locator beacon or mini flares?



Time to invest some of that money you got for Christmas in an emergency locator beacon? Even after a safe landout, exposure can be a killer and there are still plenty of areas in the UK without mobile phone coverage. And, as the October 2001 GASIL says, some parts of the country are listed in the UK AIP as "mountainous or sparsely-populated areas", which are difficult from a Search And Rescue (SAR) point of view. These are: the Scottish Highlands, the Lake District, the Peak District of Derbyshire, the Hebrides, Orkneys and Shetlands, the Yorkshire Moors, Exmoor, the Pennines, the Welsh mountains and Dartmoor

As the pilot:

Do you have, in your Go Bag, any item that can attract attention – a torch, maybe? A rescue Sea King helicopter searching at night can see a pen light using its night vision goggles in sparse terrain out to 10 miles plus. Have you thought about a space blanket, it could keep you alive at night and act as a reflector in daylight? Even a penny whistle could save your life.

Research is going into glider retrieval systems to save the glider. Isn't it about time research looked at a way to save the pilot, such as a light-weight survival pack?

We at the Aeronautical Rescue Co-ordination Centre (ARCC) use secondary radar replay as an aid to last known position. Gliders do not show up well on ground-based radar systems and it would be of great benefit to be able to identify, for sure, that the contact last seen on radar was a glider. Isn't it about time that research went into developing a lightweight Identification Friend or Foe (IFF)? Maybe a fixed single channel system would suffice, which all gliders could carry. This would also help in day-to-day collision avoidance.

The role of the ARCC within the UK Search and Rescue (SAR) system is to control all aviation SAR incidents and military SAR assets, Sea King Helicopters and Mountain Rescue Teams within the UK SAR Region (SRR). This area covers 1.25 million square miles from latitude 46 North to 62 North and 30 West to FIR boundary through North Sea and Channel. We respond to calls from the Maritime and Coastguard Agency (MCA), Police, medical authorities and air traffic controlling authorities requesting military SAR assistance. The requests range from crashed aircraft, fallen walkers and climbers, children being blown out to sea on inflatables and even suicide casualties.

At the start of this article I mentioned two aircraft crashes in Scotland. We had no radar replay on the first aircraft due to his position and he was not carrying a locator beacon. The aircraft was not discovered, unfortunately, until months later.

The second aircraft was, however, carrying a locator beacon, so our satellites gave us accurate positions soon after the crash. We were able to send a Nimrod maritime patrol aircraft to locate the beacon, which it did to within one mile.

This was only possible because of one thing: the emergency locator beacon. The weather on the mountaintop where the plane crashed with its four passengers was deep snow and freezing conditions, no more severe than would be expected on a good wave day in Scotland in winter. The survivors were lightly clothed and probably would not have survived the night if they had not been found when they were. With the information we were able to provide the rescue helicopter, he was able to locate the survivors in just three hours from crash time to rescue time.

Conclusion

Has your club a list of telephone numbers of services to call and a checklist of things to remember in the event of a glider not returning back to base?

We do not take initial calls directly from clubs so you should acquaint yourselves with local Police and air traffic Distress and Diversion numbers. The best emergency action that can be taken is during daylight.

If you are the duty instructor, know what information you will be asked for.

As a club, think about purchasing a beacon, maybe just one initially, to be taken on planned long trips: "it could save your life".

Eddie Pratt is a long-time glider pilot who also holds a PPL/SLMG PPL, he works as an assistant controller at the Aeronautical Rescue Coordination Centre based at RAF Kinloss in Scotland. This article is the view of the author and not necessarily that of MoD (Air) or of the British Gliding Association

Accident/incident summaries

by Dave Wright

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
81	ASW 19	4434	Write off	25-May-01 1925	Lasham	47	Serious	56

The pilot was making his second flight on type. Soon after lift-off the glider pitched up to a very steep angle and at about 50ft the left wing started to drop, probably in a stall. With the winch cable still attached, the glider rotated until it was steeply nose down. The heavy impact destroyed the glider and seriously injured the pilot's legs.

82	K-21	2588	Substantial	05-Jul-01 1720	Tibenham	70	None	0.3

After previous problems with his landings the student pilot had flown well enough through a week course to satisfy his instructor that he should fly solo. During the circuit he misjudged his height then, while landing deep into the runway, flared too high, closed the airbrakes, ballooned then pushed forward causing a very heavy landing.

83	Janus	4186	Minor	03-Jul-01 1430	Tibenham	54 13	None None	401 0

The instructor was flying an ab initio student in turbulent conditions. With prompting the student coped well but, while concentrating on that, the instructor forgot his pre-landing checks and landed with the wheel up. He was relatively unfamiliar with the glider type although his solo glider also has a retractable undercarriage.

84	Std Cirrus	3989	Write off	15-Jul-01 1624	Usk	56	Fatal	-

This FATAL ACCIDENT occurred when the glider adopted an excessive nose-up attitude during the initial stages of a winch launch, stalled and spun. This was too low for a recovery to be initiated and the pilot was killed on impact. Subject to BGA fatal accident investigation.

85	Not Known	2308	Write off1	5-Jul-01 1400	Bidford	– 	Fatal Minor	

This FATAL MIDAIR COLLISION took place when a glider hit a glider-tug aerotow combination. The glider lost a wing and the pilot bailed out but was too low for successful deployment of his chute and was killed. The other two pilots landed with major damage to their aircraft. This accident is the subject of a BGA fatal accident investigation.

86	Pegasus 101B	3854	Substantial	20-Jul-01 1606	Portmoak	61	None	30

The pilot was making his third flight on type when, after lowering the undercarriage, he mistakenly grabbed the u/c lever instead of the airbrake. After trying to sideslip off height but gaining excessive speed, he bounced for nearly 1,200ft before the glider came to rest, substantially damaged.

87	LS8-18	4785	Substantial	16-Jul-01	Aboyne	51	Minor	1005

The club decided to recall soaring gliders due to increasing thunderstorm activity. The pilot selected the correct circuit for the conditions but after first encountering a strong tailwind he hit severe sink. He turned away from trees and an earth bank in the undershoot and impacted in a small area of open ground.

88	LAK-12	4184	Not known	13-Jun-01 1540	Husbands Bosworth	60	None	482

The pilot cut the circuit short because he was too low but misjudged this and was left too high. He used full airbrake and attempted a sideslip but did not recover fully before hitting the ground with the left wing tip. This caused a groundloop.

89	Bocian	3650	Minor	01-Jul-01 –	Currock Hill	39 15	None None	540 0

At about 500ft on the winch launch the front canopy opened. The instructor took control and the student, in the front seat, closed the canopy and the glider was landed normally after a short circuit.

90	Astir CS	2185	Substantial	15-Jul-01 1320	Denbigh	46	Serious	72

Immediately after take-off winch problems caused a power failure, followed by a power surge. The pilot had started to climb at a shallow angle and was preparing to release when he was jerked forward, pitching up into a steeper climb as the power was cut. He lowered the nose, did not use the airbrakes, but was unable to prevent a heavy landing.

91	Bellanca tug	G-BGGD	Substantial	23-Jul-01 0940	Nympsfield	58	None	

The tug pilot had problems releasing the tug's parking brake but these cleared after cycling the system. After taxying to the run-up point he performed his checks with the brake applied then released it and started to taxi across the landing run to the launchpoint. The brake again stuck on and this, plus power, tipped the aircraft onto its nose.

92	K-8	3863	Minor	28-Jul-01 1750	Haddenham	45	None	82

On a hangar flight the pilot misjudged the effect of the light and variable wind conditions and did not use the airbrakes until crossing the downwind boundary. After initially using half, then full brakes the glider touched down three-quarters of the way down the airfield then ran off the end into a field.

93	DG-300	4711	Minor	28-Jul-01 1620	Tibenham	44	None	111

The pilot lowered the undercarriage at the high key point but it then retracted as the glider touched down, damaging the fuselage. It was noted that the gas strut that assists the undercarriage may have needed replacement due to age.

94	Nimbus 4DT	4482	None	30-May-01 1342	Shobdon	61 70	Minor None	2037 1100

After a short wave flight the glider returned to the site. P1 took control for the circuit and landing and reached the high key position at 700ft. The circuit appeared normal until two-thirds of the way through the downwind leg. Hitting sink, the glider was turned towards the field but still failed to reach it and undershot into crop.

95	Kestrel 19	1796	Write off	23-Jun-01 –	Elkington, Northants	65	Fatal	

This FATAL ACCIDENT occurred during a cross-country flight. Witnesses saw the glider circling low down and later to crash off a descending right turn probably during an attempted field landing. Subject to BGA Investigation.

96	Libelle 201B	2247	Minor	28-Jul-01 1300	RAF Marham	59	None	226

The pilot encountered sink on the downwind leg so decided to land in the long grass to the side of the out landing strip. This grass area had been previously used for operations but had recently been allowed to grow. After landing the glider hit a bump and bounced into the air. The surprised pilot allowed the wing to drop causing a groundloop.

➢

When safety

SAFETY appears regularly in our lives – from our railways to DIY at home. Our televisions have us proclaim that we expect our services to be perfectly safe one day, and complain of the cost the next. How on earth can we say this with a straight face?

There are three major factors at work here: *actual risk occurrence, perception of risk,* and *after-effects* – if the risk happens.

Actuality of risk is a matter for statisticians. The rate of the incident, and the audience it can affect, affect the risk rate. Without getting too complicated let's call things low risk, medium or high likelihood of occurrence.

Perception of risk is purely in the mind; it's what you see as "risky". Most people perceive smoking as a risk, and many shunned air transport in recent months. The actual risks are substantially different in these two cases.

Actual risk rate can be completely at odds with perceived risk – many people shun public transport for their cars after air or train crashes, and run a higher actual risk to themselves as a result. It is, however, unlikely to make headlines even in the local news, whereas the train crash is guaranteed national headlines. This is because of the *after-effects*...

After-effects come into play if the item "at risk" actually happens. The magnitudes of the effects are also classifiable – let's say as serious, minor or negligible.

How does this affect gliding safety?

This affects gliding in many ways – as individual glider pilots, club officials, and competitions. And largely governed by the questions:

What is the likelihood of this event happening?
What is likely to happen if it does?

A simple study of something like a cable break would be:

What is the likelihood? We might get a cable break a weekend, several across all the gliding clubs in the UK.

What happens next? If the pilot does the right thing, nothing, if he doesn't, another risk – that would be likely damage, injury or fatality. As this is not acceptable for something that happens many times a weekend throughout the gliding world, we train pilots to ensure they know the correct procedures, and have experienced them.

The items which, if neglected from the solo glider pilot's "currency", affect their ability to execute efficiently, are well known: cable breaks, stalling, spinning, lookout, field landings and "unusual" (to them) weather conditions.

For instructors, it tends to be late take-over. For clubs, it's dropping broken cables in the wrong places, handling people on the airfield, or operating equipment.

needs action

Prevention is better than cure

Prevention can occur in many ways:

Currency	**go and practise**	**Solo pilots**
Training	**go and be taught**	**Until "qualified"**
Procedures	**Ensure people are taught and practise**	**Clubs – to ensure the above**
Regulations	**For standards**	**Governing bodies and Government**

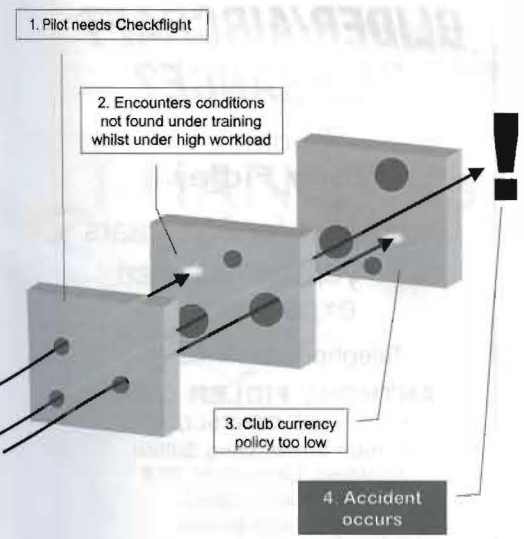
The Swiss Cheese Model

As illustrated below, the Swiss Cheese Model is used to explain an approach to safety by a number of organisations – including aviation safety: each slice of "swiss cheese" depicts skills, or holes in the skills. In the event of suitable conditions an error occurs which "slips through the hole" and an accident might occur. Subsequent layers cover up some of the holes thus reducing the risk of the accident. Thus the layers might be labelled: "pilot skills", "club policy", "BGA regulations" and "Air Law". It can be seen how if a pilot is not current (lacks skills), the holes in his "slice" are large; the club check flight policy reduces the chances of accidents by stopping the lack of currency becoming an accident.

When authorities focus on fixing problems, the solution is this to impose a single layer with few small holes – if any. Highly costly and with little freedom. The more liberal view is many layers – with holes – which hopefully don't line up. If this is what we want to happen, we need to ensure that we are responsible for this. If we become lax and ignore this, this is when tightening of regulations occur. So start with: get current, stay current.

The good news is, if you are reading this article, you're interested in safety, and are less likely to have an accident in the first place...

Jonathan Mills
Chairman, BGA Safety Committee



Accident/incident summaries (cont.)

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
97	ASW 24	4764	Minor	28-Jul-01 1630	Wicken, Northants	41	None	86

While flying cross-country the pilot had to make a field landing. He chose one of the few free of crop but upon landing found the ploughed furrows had been baked hard by the hot weather. Despite landing along the lines the undercarriage was later found to be bent out of alignment.

98	K-13	4284	Minor	03-Aug-01 –	Aston Down	46 58	None None	1146 0

The student pilot flew a good circuit but then allowed the glider to drift slightly to one side of the runway centreline. After a normal roundout he noticed that the wings were not level but then used the wrong aileron control and the wingtip caught in tall crop alongside the runway. P1 then took over but could not prevent a ground loop.

99	Astir & SF-27	–	None	–Jul-01	Incident report	None	30

The two gliders had launched on consecutive cables but neither pilot established where the other was. The Astir pilot made a long shallow approach contrary to his training while the SF27 pilot, not seeing the other glider while on base leg, descended on finals above and behind him. As the Astir flared the SF27 pilot just saw him in time to overfly.

100	K-13	2739	Write off	23-Jun-01 1530	North Hill	60	Minor	45

The winch driver had to stop the launch, when the glider had reached about 200ft, due to the winch moving forward. The pilot pulled the release then continued operating it instead of the airbrakes as he regained flying speed. Not realising this he flew on until impacting in a sideslipping turn to avoid the upwind boundary.

101	DG-300	3543	Minor	05-Aug-01 1530	Near Shaftesbury	35	None	402

After getting low on a cross-country the pilot chose a cross-wind field with low power cables on the approach. On finals he realised that the upsloping field was in wind shadow and he was not going to stop in time. Despite full wheelbrake the glider still hit the hedge, breaking the canopy and damaging the nose.

102	ASW 19	–	Minor	01-Aug-01 1915	Lasham	48	None	194

The pilot was flying his first competition cross-country on a hot, blue day. During the flight his water bottles slipped out of reach so he may well have been de-hydrated when, five hours into the flight, he had to make a field landing. With good fields nearby he landed in one of standing crop and ground-looped.

103	K-21	3138	Minor	07-Aug-01 1945	Dunstable	57	None None

During a basic instructional flight the instructor failed to properly lock the rear canopy and it came open during the winch launch.

104	K-7	2982	Minor	28-Jul-01 1230	Camphill	44	None	1

The early solo pilot had three check flights, during which his instructor emphasised the correct approach speed and also fully held off landing. On his solo approach he corrected for a fall in airspeed then appears to have changed his reference point. He failed to fully round out and the glider made a heavy landing.

105	K-21	–	Minor	–Jul-01	Incident Report		None

A limited crew of six students and two instructors were operating three K-21s. This meant that when a glider was flown solo it was retrieved by only one person on the vehicle and one on a wingtip. As a result, when the retrieve reached the launchpoint and the vehicle gave a slight tug, the glider rolled into another glider with no one to stop it.

107	SZD Junior	4138	Minor	27-Jul-01 1818	Portmoak	52	None	14

On his third solo flight of the day the pilot had a good soaring flight before deciding to loose height by practising tight turns and sideslips and return to the airfield. At 1,500ft in a full left sideslip the canopy swung open and the perspex smashed. Tests showed that the catch was probably engaged under the edge of the cockpit not in the latch.

109	Astir	4797	Minor	10-Aug-01 1330	Rattlesden	18	None	4

The early solo pilot had her first long solo soaring flight of over an hour and decided to return. Approaching the airfield she found she could not get the undercarriage to lock down. Having thought this possibility through beforehand, she locked the gear up and made a good landing on grass. Pilot fatigue or dehydration may have been a factor.

111	ASW 19B	2451	Substantial	03-Aug-01 1237	Burn	55	None	86

The pilot mis-set his altimeter and when he released in lift he was actually at 1,300ft AAL rather than 1,800ft as displayed. Finding he could not climb in the thermal he returned to the airfield, passing good fields until at less than 100ft he decided to turn into a field and stalled/spun into the hedge. He was fortunate to escape uninjured.

112	Sport Vega	2672	Minor	16-Aug-01 1615	Chelveston Northants	49	None	470

While on a competition cross-country flight the pilot encountered a very heavy rain shower so had to make a field landing. He selected a suitable field and made a normal approach and landing until the round-out when he may have opened more airbrake and landed heavily, damaging the glider on the rutted surface.

113	Astir CS	2228	Minor	03-Jun-01	Parham	59	None	27

After climbing to 4,800ft in a Silver height attempt the pilot decided to return as he was developing a sore throat. After a normal circuit he "had the sudden impression of being low" and allowed the speed to increase to 60kts. After a fast, steep approach he rounded out, ballooned and landed heavily. He later developed a heavy cold.

114	Nimbus 2B	–	None	–Jul-01	Incident Report	56	None	375

A new owner was flying the glider after only a few flights on type, although current and experienced. During the winch launch he slid back in his straps, automatically pulling back on the stick. As a result the glider rotated into a very steep climb before he could recover his seating position and resume a normal attitude.

115	LS8	4406	Substantial	16-Aug-01 1600	Cheltenham	24	None	600

The pilot was making a field landing during a competition cross-country flight. During a low final turn at about 60kts it appears that the glider hit turbulence and stalled into the ground from about 75ft. The glider was substantially damaged and the pilot was fortunate to escape any serious injury.

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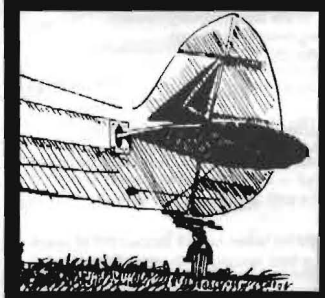
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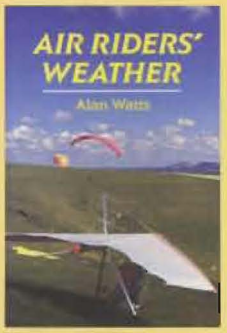
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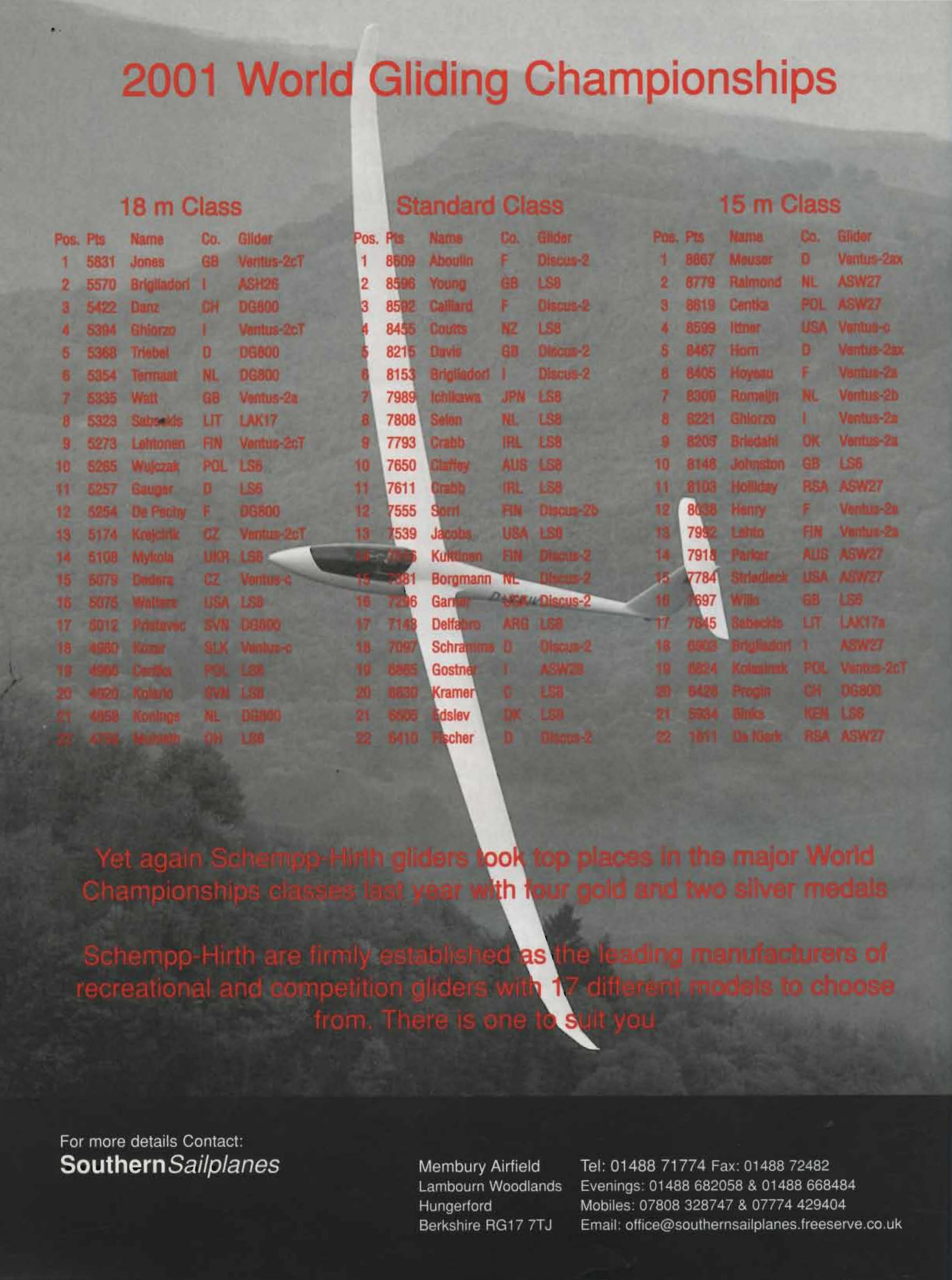
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2001 World Gliding Championships



18 m Class

Pos.	Pts	Name	Co.	Glider
1	5831	Jones	GB	Ventus-2cT
2	5570	Brigliadori	I	ASH26
3	5422	Danz	CH	DG800
4	5394	Ghiorzo	I	Ventus-2cT
5	5368	Triebel	D	DG800
6	5354	Termaat	NL	DG800
7	5335	Watt	GB	Ventus-2a
8	5323	Sebeckis	LIT	LAK17
9	5273	Lehtonen	FIN	Ventus-2cT
10	5265	Wujczak	POL	LS6
11	5257	Gauger	D	LS6
12	5254	De Pecoy	F	DG800
13	5174	Krejcirik	CZ	Ventus-2cT
14	5108	Mykola	UKR	LS6
15	5079	Dedera	CZ	Ventus-c
16	5075	Walters	USA	LS8
17	5012	Pristavec	SVN	DG800
18	4980	Kozar	SLK	Ventus-c
19	4966	Censka	POL	LS8
20	4920	Kolario	SVN	LS8
21	4858	Konings	NL	DG800
22	4756	Mulcaith	CH	LS6

Standard Class

Pos.	Pts	Name	Co.	Glider
1	8509	Aboulin	F	Discus-2
2	8596	Young	GB	LS8
3	8592	Caillard	F	Discus-2
4	8455	Coutts	NZ	LS8
5	8215	Davis	GB	Discus-2
6	8153	Brigliadori	I	Discus-2
7	7989	Ichikawa	JPN	LS8
8	7808	Selen	NL	LS8
9	7793	Crabb	IRL	LS8
10	7650	Claffey	AUS	LS8
11	7611	Crabb	IRL	LS8
12	7555	Sorri	FIN	Discus-2b
13	7539	Jacobs	USA	LS8
14	7515	Kuttinen	FIN	Discus-2
15	7381	Borgmann	NL	Discus-2
16	7296	Garnier	USA	Discus-2
17	7148	Delfabro	ARG	LS8
18	7097	Schramme	D	Discus-2
19	6965	Gostner	I	ASW28
20	6630	Kramer	D	LS8
21	6605	Edslev	DK	LS8
22	6410	Fischer	D	Discus-2

15 m Class

Pos.	Pts	Name	Co.	Glider
1	8867	Meuser	D	Ventus-2ax
2	8779	Raimond	NL	ASW27
3	8619	Centka	POL	ASW27
4	8599	Ittner	USA	Ventus-c
5	8467	Horn	D	Ventus-2ax
6	8405	Hoyeau	F	Ventus-2a
7	8300	Romeijn	NL	Ventus-2b
8	8221	Ghiorzo	I	Ventus-2a
9	8203	Briedahl	OK	Ventus-2a
10	8148	Johnston	GB	LS6
11	8103	Holliday	RSA	ASW27
12	8038	Henry	F	Ventus-2a
13	7952	Lahto	FIN	Ventus-2a
14	7918	Parker	AUS	ASW27
15	7784	Striadlack	USA	ASW27
16	7697	Willis	GB	LS6
17	7645	Sebeckis	LIT	LAK17a
18	6963	Brigliadori	I	ASW27
19	6824	Kolesinsk	POL	Ventus-2cT
20	6426	Progin	CH	DG800
21	5934	Binks	KEN	LS6
22	1811	De Klerk	RSA	ASW27

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