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Sailplane & Gliding

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Letters	February 10
Club News	February 10
Advertisements	February 27
Classifieds	March 5

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Beyond this K-21 is a winter view towards the Isle of Wight just where the channel is narrowest, near Milford-on-Sea. Behind the rearmost of the two wispy cumulus you can see the silvery waters of the Solent (www.whiteplanes.com)

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Dates for your diary

Competitions Calendar:

Dan Smith Memorial Trophy	Dunstable	27/3 - 28/3
Overseas Championships	Ocaña, Spain	24/5 - 4/6
National Aerobatic Comp	Saltby	3/6 - 6/6
Turbo Competition	Bidford	12/6 - 20/6
Booker Regionals	Booker	12/6 - 20/6
Club Class Worlds	Norway	13/6 - 25/6
Competition Enterprise	Aston Down	26/6 - 4/7
18 Metre Nationals	Tibenham	26/6 - 4/7
Northern Regionals	Sutton Bank	26/6 - 4/7
Lasham Regionals	Lasham	3/7 - 11/7
Club Class Nationals	Pocklington	10/7 - 18/7
Standard Class Nationals	Aston Down	24/7 - 1/8
European Championships	Lithuania	25/7 - 7/8
Inter-Services	Cosford	31/7 - 8/8
Regionals/Junior Pre-Worlds	Soaring Centre	31/7 - 8/8
Gransden Regionals	Gransden	7/8 - 15/8
Western Regionals	Nympsfield	7/8 - 15/8
Junior Championships	Lasham	14/8 - 22/8
15 Metre Nationals	Lasham	14/8 - 22/8
Dunstable Regionals	Dunstable	21/8 - 29/8
Open Class Nationals	Tibenham	21/8 - 29/8
Eastern Regionals	Tibenham	21/8 - 29/8
Two-Seater Competition	Pocklington	22/8 - 29/8
Mountain Competition	Aboyne	5/9 - 11/9
Saltby Open Trophy	Saltby	11/9 - 12/9

Details of CAA Safety Evenings at Shobdon; Aberporth; Mona; Biggin Hill; Bembridge; Panshangar; Glenrothes; Bagby; Woodvale; Leeds; Popham; Exeter; Blackbushe; Pembrey; Gransden Lodge; Orkney; Manston; Old Buckenham are at: *www.caa.co.uk/srg/general_aviation/event.asp*

TICKET OFFER

THE Ordnance Survey Outdoors Show, the UK's largest consumer outdoor pursuits show, returns to the NEC, Birmingham on April 2-4, 2004 with a simple message for outdoor enthusiasts: whatever you're into in the outdoors, get into it here!

The show is 25 per cent larger than 2003 and is set to welcome over 400 exhibitors throughout four halls and even a lake! The Sprayway Adventure Sports Show is taking up a large part of Hall 9, and features the BGA's gliding simulator, the Sprayway Simulated Ice Wall, and a Surfing Simulator. As well as a host of extreme sport organisations you can check out the best adventure travel destinations, watch full-on action in the Renault Kangoo Adventure Racing, or try out a host of activities like diving or rock climbing here at the show.

There are some great adventurers at the show as well – like Sir Chris Bonington, Benedict Allen, Debra Veal, Doug Scott, Thomas and Alex Huber, and the best of the Kendal Mountain Film Festival.

Special Ticket offer for *S&G* readers! Two tickets for £16! Call 0870 010 9086 and quote "BGA". Door Price is £12 adults, calls are charged at the national call rate, NEC car parking rates apply. For more information on the show, timetable details or online bookings see *www.theoutdoorsshow.co.uk*

Rob Elliot

Common FAQs

The BGA's Chief Technical Officer, Jim Hammerton, answers some of the most frequently-asked technical questions that he receives from pilots and owners

Q. Where can I get hold of a copy of an Airworthiness Directive issued to my glider type?
A. Normally, Airworthiness Directives (ADs) are issued by the National Airworthiness Authority or the particular glider or product manufacturing country. In most cases this is the LBA in Germany, as most of our gliders are German, but also Austro Control in Austria, CAA in Czech Republic, DGAC in France, and so on. Most of these authorities have websites where they can be downloaded (links from the BGA website at *www.gliding.co.uk*). ADs will be sent to all BGA inspectors in the following TNS, issued bi-monthly. Inspections and modifications raised by the BGA are at *www.gliding.co.uk*

Q. Does a particular AD apply to my glider?
A. Not necessarily. The BGA will send out copies of the AD, if it is urgent, to the registered owners of all the gliders of that particular type as recorded on the BGA glider database. All ADs will have specific applicability information on the model type and serial number range and compliance information.

Q. Is my glider grounded because of an AD?
A. Not necessarily. The content of the AD should be studied to determine what course of action is required and if it is applicable to your glider. Some may require an initial inspection with follow-up action at a later date. If in doubt, ask your inspector.

Q. Are ADs mandatory for BGA aircraft?
A. Normally, yes. On very rare occasions, if the BGA Technical Committee consider that a different approach would be more appropriate they may vary the requirements.

Q. Where can I get service bulletins (SBs) for my glider?
A. Normally from the manufacturer or agent of the particular glider or product. Some Service Bulletins are also published with LBA ADs on the LBA website or are free to download on manufacturers' websites. The BGA do not normally distribute SBs.

Q. What is the difference between an SB, a TN or a TB?
A. Nothing. A Service Bulletin (SB), Technical Note (TN), and Technical Bulletin (TB) are all different names for the same type of publication. Usually a Service Letter (SL) is of lower importance.

Q. How often should a glider be reweighed?
A. At least every eight years, or after major repair, repainting, recovering or when there is some doubt about the weight or C of G. A new weighing is also required before the initial issue of a BGA C of A.

Q. What should be recorded in a Glider Log Book?
A. Any maintenance, including C of A, repair, inspection, re-weighing or accident. The log book forms part of the history of the aircraft and without a full and accurate record it can be difficult to follow up on any problems occurring later in its life. An entry does not devalue the aircraft but should unrecorded work be found, that certainly would. It is the owner's responsibility to ensure that the entry is made by the certifying engineer.

Q. Why didn't I receive information on my glider sent out by the BGA?
A. Are you the registered owner? Have you notified the BGA of any change of ownership? Check your C of A for details of who is recorded as the owner. The BGA will send out the information to the registered owner produced by the database. If still in doubt, contact the office to check your details.

Q. My 30-day ticket has expired, can I fly the glider?
A. No. You need to ask why the C of A has not been renewed (or issued): did your inspector forward the paperwork to the BGA in time; is there an outstanding query? Your inspector may not issue a second 30-day ticket without permission from the Chief Technical Officer (CTO) – or Technical Committee Chairman or BGA Chief Executive if the CTO is unavailable.

Q. Can I extend the C of A?
A. Yes, you can, but only in exceptional circumstances. An extension can only be given for sound reasons. All extensions must be authorised by the CTO in writing (or Technical Committee Chairman or BGA Chief Executive if CTO is unavailable). Apply by email to *cto@gliding.co.uk*

Q. My maximum cockpit load is too low, what can I do about it?
A. The BGA can allow certain extended weight operations. For details see the BGA datasheet for your glider. If a concession is allowed it will change the certification category to Non Aerobatic (Normal) whilst within the extended weight range. No additional approval is required from the BGA if it is covered by the data sheet. If you require a greater extension, application must be made to the Technical Committee. Normally, manufacturer involvement will be required.

DICK Skinner of the Essex & Suffolk GC thought that his wooden glider, a Skylark 3F, deserved tow-out gear in keeping with its construction. Rather than scrounging an old bicycle wheel or buying a plastic wheel from a local DIY store, he took odd bits of wood from the pile in the corner of his shed and built this six-spoke wooden wheel for his wingtip (right). It has 15 wooden parts, using three different types of wood, and runs on an old bolt and a piece of copper gas pipe as a bearing. The tyre is a spare piece of D-section rubber buffer. The wheel is mounted on semi-circular steel springs (also from scrap material) and attached to a padded wooden wingtip clamp. The only expenditure, apart from his time, was the cost of a small tin of varnish and some glue. Even the over-centre clips on the wingtip clamp were recycled, having originally come from the soft top of an MG. They had been resting in a box in Dick's shed for 30 years waiting for a new application...

John Horne

New gliding scholarships prove popular

A LOT OF interest has been shown in the Wright Centennial Scholarships scheme, which helps aspiring young glider pilots take up the sport, according to the BGA office, and applications are already arriving.

The Royal Aeronautical Society (RAeS) kindly awarded the BGA 40 scholarships of £150 each. Tenable at BGA clubs, the awards are given to selected applicants aged 15 to 16 years, 6 months when they apply.

Applications may be made by people aged between 15 and 17, who are in full-time education and who wanted to take up the sport, but were deterred by lack of funds. Successful applicants will receive a scholarship to fund their initial training to get them well on the way to gaining their "wings". Funding has come from the RAeS's Centennial Scholarship Fund, which commemorates the centenary of the Wright Brothers' first powered flight, which took place on December 17, 1903.

Peter Hearne, a former President of the Royal Aeronautical Society and currently a Vice President of the BGA, was involved in establishing the scheme, and commented: "It is most appropriate to be able to offer this scholarship at the time of the Wright Brothers' centenary." A major contributor to their success was the lengthy series of trials they undertook with full-scale gliders in the two years preceding their success. This enabled them to gain a satisfactory standard of piloting skills and produced the flight test data they needed to develop three-axis control.

In making this award, the RAeS recognises the important part gliding played in the history of aviation and the promise it brings to the younger pilot as we now enter the second century of flight.

For details call the BGA on 0116 253 1051

On the top rungs of the ladders

THE BGA National Ladder changed at the start of the 2002/2003 season to allow pilots to submit claims directly on to the website without needing to consult their club ladder stewards. This has been a great success – the site is very popular with pilots who can now immediately compare their own flights with others on the same day. This has increased competitiveness, as shown by the tight spread of scores at the top of the Open Ladder.

Ed Downham made some excellent flights, including a 750km UK Diploma and a 600km triangle, to claim the Enigma Trophy as Open Ladder winner. In a close-fought battle for second place, I just edged out Tim Macfadyen to claim the Firth Vickers Trophy. Tim earned the Slingsby Trophy as runner-up in the Weekend Ladder instead, while Peter Baker claims the L. duGarde Peach Trophy as its winner (rules do not allow a single pilot more than one Ladder trophy per season). Ian Craigie earned the Spitfire Trophy as clear winner of the Junior Ladder.

In response to an online survey, some changes will apply for 2003/4: a revised weighting for different-shaped tasks – eg, 28% triangles now score more highly than flat triangles or O/Rs; and height gains now have a new, separate, Height Ladder. Please visit *www.bgaladder.co.uk* for full details of these and other changes. The site also provides details of how you can take part in the 2003/2004 season. You may also contact John Bridge at *jotmb@aircross.co.uk* with any queries not addressed on the site. Well done to all the winners, and have a great season!

John Bridge, National Ladder Steward

	Pilot	*Club*	*Score*	*Flights*
Open Ladder				
1	Ed Downham	London	14782	4
2	John Bridge	Cambridge	12519	4
3	Tim Macfadyen	Bristol & Glos	12329	4
4	David Booth	Deeside	12233	4
5	Trevor Stuart	Bristol & Glos	12057	4
Weekend Ladder				
1	John Bridge	Cambridge	10525	4
2	Peter Baker	Cambridge	9183	4
3	Tim Macfadyen	Bristol & Glos	8303	4
4	Guy Corbett	London	7948	4
5	Roy Pentecost	Lasham/S&H	7933	4
Junior Ladder				
1	Ian Craigie	Four Counties	8731	4
2	Will Harris	Cambridge	6939	4
3	Owain Walters	Oxford University	6640	4

GLIDER pilots figure strongly in the Royal Aero Club Awards for 2003, to be presented later this year. The Britannia Trophy (for the most meritorious performance in aviation during the year) goes to Standard Class World Champion **Andy Davis**. The Prince of Wales Cup (for the most meritorious team performance in aviation during the year) goes to the **British Gliding Teams** – Senior and Junior. The RAeC Silver Medal (for outstanding achievement in aviation during the year, principally as a pilot) goes to Junior Standard Class World Champion **Jez Hood**. The Old and Bold Trophy (awarded to a person over 65 who flies, or has recently ceased flying, and who has been conspicuously involved in aviation, for their work, initiative, devotion or in other ways) has been given to instructor and long-time *S&G* contributor **Derek Piggott**. A Certificate of Merit (for those who have served the cause of aviation in general or sporting aviation in particular by their work, devotion or initiative) has been awarded to BGA Development Committee Chairman **Max Bacon**.

IT'S all happening in the Andes, with several world records toppling – some more than once – to top pilots. A new Open Class O/R distance record (Terry Delore/Steve Fossett, 2,002km) was broken by Jean-Marie Clement/Patrice Papazin (2,024km) and again by Klaus Ohlmann (2,245km). Klaus had earlier achieved a long-held dream with a free distance flight of 2,172km in one direction; if ratified by the FAI, this will secure him the Küttner Prize. The South American summer is ending as you read this and we'll bring you a report on all the action next issue.

DISCUSSIONS continue between the BGA and the Department for Transport on the implementation of Part 21 (original airworthiness) of the European Regulation 1592/2002. The three-month review period granted to the BGA from September has now led to meetings and negotiations in early 2004 with the DfT and CAA. Early indications of the possible outcome are positive from the BGA standpoint. As soon as a definitive position is reached, the BGA will communicate widely with the UK gliding movement.

BRIAN Spreckley has been appointed British Team Manager, following Harry Middleton's retirement.

A DISPUTE has arisen between DG Flugzeugbau and another group of investors about the ownership of LS (*www.dg-flugzeugbau.de*)

THE RAeC Trust offers bursaries of up to £500 to young people to progress in airsports. Deadline for applications is 31/3/04 (*www.royalaeroclubtrust.org*)

FOR Government proposals about UK airport expansion see *www.dft.gov.uk/aviation/whitepaper*

The annual congress of the European Gliding Union, which represents glider pilots on regulatory issues, will be held alongside the BGA AGM and Conference (Eastwood Hall, nr Nottingham) on March 6.

THE winner of the BGA 1000 Club Lottery for November 2003 was RS Maxwell Fendt (£40.50), with runners-up R Barrett and CE Wick (£20.25). December winner was M Bainbridge (£40.50), with runners-up N Holmes and D Shepherd (£20.25).

Weatherjack

I MUST make one or two points in reply to Rod Witter (*Soaring forecasts*, December 2003-January 2004, p9). In the four-plus years I have been giving these forecasts, I have enjoyed remarkably good health. Not a single day has been lost as a result of illness. Now, of course, that cannot be expected always to be so. I have just qualified for my free bus pass, so we must all be prepared for the occasional down time – possibly without being able to give too much advance notice. And one day I might like to retire!

Holidays, and times when I am doing live forecasting at competitions, have always been covered. The bulk of the work has been done by Adrian Hatton, but he is a busy working farmer, so it might not always be possible to maintain 100 per cent cover in the future. I am doing two comps in 2004 so those two periods need to be sorted out. Family holidays are, in fact, less of a problem. I am always an early riser – a couple of hours ahead of the rest of the family as a rule – so I am quite happy to do the forecasts from my sister-in -law's cottage in Cornwall when we make the annual summer visit.

The greater concern is for the longer term. I have tried to explain my methods so that more and more people can manage DIY forecasts. But I really would like to see a successor in the pipeline. Yes, it is a labour of love and is effectively unpaid. For perhaps 1,000hrs work annually, it brings in less than £3,000 in voluntary donations and a handful of adverts. So think carefully before you offer your services!

I am not convinced that a BGA-funded service would be appropriate. It would not suit me for the very reason that I would be under a much greater obligation. I do my utmost to update the website on a daily basis during the soaring season because I **want** to, not out of an obligation. The failures have been for external reasons – power cuts, ISP problems, source data unavailable, and so on. A formal contract with the BGA would put me in a much more difficult position if for one reason or another, I were unable to deliver. It could become a chore rather than a pleasure.

So if there are any enthusiasts who might be prepared to help, please get in touch. As they say: "full training given". I would envisage initially that person doing just two days per week and maybe working up from there. It IS fun and rewarding (and it makes me feel less guilty when I don't turn up at the club at crack of dawn to help get the gliders out!) Strange as it might sound, my main kick out of gliding is when I have forecast a "big day" and I subsequently hear of a large number of 500s or more. That is more satisfying than the pathetically slow 300 that I still occasionally fly myself.
Jack Harrison, *via email*

All the best – the K-6E!

IN the October issue (*Who needs glass?* P22), I was really surprised that Mr Adrian

Left: CES and its new owner at Nagano, Japan
Right: Caroline Trust bursary winners

Emck changed his glider back from LS8 to K-6E! In previous *S&Gs*, Mr Adrian sometimes appeared and I like reading his heart-beating, challenging flight stories.

Previously, I had flown a K-6E belonging to my club. In 1998, I bought my own K-6E at last, which came from Lasham – BGA number 1489, named " CES ". I had found this secondhand K-6E in *S&G* classified section in December 1997. It said: "13 300kms and two 500kms – exceptional machine". Of course I had recognised at once that this belonged to Mr Adrian Emck and his syndicate. I had asked Japanese glider import agent Mr Itoh to contact the owner. And she is with me from that time on. Flying over the beautiful Japanese mountains, Mr Adrian's favourite XK-10 vario is still whistling to me: "Do your best, the lift is here".

One of my dreams of gliding life is to write the story for *S&G* readers titled: "Fourteenth 300km in Japan Alps over 10,000ft". My glider base is in Nagano city, where the winter Olympics was held in 1998. Nagano is a famous mountain skiing area and slope lift, waves and convergences are often appeared.

I guess that CES is happy staying over these mountains with refurbished wings and new instrumental panel. I sometimes fly with glass bird and even with some bt-type glider of my friends. But my dream still exists: "Fourteenth 300km in Japan".

We will send our largest yell to Mr Adrian Emck, from CES and myself.

Have happy life being in the sky.

Atsushi Taneda, *via email*

Avoiding parachute drop zones

BACK in the summer when planning a task which would take me near a parachuting site I tried to find its co-ordinates so I could program my GPS with a proximity alarm to warn me of my approach to their drop zone. This proved more difficult than expected; the information is not (numerically) on the 1/2 mil. chart or the accompanying frequency card. Added to that, the site in question has no obvious ground features to mark its location. Since then I've spent more time searching for the information and the most accessible thing I've found is a clickable map on the British Parachute Association website but I don't think the information there is complete and it's certainly not presented in a way to promote flight safety.

With the help of the BPA I did eventually obtain a definitive list, in the form of the relevant pages from UK AIP. I've since found a copy on the CAA website at *www.caa.co.uk/docs/64/DAP_ACD_3_VFR_Airspace.pdf* – again, this was not easy to find. This document also contains details of all UK Danger, Prohibited and Restricted Areas but not glider winch launch sites. I've transcribed the parachute drop zone list into Garmin format for upload as proximity way points with the alarm triggering half a mile from the zone boundary and offered the file to the BGA for inclusion on its website, hopefully this will make the DZs easier to avoid next season.

I've also tried to find co-ordinate details of winch launch sites and I've reached the conclusion that the situation is no better than for the parachute DZs. The information can be extracted from the BGA turning point list by filtering the points with a ## designator down to gliding sites but this is not in a suitable format for GA pilots planning to avoid the hazards (always assuming they appreciate the problem).

I don't fly power myself so I've no idea how much use GA pilots make of modern aids for flight planning and navigation. Of course the CAA charts are still the primary source of information for navigation but possibly more could be done in the legend to class cables and DZs as hazards.

As for modern aids I think the BGA, BPA and CAA could all do more to make information of hazards available in computer -readable format. This shouldn't cost much and if it is used to improve the avoidance of hazards, and therefore to improve flight safety, it must be worth doing.

Richard Dann, *via email*

A downloadable file of parachute Dzs in Garmin format is now at www.gliding.co.uk/bgainfo/airspace/gps.htm – *Ed*

Can the Caroline Trust help you?

MANY people in the gliding movement will not be aware of the Caroline Trust, which was founded in 1999 and is now a Registered Charity. The Trust has had a successful programme of bursaries for young people, enabling them to learn to fly.

After approaches to local secondary schools the staff helped select eight pupils who would benefit from the experience of being in a gliding club and learning to fly. Laura, Rosanna, Sophie, and David were our first students. The bursaries, which are also subsidised by the Derbyshire and Lancashire GC, give the students as much flying as they can do for one year.

The benefits to the students are not only learning to fly... within a gliding club they become part of a community where people can only participate in their sport by helping each other and their club. They encounter and make friends with members of all ages, occupations, backgrounds and temperaments! If there is such a thing as the university of life this is an interesting classroom. Members all agree that it's been great to watch these young people grow in skills and confidence.

The Trust's objectives are to encourage young people to take up and improve their gliding and also to help disabled people to experience and participate in the sport. The Trust now wants to expand its horizons and would like to invite people in the gliding movement to approach the Trust for funding if they see a need that fits the Trust's objectives.

So, does your club have a young person who would benefit from a bursary? Are there young people out there who need to improve their flying experiences? Is there something your club needs which would improve facilities for disabled people?

If so, email *carolinetrust@tideswell.net* or call me on 01298 872496. I am keen to keep formalities to a minimum.

Pete Roberts, Chairman, Caroline Trust

A gong for Guy and Paul?

SURELY there must be an honour somewhere for Guy Westgate and his pal Paul for their intrepid voyaging (*Heading for Etna*, October-November 2003, p34 and *Rain, steam and speed*, December 2003-January 2004, p34)? Some of us have enjoyed adventures in sailplanes, in different countries, but surely never an epic on this scale? OK; so they burned a bit of petrol to achieve their dream but, like a stick of Blackpool Rock, they clearly have "glider pilot" running through their whole being, and are not powered aerial tourists.

In the absence of a knighthood for such romantics of the air, perhaps the BGA has some suitable award?

Yours in awe,

Rod Witter, Lleweni Parc, *via email*

Think of my position...

I WELCOME the article on the BGA website by John Hoskins about winching and the

Please send letters (marked "for publication") to the editor at editor@sailplaneandgliding.co.uk *or the address on p3, including your full contact details. The deadline for the next issue is* ***February 10***

Your letters

real point about the pilot needing to fly safely during a normal launch (*www.gliding.co.uk/safety*). As a proud winch driver and solo pilot, I have always felt it is my responsibility to work hard to make sure the pilot has every chance of flying both a safe and value-for-money launch, and always feel pride when feedback from my colleagues suggest they like me to launch them for these very reasons.

My view is that there are two people performing on every launch and as winch driver I also have a duty to do my part well to support the pilot and to take the utmost care in that responsibility. But there is no formal recognition about this role and my duty. The quality of my input normally comes only from the hunches I get when starting to launch an aircraft. Whether the pilot is competent or not comes from observation of him or her in action as I see them rotate into the climb and comparing them with the patterns I'm expecting to see. If I don't see those patterns I react accordingly as far as I am able to.

I often expect our K-13s to have variable launches – it may be the pupil in control – and try to reflect this by limiting my inputs if I think the pilot is learning since it is more likely them than me, and in that case it is most important I act consistently.

However, I have often been surprised by the quality of launches from more advanced solo pilot/aircraft and also from experienced private owners who seem hell-bent on working against me. Some pilots also have a tendency to dictate the way they want me to launch them, and often when I do that they end up with safe but poor launches – and it doesn't help my reputation in those cases!

I usually assume every pilot could do with some help on the launch and have discovered that although I occasionally have a tendency to be marginally faster and rarely slower, they do appreciate my efforts and the quality of the service I provide. If feedback is correct, my style seems to give the advantage to the pilot in both controllability options for him or her to react to launch occurrences and better launch height. However, although I am unpaid, I don't offer my thoughts about their part in the launch primarily because they are paying for this service to my club and I don't feel until now I should have a right to offer this feedback.

However, maybe the real advance for both parties "flying" a launch is recognising the part each other plays. The US Navy recognises the role of the Landing Signals Officer for improving the carrier landing performance of every pilot. I often get feedback on my performance as winch driver which I very much welcome and indeed I actively seek. I now ask: if I were winching, would you, as the pilot, be equally receptive to me offering some feedback on yours? And (opening up a can of worms here, I know) morally, should I consider refusing to launch you unless you show willingness to work with rather than against me on **our** launches?

Paul Lazenby, *via email*

Wave cloud over Crete *(M Kouvidis)*

Icarus – the truth

I HAVE long held the belief that the story of Icarus is not entirely fable. All the ancient civilisations had stories connected with flight – be it Pegasus, Mercury, a carpet, Superman or Icarus, the dream was there. The early Mediterranean people were skilled at building very sophisticated sailing vessels and navigating over great distances.

To this day Icarus is a local hero in Crete. Who is to say that he did not actually build a simple hang-glider and soar?

Today, anyone equipped with a ball of string, a couple of hotel sheets and a Swiss Army knife to cut and shape the local bamboo could build a rogallo-type hang-glider before lunch.

The wave systems set up by the 8,000ft mountains have to be seen to be believed. With this in mind I offer my rhyming history of the birth of flight as we know it today.

Chris Ellis, OSWESTRY, Shropshire

History, so it is said,
Was writ by folks a long time dead
Relating all the great events –
I'm sure with all the best intents
(Though most of them, I would declare,
Were never actually there).
And with the slow elapse of time
Came subtle changes, quite sublime
To make the story understood
By simple souls for common good.
Therefore, some moral tales are told,
In myth and legends very old,
To keep us on, in many ways,
The straight and narrow, all our days.

One fable full of advice sound
To keep our feet firm on the ground
And shoot down dreams, however slight,
Of dabbling in wild thoughts of flight
Recounts a tale of dad and son
From Cretan town, Heraklion.
It says the father, Daedelus,
Believed that without too much fuss
Wings could be made from things to hand
To sail the skies above the land
And join the birds in joyful play
(The goal of man for many a day).

Icarus, a son with guts,
Did not think dad completely nuts:
Together, working as a team
They fashioned wings towards their dream.
Made from feathers bound by wax
– the Minoans passed this off as fact.

The wings had just sufficient span
To bear aloft a smallish man.
And Icarus – being young and slight –
Said: "I will make the testing flight",
With wings strapped tight upon each arm
Took off in early morning calm.
As he bravely flapped away
The sun came up to warm the day
And, rising higher with each beat,
He soon began to feel the heat.
Emotions high with great elation
Were dashed, by wing disintegration.
Feathers came out one by one
Loosened by the blazing sun.
So Icarus, this son so brave,
Ended in a watery grave.

The moral of this tale of old
Is – don't believe a word you're told:
The people of this ancient time
Had brains as good as yours and mine
And when it came to means of flight
Could surely make things work out right.
As Daedelus sat deep in thought
Atop the cliffs around the port
He noted how the wind did blow
The sailing vessels down below
And how the gannets soared with ease
Above him on the evening breeze.
Then came the idea monumental:
Use those sails – but horizontal.

He and Icarus, with a will
And using every bit of skill
Set out to build a kite-like wing
With bamboo poles and cloth and string.
When at last the task was done
Dad just said: "Go and fly, my son".
With an air of expectation
They removed their new creation
Half-way up the nearby slope.
Icarus, suffused with hope,
Faced towards prevailing zephyrs
Stepped out... and rose without effort.
Coursing out along the hill,
The northerly propelled him still
Higher as he soared the face –
Amazed and joyful at the grace
With which he climbed the mountains high
Up into the evening sky.

Alas! He did not understand
The wave, set up by lumpy land.
As gentle lift conveyed him higher
The joy of flight, his great desire
– along with lack of oxygen
At altitudes where air is thin–
Caused him to quietly fall asleep
Rather than plummet to the deep.
Now, for all that we may know,
Above those mountains capped in snow
The first to taste the greatest thrill
Is floating, frozen, up there, still.

EASA and coaching on the agenda

THE sixth BGA Club Chairmen's Conference was held at The Soaring Centre, Husbands Bosworth on Saturday, November 1, 2003. A fine day produced a good attendance with 52 delegates, representing 36 clubs from as far afield as Devon and Deeside.

The purpose of the conference was twofold. Firstly, a consultation exercise was held on proposals for the future of the BGA Coaching Operation. Secondly, it served to disseminate information on a wide range of issues that directly affect gliding clubs.

In his welcoming address, BGA Chairman David Roberts warned chairmen of the threat of EU legislation to the freedoms enjoyed by the BGA for self-governance and self-regulation. Maintaining those freedoms is a continuing battle, involving many hours work by dedicated volunteers, some of whom addressed the conference.

Kevin Moloney, Chairman of the BGA Safety Committee and CFI of Cambridge GC, outlined proposals to reinstate a programme of BGA Safety Evenings. Kevin has designed a presentation which draws upon his 20 years experience as a military helicopter pilot and which he will take around the regions during the winter, on a trial basis, with a view to delegating the task to others in 2004. Club chairmen were invited to host a BGA Safety Evening at their own clubs.

The European Aviation Safety Agency (EASA) and the potential threat to the BGA from EU regulation was the subject of David Roberts' address. Effective since September 2003, the EASA has the power to regulate gliding and could impose an additional layer of bureaucracy without necessarily achieving any improvement in safety.

Full implementation will take at least two years, starting with Certification and Registration followed by Maintenance, Pilot Licensing and lastly, Operations. The best we can hope is that the BGA can continue to regulate on behalf of the CAA and with the approval of EASA. The BGA has the backing of the CAA and the Department for Transport as a competent authority. The dangers of over-regulation are very real and could mean a JAA Class 2 medical certificate would be required for all glider pilots.

Chairmen and BGA representatives at the sixth club chairmen's conference *(David Trotter)*

There is still a great deal to be done and the burden of front-line negotiation is falling mainly on the shoulders of the BGA Chairman and Terry Slater.

Phillip Burton, a police officer with special responsibilities for Child Protection, provided a brief address on the need for adequate child protection policies at gliding clubs, including the appointment of a child protection officer. His re-appraisal gave a much wider appreciation of the scope of the problem for any club that allows under 18-year-olds on the field. This is not just an issue of child abuse but of operational responsibility and insurance requirements.

Phillip warned chairmen that if they failed to observe the requirements of the Child Protection Act, the "Old Bill" might come knocking at the door. A new Child Protection Pack and in-house training scheme was being developed for the BGA.

Terry Slater then spoke about the CAA's approach to Adventurous Aviation Activities in creating another tier between commercial and private aviation interests. As a result of the working group, with which Terry has been involved, there are now better prospects for being allowed to provide joyrides in gliders. No longer will it be necessary to have a commercial licence and a public transport C of A in order to charge for giving pleasure flights, other than trial lessons. However, new Codes of Practice must first be approved by the CAA.

The Soaring Centre's catering team really excelled themselves in providing a first-class buffet lunch, which was much enjoyed. After lunch and the group photograph, BGA Vice-President Dick Dixon opened the afternoon's proceedings by outlining the options facing the Executive Committee regarding the future of the BGA's coaching operation. Dick is currently chairing a small working group charged with reviewing the coaching operation and recommending options for the future. He was supported by the other two members of the group, Keith Mansell and Bob Pettifer.

After eight years' successful operation in co-operation with the RAFGSA at Bicester, the BGA now has to make other arrangements. This creates an opportunity to take careful stock of what we are doing and to re-consider its relevance for future training demands – particularly in the context of EASA. Details of the current coaching arrangements, Instructor and Regional Examiner organisation and associated costings were provided to the delegates, who were divided into six syndicates. Each syndicate was provided with a question which it was invited to consider and then to comment and report on its findings.

The syndicate questions embraced a broad range of relevant problems and the session was concluded with an open forum discussion, bringing in all three members of the BGA Working Group, who answered questions and provided feedback.

Dick then undertook to take the syndicates' views and thought-provoking comments fully into account when presenting the working group's recommendations to the BGA Executive Committee.

By popular opinion, it was a successful day, which met its objectives and further enhanced the place of the annual Club Chairmen's Conference as an important date in the BGA's calendar. A digest of the presentations, together with full details of the syndicate questions and responses, is available from the BGA office.

Roger Coote, BGA Development Officer

National Gliding Week

Is your club ready to take part in National Gliding Week?

BY NOW, you should have heard about our plans for National Gliding Week. Even better, perhaps your club is arranging an event that will form part of the celebrations, which will take place between June 19 and 26. I'd like to take this opportunity to set out what National Gliding Week is (and what it isn't) and to explain some of the reasons why we are holding it.

We are always looking for ways to increase the coverage of gliding in the press. As I've explained in these columns before, this isn't publicity for publicity's sake (although there's nothing much wrong with that). By raising the profile, we are aiming to attract more people into the sport, encourage more external funding, and gain more media interest. 2003 gave us many good excuses for press coverage – Jez Hood's win in the World Junior Championships, followed by Andy Davis' win in the World Standard Class. We haven't got as much world championship activity this year, although we are hopeful that National Gliding Week will be topped off by a win in the Club Class World Championships in Norway.

However, it's not just competitive gliding stories that we want to see in the media. For every competition pilot, there are probably another 20 who enjoy the sport by setting their own challenges. Our publicity plan calls for both competitive gliding and what I call "lifestyle gliding" to be featured.

By definition, lifestyle gliding isn't particularly newsworthy and we have to be constantly on the look-out for features opportunities to exploit. The idea behind National Gliding Week is to focus everybody's attention on gliding for a short, concentrated period and to showcase the sport in front of the largest possible number of people. We also hope that the concept itself will be sufficiently newsworthy to generate press coverage. National Gliding Week also gives us an extra selling point when trying to place features in a wide range of publications – national press, lifestyle magazines, and so on. We believe that a concentration of activity over a short time period will prove effective.

We hope that the event will be a success and we plan to make it a feature of the gliding calendar every year, including in 2005, when Britain will host the Junior World Championships. So what will National Gliding Week comprise?

Basically, it is an umbrella, under which clubs throughout the country can organise events. We want as many clubs as possible to rise to the challenge and put something on during the week. Events can take just about any form, including:

- open days
- displays at shopping centres
- sponsored events
- flying dawn to dusk on the longest day
- competitions with your local papers
- aerobatic displays
- school courses

Whatever format an event takes, all we ask is that it is something that has public appeal, that you promote it locally, and that you let us know about it.

We will be promoting National Gliding Week to as wide a public as possible, not just to the press. There will be a dedicated website – *www.nationalglidingweek.co.uk* – that will provide a comprehensive range of background information about gliding (both for the public and the press) and list all the events organised throughout the country.

The BGA will provide a range of tools, including logos, posters and *pro forma* press releases to help participating clubs promote their events to their community.

We are certain that participation in National Gliding Week will benefit all parties. Club events will benefit from the central promotion that National Gliding Week will offer. Wide club support will produce an excellent celebration of gliding with strong public interest and increased publicity opportunities.

We all want National Gliding Week to be a success, but without the support of clubs throughout the country, from the largest to the smallest, the initiative will fail! Hopefully, your club will have decided to participate by holding an event. If not, please consider taking a lead – it's not too late.

Keith Auchterlonie, BGA Communications Officer

national gliding week

BGA Gliding Conference 2004

Eastwood Hall Conference Centre, Nottingham

Saturday 6 March 2004

- **Leisure Facilities including swimming pool & Jacuzzi, available to all.**
- **Accommodation - £32.50pp (based on two sharing)**
- **Lunch - £15 for a hot and cold 3 course buffet, or £5 for rolls/sandwiches (pre-booking required).**
- **Unlimited tea/coffee/biscuits throughout the day - £5.**

Provisional Programme

10.00am **Welcome**

10.15am **Faulkes Flying Foundation**

10.45am **Rise in Costs - Fall in Cover**
The implications of the BGA Insurance Policy that may affect your cover
Have Your Say - Open Debate

11.30am **Coffee**

12.00am **Instructing a new approach?**
How should we structure our training to enable people to become qualified pilots quickly? Is the current system adequate? Should we do more or less in-house training?
Have Your Say - Open Debate

1.00pm **Lunch**

2.30pm **Annual General Meeting**
Including Trophy Awards

3.45pm **Ted Lysakowski Trust**

3.55pm **Exhibitions - Tea/Coffee**

4.30pm **Lembit Opik**

5.00pm **Jerry L. Ross**
NASA Astronaut

6.30pm **Close**

8.00pm **Pre Dinner Drinks**
8.30pm **Dinner**
10.00pm **After Dinner Speaker**
Gerhard Weibel
10.30pm **Live Music**
2.00am **Close**

The Dinner in the evening is always a very popular event and tickets are limited to 250. It is strongly recommended you book early ... strictly by ticket only - £24 per person

For more information and to book your tickets, call the BGA Office on 0116 2531051 or email debbie@gliding.co.uk. Or book online at www.gliding.co.uk

For accommodation bookings, please contact Eastwood Hall directly.
Tel: 01773 532532, Fax: 01773 532533.
See also their web site:www.hayley-conf.co.uk/pages/eastwood.html

Europeless, OR, the Dismal Science raises its ugly head

COLD-SHOWER time. Brace yourselves! This from *The Times* 18 December 2003: ***In the space of under two years the Euro has risen 40 per cent against the US Dollar, and 15 per cent against the UK Pound.***

(Leave a paragraph-break here, Madam Editor – I want this horror to sink in.)

Therefore, on the price of a new, fully-instrumented German 15-metre racing ship delivered in a new German trailer, that means a price rise of about US $40,000 to an American pilot eagerly anticipating the Racing Class Nationals, and a more modest £10,000 to his British counterpart. (Don't ask about Open Class ships, please.)

Purchases of new German gliders in the USA had already come close to collapse in the spring of 2003, and since then the situation has got even worse for US sailplane importers.

"Ah, well, everything goes in cycles, and it'll right itself in the long term," you say smugly if you are a classical economist – or just a bar-room philosopher, which is much the same thing, plus some clever graphs. However, in the long term we are all dead, as the world's greatest economist, Keynes, reminds us. Any glider pilot drawing an old age pension can forget about waiting for this crisis to right itself. It won't get back to normal, whatever that means, during his likely future soaring career.

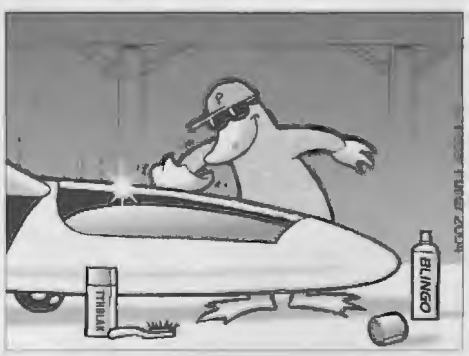
As to the poor importers, it is better if they are also in the business of repairing old gliders, especially if the owners keep wrecking them – well, you can only live in hope. There's gold in them thar old ships, my lad; look after them lovingly. American importers will also do well if as a sideline they sell flights or rent gliders to visiting Europeans – see below.

Yes, the good news is that if you own an airworthy German glider (note the qualification), don't part with it cheaply. A steep rise in the price of new cars, houses, horses or brides – in those countries where such mercenary transactions are part of the culture – means a corresponding, though not necessarily *pro rata*, increase in the price of the used version of the same items. The pent-up demand has to find an outlet somewhere. The other good news is that the USA is tremendous value for money as a vacation destination, especially if you are from the Eurozone, eg, France and Germany.

Even for us British pilots (1.40 divided by 1.15 = 1.22) there has been a 22 per cent improvement in what we get for our Pounds in just two years. So, for what it's worth, my counsel to you is:

- Keep that old ship in sparkling condition; Drive a hard bargain if you sell. (I should declare an interest – I am trying to sell shares in two gliders – but the advice is still valid);
- Make sure insurance values reflect the rocketing replacement cost if your pride and joy is a total write-off. (In the inflation*-crazy 1970s I insured a £7,000 Kestrel 19 for £9,000. I was then easily able to buy a replacement Kestrel when Mrs Platypus demolished the first one in the mother of all jack-knife disasters, which is still talked about in motorway cafés up and down the entire length of the M1.);
- Go west, young pilots, and sample the Pennsylvania ridges in the spring, or the 18,000ft cloudbases of Colorado and Nevada in the summer.

**To prevent a stream of letters from economic pedants: the problem today is not general world-wide inflation as in the 1970s but the sliding past each other, like tectonic plates, of major currencies. You'll be glad to hear that I won't bother to analyse here why this is happening. Just take my word for it.*



Sparkling condition

This is Volmet South, and I wouldn't land there if I were you

I don't know when I first had a 360-channel radio – I think it was in 1973 – but I became a keen user of London Volmet on 128.6 as soon as I had the choice of frequencies. It was, and is still, useful for getting an idea of what the weather is doing around the country once you have set off on a big task. Before GPS came along 12 years ago, I also used Volmet to get an idea of the wind direction if I was getting low and possibly needing to land soon. I was all the more keen a listener to Volmet after I suffered two field-landing crashes in the 1970s: in both cases the wind had gone through more than 90 degrees since take-off and I had piled noisily into what should have been the upwind fence, slightly injuring myself each time. Wheel-brakes were truly lousy in those days, he adds by way of self-exculpation.

I must have been very naïve in those days – as opposed to the sophisticated man of the world that I now am – since I genuinely believed that there was a little fellow with a BBC accent sitting in a booth near Heathrow, placidly reading out the state of the weather hour after hour with not a sign of boredom or fatigue. Well, I thought, there are more tedious jobs, such as being a book-keeper or a chicken-sexer. (Indeed, I wonder how airline pilots stay awake sometimes. Perhaps they don't, of course. So long as someone wakes them for dinner and for the landing bit, nobody will notice if they take a little zizz.)

The man in the booth never seemed concerned about the vile conditions he was describing, or about the pilots' and passengers' welfare. A northerly gale howling straight across the single runway at Luton, coupled with zero visibility and a 500ft cloudbase throwing down sleet and hail, never provoked him to whistle and remark, "Jeez, I wouldn't want to put down there! Why not try Stansted?" Nowadays the middle-aged man with the BBC accent has been replaced by a young woman with a Southend accent; political correctness has struck again. However, they do say women's voices carry better over the radio.

During the 1980s my habit of switching from the gliding frequency to Volmet to get a wind for landing got me into trouble, twice. On those two occasions I failed to hear glider pilots on the ground frantically calling me to say: "Don't land here!" The first time it was to say the ground was far too rough, as I discovered when I barrelled in blissfully unaware and the undercarriage promptly collapsed. The second time Chris Rollings and the late Ted Lysakowski tried to warn me that the cut crop they had landed on was not hay but oil-seed rape awaiting harvest, and that on seeing me about to join them the farmer was now doing a passable imitation of Hitler learning of the fall of Stalingrad, and was rummaging around for some anti-aircraft ordnance to blow me out of the sky. Not best pleased, in other words. The farmer later resorted to litigation, which proved more painful than a backside full of buckshot, I can tell you.

You might ask about those two cases: "If there were gliders already on the ground, why did you not call the pilots and ask them about the wind direction, suitability of surface, etc?" The answer is that I have hardly ever made successful contact in those circumstances – the pilots were usually away at a phone organising their retrieve – this was before mobile phones were common. If they were near their radios and if their radios were switched on, they could be on one of three frequencies which you have to try one after the other, and Heck, you're getting low and time is running out. Besides in these pre-GPS days, you – and the other guy, too – had to know where you were, or the conversation became fairly fruitless: "Glider on the ground near, duh, Birmingham, what's the field like and what's the wind direction?" Numbers on top of the wing would have been a great help.

By the way, you could not, and still should not, assume that the direction the (apparently) intact glider on the ground is pointing is either a) the current wind direction or b) the direction in which that glider actually landed; pilots do move gliders around after landing. And some with long wings do, er, occasionally perform a bit of a groundloop at the end of their landing run. It would probably be better to pick a field on your own initiative rather than

pilots do move gliders around

inordinate time to come and get you

assume the other glider has found the perfect landing-spot. However a glider on the deck is a magnet, I am afraid, and you are just a little iron filing. It's human nature, and we crave company while awaiting a retrieve.

And, God, why do crews take such an inordinate time to come and get you? It's so tedious, so boring – in fact, it's as bad as sitting in a little cubicle reading out the weather for hour after hour...

An infinite capacity for taking pains

I have flown in two-seaters with a great variety of other pilots over the past 20 years, including (in date order of our first flight together) some people who will be familiar to you:

Hans-Werner Grosse

Robin May

Brian Spreckley

George Moffat

Justin Wills

"Name-dropper," you may call me. I can't help it; the Queen was telling me off about it only the other day.

One thing that all these pilots have in common is the tremendous attention they pay to detail. "What the Hell, that'll be good enough!" is absolutely not what you ever hear them say. In fact to ordinary pilots they may come across as excessive fuss-pots (USA: "fuss-budgets") when they prepare themselves and their aircraft for flight. The car and trailer gets the same meticulous treatment as the maps, the cockpit and every inch of the ship. Let's face it, most of the rest of us are just slobs by comparison.

All their thermalling turns are immaculate and their flying polished: they come out of thermals pointing the right way at the right speed. Everything is clean and wasted energy is minimised. You might retort that this does not tell you much. It's a bit like saying that all top concert pianists play perfect scales and arpeggios; of course they do. But it's worth a couple of percent, and what's more if it's done seemingly effortlessly through long practice, then so much more mental energy can go into the real effort – knowing where the other competitors are, working out where the best lift is in the thermal we're in right now, and looking ahead to the next source of lift and working out the best track to it, as well the strategic planning – on a big distance task, the amount of day left and the reports of thickening skies from the west, etc. What I call:"Which side of the Pennines should I fly?" questions. If your scales and arpeggios are immaculate you have time to do those other jobs.

They rarely take chances. (There are – or were – some notorious risk-takers among top competition pilots, but they are no longer with us.) I have more than once been rebuked by some of the five wise men for risking an outlanding by leaving a thermal too early or getting too low and trusting to luck to get me out of a hole. They rarely trust to luck, unless conditions have deteriorated to desperation-level. What scraps of luck they get in those cases they make better use of than the rest of us, through a much better sense of where the lift is, almost as if the miserable scraps of up-going air were visible.

They don't fly at blistering speeds. They know their polar curves and stay in the right sector for the weather ahead (not the weather behind) and the wing-loading, which they know to the ounce. They don't chase MacCready, pulling up or shoving forward every time the speed-director beeps or burps at them; that uses too much mental energy and does little for cross-country speed.

All the above suggests they are all the same. But of course they are not. After consulting my libel lawyer I might venture to mention some individual differences in a future issue of *S&G*. Watch this space.

mdbird@dircon.co.uk

trusting to luck

Electric charger

Jochen Ewald flies the electric Antares, a new battery-powered motorglider complete with a woman in the cockpit...

IT'S RARE to get a completely new glider to fly. Most "new" machines are – at least in part – improvements on previous designs. But with the Antares electric self-launcher, Axel Lange wasn't restricted by production lines set up for previous models; he could show the gliding world his drive concept in a brand-new glider.

Antares has a state-of-the-art 20-metre wing developed by Loek Boermans and Delft University (DU) – there are 18-metre tips, too. The aerofoils have a long laminar flow section with a curved leading edge that sweeps back continuously, while the trailing edge is swept slightly forward in the inner (18m) section and back again at the removable tips. These inner sections contain the 'fuel tanks' for the electric engine: 36 SAFT Li-Ion cells in each, wired in-line, delivering 288V DC when fully charged. These can store far more energy than the Ni-Cd or Ni-Mh cells used to power earlier electric motorgliders (the Stuttgart University solar Icaré 2, the microlight Air Energy AE-1 Silent or Axel Lange's Antares testbed, the LF-20E).

They do, however, need more care when in use. Each cell's temperature is monitored constantly, and the wings have cooling fan systems to prevent overheating. Small underwing vents open automatically when the engine starts, to let warm air out. Because the batteries deliver reduced power when too cold (below 20°C), the Antares will have an automatic internal battery heater (not installed in the prototype I flew). The makers give a minimum battery lifetime of 1,500 full charge cycles or 11 years, and a replacement set costs about 10,000 Euro (a pilot is unlikely to use more than 150 full cycles per year, so after 11 years they should be far cheaper or have a much higher capacity). Each wing also contains a 19-litre and a 31-litre waterballast tank, filled through the top and emptied through electric valves.

Rigging is similar to that of other gliders, with spar tongues connected by two main-pins secured by spring-loaded locks. Each wing weighs about 120kg, so Lange supplies a rigging aid for two-person rigging.

The fuselage, meanwhile, is designed for minimum drag plus pilot safety and comfort. The result is a cockpit section with a cellular structure like modern Formula 1 cars and an energy-absorbing nose cone in front of the pedal and canopy hinge frame.

The canopy swings open like an LS or Schleicher machine, and is supported by a gas spring strut. The seat itself appears to be the most comfortable design for pilots of any size. Unusually, the bottom harness securing points are fixed to the adjustable seatpan, which means that the way the straps hold the pilot is always optimal – but check that all three seatpan holding bolts are secured!

Flap and airbrake levers are on the left, while on the right console there's the main key switch for the electrics, an emergency button, which separates the whole drive system irreversibly, and a set of contact breakers. In the panel a large LCD screen gives all engine and battery information and shows the pre-flight checklist. Engine and undercarriage are operated by an electro-hydraulic system; there's a gas strut back-up to drop the wheel should that fail.

Main picture: Antares in flight. Above: propellor blades are mounted on the DC/DC brushless rotating engine

The heart of the Antares is, of course, the engine, a 42.5kW DC/DC brushless outside rotating electric motor, especially developed for this machine. It is fixed between the two masts with the propeller blades directly mounted to its outer rotating ring. A steel cable from the engine to the rear end of the engine bay ensures that the engine won't hit the pilot in a crash. Once it's fully extended, the bay doors close again to reduce drag.

The whole drive system is operated by just one (patented) "throttle" lever – the pilot doesn't have to worry about procedures; you simply set the throttle into any position between "retracted" and 'full power," the rest is done automatically by the computer. This, the avionics, radio and hydraulic pump are supplied from a 12V battery automatically recharged by the wing batteries, ensuring they work for some time, even if the main battery circuit doesn't.

As in the LS-9, the tailwheel is integrated into the rudder exactly underneath the hinges. This means there are no "ground taxi" forces on the rudder pedals and control is light and direct.

After a thorough briefing, I got ready to fly the prototype at Zweibrücken. At first I felt that the cockpit was rather narrow, but after adjusting the seat I found it comfortable and big enough. Switching the main key to on started the computer, which took about 30 secs to boot up. The first screen showed the pre-flight checklist (you press the enter button to confirm each item). Then the in-flight display came up, showing engine and battery data. A yellow background indicates readings close to limits and a red one (for

With open doors, the engine deployment starts...

The pylon is travelling towards the upright position

With the engine fully out, the rear doors close

danger) highlights ones outside the permitted range. What's more, Julia – a trainee at the factory – announces 'yellow' and 'red' data on the radio loudspeaker and headphones.

Checklist done, move the throttle forward to "engine extended" position. The hydraulic pump starts its (rather noisy) work and the display shows "engine travelling" until it is fully extended and the doors close. Moving the lever further forward does nothing – there is a "child lock" – it has to come fully back to idle again before it becomes active, when it works like a normal throttle. The big difference between Antares and a normal motorglider is that now there is just a low whirring sound and you hear the prop turning behind you. Taxying is easy with integrated tailwheel and a good view of the wingtips.

The prototype weighs 440kg, and with me and parachute its take-off weight was 525kg, the wingloading about 41.5kg/m² and the c of g roughly in the centre. The idle battery voltage was 286V; "Julia" warned me that the battery temperature is, at 17°C, a bit low. This caused only a small reduction in max power, and the batteries would soon heat up when supplying more energy.

After arriving on the large Zweibruecken concrete runway I closed the canopy, set the flaps to +2 (fully positive) and trimmed slightly tail heavy, checked airbrakes were locked, held the stick fully back and moved the throttle carefully forwards. In a crosswind like today's, this has to be done carefully otherwise the tailwheel can lose ground contact due to the moment of the powerful engine high above the fuselage before the rudder becomes effective. Then directional control might become difficult.

Acceleration proved very good and can be compared with that of one of the modern 55hp, 18-metre self-launchers. After some metres I was able to level the wings and, although the stick was fully back, the tail lifted off when the throttle was at full power. That wasn't too much of a problem as the rudder was effective by now to compensate for even a strong crosswind. As we reached about 85km/h, Antares lifted off and, easing the stick a little forward, I let it accelerate to the best climbing speed of 95km/h.

The panel display showed slightly above 40kW for the engine performance with the prop revving at 1,600rpm. The vario gave an indicated climb rate of 4.5m/s, and the climbing angle was very like a piston-engine powered self-launcher. Increasing the speed to a fraction over 95km/h, 'Julia' warned me that with the revs increasing to 1,650 I was coming close to max rpm. The noise level in the cockpit was quite low; still, Antares has a headset (which is active only when the engine is running, otherwise the radio automatically switches to loudspeaker and microphone).

At a safe height I swung the undercarriage switch to 'in', and in less than five seconds the display showed it was fully retracted. Reducing power to the most energy-effective setting of 30kW I reached 1,000m above the field in five minutes. The constant climb rate showed nearly no power loss with altitude unlike non-turbocharged piston engines.

Testing with full throttle revealed that the Antares does not stall in this configuration, and with the stick fully back I reached a minimum speed of 80km/h. Trimmed to 95km/h, I set the throttle to idle: the nose rose a little and the Antares stabilised at 80km/h. Pulling the stick back further resulted in buffeting at 78km/h, and at 75km/h it went into a stable stall. In normal flight with the engine at idle – the configuration it would be in after an "engine failure" – the prop windmills freely, and its drag is quite low – I estimated the performance in this configuration to be about that of a K-6. Continuing the climb at 30kW up to 2,000m the display indicated 30 per cent battery power remaining.

A well-designed cockpit – after a two-hour test flight with engine run and thermals, Jochen felt no fatigue

To convert the Antares to a "real" glider pull the throttle fully back. The engine is braked down by a small amount of "inverse" acting power and, if you fly at 95km/h, the prop moves forwards step by step. When it reaches the vertical it stops and the engine begins to retract. If the speed is held, the time from throttling back to full retraction is 30 to 40 seconds; fly too fast and the prop will continue to turn slowly, fly too slowly and it will stop until you accelerate a bit.

A good feature Axel Lange has installed is an automatic switching of the variometer pressure from static (during powered flight) to the TE probe in front of the fin – another idea that takes the workload off the pilot.

During engine retraction the c of g moves back a little, so trim has to be reset forward. The prototype's spring trim system had a bit too much friction; the indicator lever had to be pushed in the desired direction after unlocking with knob in front of the stick.

Settled in calm air above the clouds, I checked the stall speeds. With the flaps set to +2, first light buffeting occurs at 78km/h IAS, then gets stronger until a min speed of 74km/h is indicated. Pulling the stick further back makes the nose come even higher and the speed of the partially stalled glider increases a bit, until it drops a wing. This can be stopped immediately by opposite rudder and easing the stick forwards – I did not do more because spin tests were not yet complete. Setting the flaps to +1 results in the same behaviour at 4 km/h higher speeds, the flaps at 0 / -1 / -2 / -3 results in 4 / 2 / 3 / 1 km/h higher speeds with no wingdrop and the stall becoming more and more stable. In landing configuration, with the flaps at +2 and airbrakes out, buffeting starts at 81km/h and at 78 km/h it goes into a stable stall.

Although the Antares could be described as big and heavy, its control forces are really light and give the feeling of flying a much smaller, light glider. Even the long flaperons feel like the ailerons of a 15-metre glider at low speeds; at higher speeds the forces do increase, but by much less than other flaperon-equipped gliders. Excellent roll rates ➢

This page, clockwise from left:
The Antares panel, with its LCD screen, a key tool in managing the electric drive system. The red control on the bottom left is an emergency lever to lower the undercarriage should the hydraulics fail;
Main key lock, emergency cut-off button and fuses on the right side of the cockpit;
The flap and airbrake handles rotate up to give easier access into and out of the cockpit;
The throttle, which has been patented, here in the "engine out, stopped" position;
The Antares' elegant new 20-metre wing.

All photos by Jochen Ewald except for the air-to-air picture at the top of p18 (Lange Flugzeugbau)

– I measured 4.6 secs 45°-45° at 100km/h, flaps +2 and 4.1 seconds at 110 km/h, flaps 0 – make this glider fun to fly. (The factory flight tests for certification at 5km/h faster even resulted in 1 sec faster roll rates). To roll without sideslipping, first full aileron and rudder have to be applied, then the aileron deflection has to be taken back during the last part of the movement, the usual characteristic of "heavy wing" gliders. In the prototype, cockpit ventilation cooled my feet and not my head, but this will be modified.

To test the power remaining, I re-start the engine by just setting the throttle to 'full'. Within less than 30 secs, the engine is out and starts to work effectively. Trim back a bit, throttle reduced to 30 kW, and I climb another 550m before Julia warns me that the lowest single battery voltage is down to 3.1V and I switch off again. Li-Ion batteries do not like being fully discharged; the absolute minimum to prevent damage is 2.7V. In the Antares prototype, the 'warning' limit has been set to 3.1V and the 'danger' limit to 3.0V. Each 0.01V below3.1V is displayed and announced clearly, because, unlike in your mobile phone, there is no automatic cut-off when the voltage is too low – in an emergencies you might well prefer to risk wrecking the batteries instead of the glider.

Based on my logger data, I concluded that the advertised max climb of more than 3,000m is realistic. In normal use as a self-launching motorglider, you will need the engine just to climb to about 400m to find a thermal, and then switch it off. With 2500 'climb metres' remaining, a sawtooth flight range of 160km in calm air is possible – in most cases enough to fly home or reach a good airfield to derig or recharge.

I went on to amuse myself soaring in good thermals under the clouds. The Antares is a fine, well-harmonised glider with excellent performance. Thermalling in calm air with 30° bank appears most effective and fun with +2 flaps at 85km/h; while in rough, strong thermals with 45° bank 95km/h felt right. A slight opposite aileron deflection is needed while circling. Light control forces make centring easy. The long flaperons give nearly no feedback about the aerodynamic forces from gusts in the thermal. Many pilots prefer this light, but not nervous control feeling, but I know that others would like

Technical Data

Span (m)	18	20
Wing area (m^2)	11.9	12.6
Aspect ratio	27.2	31.7
Fuselage length (m)		7.40
Fuselage height (m)		1.45
Empty weight (kg)	425	430 (Prototype: 440)
MTOW (kg)		600
Max waterballast (kg)		100
Min wingloading (kg/m^2)	42	40
Max wingloading (kg/m^2)	50.4	47.6
Best glide angle	52	56
Min sink (m/s at 475kg)	0.51	0.49
Engine: DC brushless, outside rotating principle		
Max power (kW)		42
Nominal rpm		1500
Max rpm		1700
Max climb rate (m/s at 480kg)		4.8
Max climb rate (m/s at 600kg)		3.9
Max climb height (m at 480kg)		3000

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more feedback. At higher speeds, the control forces of rudder and elevator rise slightly, the ailerons more with the speed. When I flew, flutter tests were not done, so VNE was just 170km/h – later, it will be 290km/h.

The flap-speed connection was not finally adjusted, but already worked quite well. The Antares is one of these gliders which 'follow the flaps'. Unlocked, the flaps always move towards the 0 position, unlike some other gliders, where the flaps want to move towards their optimal position when you unlock them. Here , for "+" settings you have to pull the lever back and for "–" settings to push it forwards. Then Antares will (nearly) fly the appropriate speed having been trimmed once. With the trim set to 95km/h at +2 flaps, speed accelerates to 100 / 115 / 125 / 145 / 155 at the settings +1 / 0 / -1 / -2 / -3. The gliding performance is excellent – I believe although this is "only" a 20 metre glider and feels even smaller, its performance is not far below that of the ASH 25 class.

After two hours of fun and exploring the region, I fly back to the airfield without the slightest fatigue. The great efforts that have been made to make this glider light, nifty and comfortable will really pay during long competition or cross-country flights.

I then check the effects of the airbrakes in landing configuration. Flaps +2, trimmed to 95km/h, the speed increases to 115km/h when I open the Schempp-Hirth brakes fully. Perfect – just the recommended approach speed. Because of a turbulent crosswind, I chose an approach speed of 125 km/h. The hydraulic pump takes only 4 seconds to deploy and lock the mainwheel. Held off, with airbrakes almost full out, Antares touches the ground in a two-point attitude and is easy to control, despite the gusty crosswind. The wheelbrake is effective and there is no real tendency to nod on the nose. The flaps need not be switched back; aileron efficiency remains good almost to the end of the ground roll. I steer easily on to the taxiway, where I start the engine again to taxi back to the Lange factory hangar. Here I do not feel much urge to leave this fine and comfortable motorglider, but now it needs nine hours to recharge – I used up a full cycle.

Antares is the first high-performance electric motorglider world-wide going into serial production. Throughout it displays the latest technology, which makes it (with ETA) probably the most advanced glider available today. As Axel is a perfectionist, it is on the market rather later than estimated. But his thoroughness means many sensible features for safety, comfort and ease of handling – some patent-protected. It is a "low noise," environmentally friendly alternative to conventional self-launchers, offering more safety by dint of a reliable engine and good performance even with the engine out and not working. At 125,000 Euros (+ VAT) it does not seem too expensive. Customers would seem to agree: there is a two-year waiting list. If you want to experience the future of motorgliding, take a close look at the Antares!

The leading edge

Justin Wills reflects upon a recently-published book about and by the New Zealand gliding pioneer, Dick Georgeson

THE growth and success of the Vintage Glider Club is due, I think, not only to the human propensity for nostalgia, but also to a desire to identify with the gliding pioneers and their aircraft, whose graceful shapes were inspired as much by artistic as by aerodynamic considerations.

For Europeans most of this pioneering took place in the 25 years leading up to 1950, but in New Zealand soaring did not really start until this later date, and thus the exploration of the now famous lee wave conditions by Dick Georgeson and others over the next 35 years – uninterrupted by a world war – covered an even greater spectrum of aircraft and pilot performance.

Dick has now written of his experiences in a broadly autobiographical framework. The breadth of the achievements he describes is extraordinary: from solo training at Dunstable on Daglings in 1948 under the tutelage of the CFI Wheatcroft (Dick completed his Silver C in the London GC Gull 1 less than six months later), to World Records for Altitude, Out and Return, and Straight Goal in gliders ranging from a Slingsby Prefect to a Nimbus 2 and Janus C.

But what really distinguishes the book is what it tells us about the man and the human qualities he employed to achieve his success. The style is neither particularly lyrical nor analytical (sadly, the publishers omitted the chapter on meteorology and wave flying techniques) but its direct and conversational approach produces a fascinating, albeit possibly unwitting, self-portrait.

The first essential characteristic with which all pilots can identify is Dick's fascination with flight. He first became airborne in 1933 at Timaru, New Zealand, in the famous Southern Cross Fokker Tri-Motor, flown by Sir Charles Kingsford Smith, and his description of the event is one of the most vivid in the book. More unusual was Dick's empathy with atmospheric forces: he recalls, on seeing as an 11-year-old the great New Zealand wave system called the North West Arch, "an intense feeling that the great power of the wind was at work".

Immense enthusiasm is another obvious characteristic. This pervades practically all his other attributes, but in its simplest form is manifested by intense dedication and application: having achieved his Silver C in April 1949, with three days to spare before leaving the UK, he rushed up to Kirbymoorside and persuaded Fred Slingsby to give him their New Zealand agency. This enthusiasm is blended with a quite extraordinary instinct for self-preservation: despite an enormous number of extremely tricky situations Dick had only one minor accident in 35 years of extremely adventurous gliding. Whilst this may imply an absence of bad luck it cannot, over such a long career, have depended purely on good luck.

When his Prefect arrived from Britain in September 1950 he taught himself (and the tug pilot) how to aerotow; this included a spectacular demonstration of PIOs. That Christmas Dick took the Prefect to the Mackenzie Basin in New Zealand's South Island and became the first glider pilot to explore this extraordinary and fascinating region. He promptly broke the New Zealand Endurance Record, and 12 months later achieved the NZ Altitude Record on the Two Thumbs Range. To maximise his height gain he released on the southern end of the ridge at 250ft above the valley, which probably seemed adequate in terms of his experience at Dunstable. However, even today contacting this ridge in a modern glider at four times this altitude is an extremely nerve-racking experience, so it is hardly surprising that Dick reports "my feet clattered on the rudder pedals with fright," but he managed to stay up and gradually climb away to 10,600ft.

'The gorge was a terrible place to be low in a glider – narrow, deep and liberally strewn with rocks'

Thirty years later Dick, with his second wife, Helen, found himself trapped in the Cromwell Gorge in their Janus in heavy sink from a nearby thunderstorm. The gorge was a dreadful place to be low in a glider – narrow, deep and liberally strewn with rocks (it has since been dammed and is now a substantial hydro lake). But some time earlier Dick had driven along it looking for an emergency landing area and now, with the aid of full flap, full airbrakes and the tail parachute, he managed to squeeze into the only space he had found, less than 100 metres long.

There is plenty of other evidence of Dick's competence, which applied to more than just gliding: during World War Two he worked in his uncle's munitions factory at Irishman Creek, a remote sheep station in the Mackenzie Basin. Whenever there was a particularly intricate piece of work to be done it was given to Dick, and the small lathe at the eastern end of the workshop is still called "Dick's lathe".

Another aspect of Dick's enthusiasm was how infectious it was. He not only encouraged others to try things for themselves but also obtained their willing assistance in his endeavours. This included Phil Howell, who built him a remarkable HF glider radio in 1956 with a range of over 800km, and Alan Mitchell, a meteorologist who took a special interest in Dick's plans and provided an invaluable forecasting service.

In fact, reading the book, which also provides a history of gliding in New Zealand, one is struck by how generous he is in his praise of everyone he mentions. One gets the impression that here is a man who has only met the nicest people. However, this is not the case: Dick was General Manager of the Hamilton engineering works in the 1970s during the worst excesses of militant trade unionism, and it was his ability to search and find the good in everyone and concentrate on that which got him through and brought him success.

This deep vein of optimism is another vital characteristic. Dick's mother died within a few days of giving birth to him, her only child. A short time later his father disappeared, presumed lost at sea, leaving Dick an orphan, to be brought up in the Mackenzie Basin by his maternal grandmother, and his aunt and uncle, whom he adored. His aunt had been Peggy Wills, first cousin of Philip Wills, before she met Bill Hamilton and moved to New Zealand. It was Philip who introduced Dick to gliding at Dunstable in 1948, and who subsequently sold him his Weihe sailplane. Bill was to become one of New Zealand's greatest engineers and inventors, a natural genius and a hugely successful charismatic man, whose business provided Dick with his professional career. Thus Dick portrays his orphan state as one of great advantage.

In 1940 Dick volunteered to join the New Zealand Air Force. It was then discovered that he had severe glaucoma in his left eye. The subsequent operation saved his eye but he lost 95 per cent of his sight in it. This ruled out all active service and, seemingly, all prospects of ever becoming a pilot.

But he persevered, learnt to compensate with his good eye, and with clever medical assistance eventually passed his aviation medical. Despite several further problems with his sight he never allowed this huge potential handicap to stop him achieving his dream of flight.

This involved both intellectual vision and tremendous tenacity. Dick had heard about lee wave conditions from Europe and realised the North West Arch must be a similar phenomenon. Progressively, over 35 years, he explored it. In the process he

Dick Georgeson commissioned this picture of himself, flying a Skylark 4 over Lasham, from Charles E Brown and presented it to Philip Wills. Today, the original hangs in Justin Wills' study at Irishman Creek, his sheep station in the MacKenzie Basin, South Island, New Zealand. Dick was the first glider pilot to explore this fascinating region

broke the World Gain of Height Record and then the World Out and Return (O/R) Record in a Skylark 3F in a flight of 8 hrs 45 mins, at the end of which he was literally frozen stiff. He went on to break the O/R Record, again in a Dart (10 hrs 2 mins), and again in a Kestrel 19 – exceeding 1000km for the first time (11 hrs 55 mins). However, the most spectacular flight occurred in 1978, when he flew the entire length of both New Zealand's main islands to gain the World Goal Record of 1,254km (Nimbus 2). This involved enormous logistical difficulties as the start point was nine hours' drive south of Christchurch, where Dick lived. Inevitably there were numerous attempts when the weather did not co-operate.

Eventually, on January 14, 1978, he took off, accompanied by Bruce Drake and David Speight in their gliders. Dick fell into a hole near Christchurch and spent nearly three hours getting back into the wave. He had taken seven and a half hours to cover the first 400km, with 850km and five and a half hours daylight left – and he made it! His only enduring regret was that his lifelong friend and mentor, Philip Wills, died just before he could get him the news of this extraordinary flight.

Subsequently, Dick broke further world records in the two-seater category, flying with his wife Helen in a Janus. A committed supportive partner is another essential element for any successful glider pilot.

Dick was also a contest pilot, winning several New Zealand Nationals, and competed in three World Championships, including the 1965 event at South Cerney, where he flew Philip Wills' Skylark 4. I happened to be in the retrieve car during the goal race to Spitalgate when Dick radioed that he was lost in very poor visibility (due to sea air from The Wash), and requested "a heading, any heading, quick!" From a brief description of what he could see below we guessed at a heading of 010°, and he reached Spitalgate with 15ft to spare. As a token of thanks, Dick commissioned Charles E Brown to photograph him flying the Skylark 4 over Lasham and presented it to Philip, who hung it in front of his desk at his City office. It hangs in my study at Irishman Creek today.

Inevitably, such a saga of past successes leads one to speculate about the future. One thing is certain: if gliding can continue to attract people of Dick's calibre almost anything and everything will be possible. The final essential characteristic of success exemplified by Dick is that of identifying and concentrating on the things that really matter: at our last meeting he was over 80 years old and had recently been in hospital, so I asked him how he was.

He replied: "Well, I am still here. That helps." How right he is.

"I was about 11 years old when I had an experience that filled me with great excitement. I remember one morning at Ashwick leaving the house and running over the plank crossing the little stream that supplied electricity for the house, when a sudden gust of warm wind hit me. I looked up over the trees on the low hill where my mother Leila was buried, and beyond to Mt Dobson. There, high above the 2000-metre mountain, was the sharp leading edge of a long white cloud, stretching in both directions as far as the eye could see. The sky in front of this edge was a deep blue; the cloud was a dazzling contrast; and the bulk of Mt Dobson stood in clear silhouette. The sudden hot puff of wind, the vivid blue sky, the sharp outline of the mountain and the long white cloud stretching into the distance gave an intense feeling that the great power of the wind was at work. It was enthralling. I ran on happily, little realising that this nor'west arch would involve me in the most exciting and fascinating way for the greater part of my life.

Extract from:* The Leading Edge – A Life in Gliding *by Dick Georgeson and Anna Wilson, Longacre Press
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Racing uncertainty

Aspiring contest-winner Chris Davison has been on a quest to discover what makes a racing pilot. He shares his discoveries

RACING has many meanings. There are "racing gliders," "racing days" and "racing pilots". Racing gliders are white and shiny, racing days are blue and fluffy and whilst it is less easy to categorise racing pilots, they all fly faster and land out less than I do, and that is really starting to annoy me.

I am also getting annoyed that no one has ever explained to me how I become one. The secret of flying faster and so becoming a racing pilot is, I'm sure, handed down from pundit to novice behind rows of shiny LS8 trailers all over the country. Secret meetings conducted in low whispering tones – "but remember, keep it to yourself and, whatever you do, don't tell Davison". I have loitered with intent behind most of the LS8 trailers in the UK and discovered absolutely nothing.

I first came across the term "racing" at a regionals a few years ago. I had been delighted to actually complete a task, only to discover a bar full of sour-faced pilots moaning about being 5km/h slower than the winner, who in turn had a grin like an Eta on finals. I had no idea that there was a class of pilots for whom "getting back and having a cold beer" was not the pinnacle of achievement but just a basic statement of the obvious: *racing* pilots.

I had hung around LS8 trailers long enough without the slightest sign of a indiscreet pundit, I had to find another route to further my quest, so I entered a nationals.

In my search to discover the secret of being a racing pilot I sought and received lots of advice: "it's your first nationals, so fly within yourself" – "it's your first nationals, so you'll need to push yourself hard" – "start the task early to maximise the flying window" – "start late to follow the other gliders"... fly fast, fly slow, press on, hold back, stay high, fly low...You name it, I'd been told it, and then someone else had contradicted it.

The good news is that hindsight brings far more clarity than "advice" – and so after the first few days of the competition I knew exactly where I was going wrong.

I was landing in fields.

Progress was being made, however; each landing was further away than the last and I was getting to the field far more quickly. By Wednesday, I had formulated the brilliant plan of following a better pilot, only to discover that all the better pilots also had bigger gliders and did not turn into jelly at 1,500ft. But the plan (almost) worked and I (nearly) made it home. I decided that an intensive session of questioning was required if I were to erase those brackets, so armed with some tongue-loosening beer vouchers and demonstrably not being a threat in any way, shape or form to the pundits, I set to work. It was a tough evening, but someone had to do it.

Eventually, I pieced together what the secret must be – ingeniously simple, really. The next day I put the secret to work and completed the 366km task, to a spontaneous round of applause from the finish line for tenacity. Shaking like a leaf and feeling very smug indeed I emerged from my little glider to be presented with an ice-cold beer. At last the secret was mine; I was a racing pilot.

Or not.

Friday was the "day of days" and a 505km task was set. My race-proven secret for flying faster would be applied again.

The first leg, a mere 165km from Lasham to Leominster, went without a hitch, I was keeping up with other gliders, even racing.

Next, the 122km to Buckingham and a huge cloudstreet. The best flying of my life, bar none: 62km dolphining without turning once, catching the gliders ahead, rejecting 4kt climbs and being rewarded by 7kt on the averager! The conditions were fantastic and I was in racing heaven. What could possibly go wrong?

Then, slowly but surely, my secret started to fail me. The conditions began to change – but my flying didn't. I rejected 4kt and found only 2. I got lower but pressed on further down track, rejecting weak lift as I went. Too late, I realised that I needed to stop racing and start flying, but by that time I was picking a field.

I watched a stream of gliders passed overhead, dumping water, climbing slowly away but most of all, flying. I cannot overstate how low I felt sitting in that field waiting for my crew to arrive. From the best to the worst day of my gliding life, in less than an hour. The next day, physically and mentally exhausted, I quit the competition and went home to take up golf.

On reflection, it was not the secret that had failed, only my attempts to use it. A mixture of dehydration (the hottest week since records began), the internal stress of a poor start to the week and the false elation that my days of landing out were over had blinded me to the obvious: *racing pilots race in racing conditions* or, at least, the successful ones do. Racing days in the UK are subject to terms and conditions, and you fail to read the small print at your peril.

So what is the secret I discovered and does flying faster make you a racing pilot? First let me share some of the myths I have dispelled in searching for the secret:

❑ Myth number one: Just follow the gaggle. A brilliant idea so long as you can (a) find the gaggle in the first place, (b) join them before they swarm off to the next thermal and (c) fly a glider with enough performance to stick with them. Playing catch-up in a small glider does not work. Trust me.

❑ Myth number two: Fly faster between the thermals. Flying faster in a Club Class glider just makes you come down more quickly and so you need to spend more time thermalling, which slows you down again. Flying fast in isolation of having a good climb ahead is a really effective way to add another field to your private collection.

❑ Myth number three: Racing pilots like strong thermals. Wrong, if you've ever tried to follow one you will know that racing pilots ***hate*** all thermals and spend as little time as possible in them. Going round and round in small circles clocks up significantly fewer kilometres than flying in straight lines, so you are slowing down, not speeding up. The thing about strong thermals that racing pilots do like is that they need to spend less time circling in the damn things.

❑ Myth number four, the key to my discovery: Rejecting sub-standard lift increases your chances of landing out. No, it does not: it reduces them. Why? Because there are simply only so many hours in the day with good conditions and if you don't maximise the good conditions you will be forced to use the poorer conditions later in the day. Rejecting a single 4kt climb to take 6kt gives the same benefit as a final 2kt climb over zero sink... and how many tasks have you failed for the want of a final 2kt climb?

The single thing I changed was taking the risk to reject weaker lift because if I didn't I knew with certainty I would run out of day.

The single error I made on that day was not spotting that the stronger lift ahead was not there any more.

But does flying faster, by itself, make you a racing pilot? Racing, it seems to me, is a mindset; an absolute certainty that there ***is*** good lift ahead and you ***will*** get to it. Your focus is on how you maximise it, not how you find it. All the secrets in the world will not make you a racing pilot unless you can clear your mind of the fear of landing out because you ***know*** there are multiple sources of lift ahead and you ***know*** you can find and use the best ones. If you can free your mind of that constraint, either through experience or blind optimism, you will make a great racing pilot.

I, for one, am not quite there. So whilst my secret may not make me a racing pilot just yet, it does give me something new to try this season... and should mean a lot less time loitering behind LS8 trailers!

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IC 1	3rd-11th April	IC 6	4th-12th Sept
IC 2	17th-25th April	IC 7	18th-26th Sept
IC 3	15th-23rd May	IC 8	2nd-10th Oct
IC 4	5th-13th June	IC 9	16th-24th Oct
IC 5	19th-27th June		

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SCA 1	5th-9th July	*Venue To Be Decided*
SCA 2	12th-16th July	*Venue To Be Decided*
SCA 3	19th-23rd July	*Venue To Be Decided*
SCA 4	26th-30th July	*Venue To Be Decided*

Venue's for away soaring courses will be published on the BGA website during February and will appear in the next issue of S&G

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To touch the Finger of God

Steve Derwin describes how last year, after more than a decade, gliding showed him the way to regain a world that he thought he had lost for ever

TWICE now I have been granted the great distinction of being able to touch the Finger of God – both times in the company of a great man. The first time, it was with a leading mountaineer; the second, last summer, with an inspirational pilot. As you might imagine, each time the experience has been a turning point in my earthly existence.

The Finger of God – more correctly termed in French "*Le Doigt de Dieu*" – is a spectacular pinnacle of rock on the summit ridge of La Meije in the Dauphin Alps, standing 3,928m (12,900ft) above sea level. *Le Doigt* itself is a huge gneiss "*gendarme*" that bars the way to a high-level traverse at the very top of one of the Alps' most testing north faces...

My first encounter with the deity's upstretched hand was in 1983 – or was it '84? I really don't remember time in such large units, but ask me about each second of the climb and I can still recall it in vivid Technicolor. I remember the long walk through the Alpine meadow to the foot of the route: the spikes of yellow bitter agrimony, the pretty little harebells and blue scabious adorning the sweet-smelling meadow. Late in the afternoon and to a mountaineer fresh on his journey and bent on the summit, they represented all that was good about the prospect of a safe return from scaling the heights above.

After a restive night in a high refuge, I climbed that north face via an extreme route called "*Couloir en Z*" and on the harder moves I remember nervously humming to myself a *Stranglers* song and reflecting on the appropriateness of the lyric: "turn the corner, rub my eyes and hope the world will last". We spent the next night shivering in a bivouac on a ledge no bigger than the average kitchen table. I remember brewing no fewer than 13 consecutive mugs of tea inside my bivvy sack. Sleep was impossible and keeping warm essential when pinned down to such a small spot.

My partner – and the first great man of my story – was Alan Hinkes, now Britain's leading high-altitude mountaineer and an inspiration to me as the lead climber in our partnership on many serious mountaineering undertakings back in those days when I still had the use of my legs. He and I went to East Africa together to climb Mount Kenya, to Peru to tackle unclimbed routes in the Cordillera Blanca range of the Andes; and to Alaska to weather an attempt on Mount McKinley. I've been with Alan to some of the most exhilarating places on earth, and to the place where the lowest-ever temperature was recorded, Denali Pass at 18,000ft (5,500m) on McKinley. I've had some successes and just as many failures in my mountaineering career and, in truth, that's the way it goes in climbing. But I have to say had I not lost the use of my legs in a motorcycle accident in 1989 I know I would still be taking the rough with the even rougher that mountaineering offers, such was my love of that sport.

After my accident, I wasted little time in planning my return to the mountains. First thing I did was to buy a quad bike to try some high-level walking routes in the Lake District and Scotland. But it was never the same. Too easy, and whilst there was a certain degree of risk, I found it lacked real challenge – and, besides, I could never stand astride sharp ridges or peer down precipitous faces to the ice fields thousands of feet below.

Then the realisation came to me: "I know," I thought, "I'll take up hang-gliding. Then I can fly those ridges and peaks". Hang-gliding led me to microlights, and microlights to fixed-wing and fixed-wing, I'm delighted to say, led me to the ultimate form of manned flight – gliding.

And it was through gliding that I was able, once again, to touch the Finger of God. In summer 2003, the second hero of my story made possible a return to the Alps that I could never have dreamed of. My journey through mountaineering and then aviation

Clockwise, from opposite: Le Dolgt de Dieu (Alan Hinkes); Le Doigt, with Klaus Ohlmann in his yellow Calif, KO, on a lead-and-follow with two other gliders (Claus-Dieter Zink); Klaus and Steve – in the cockpit of a borrowed Calif – at Serres; Steve climbing (Alan Hinkes); Alan, the first "great man" of Steve's story (Steve Derwin)

had led at last to the definitive high-altitude experience. In the cockpit with a world-beating endurance pilot and over three days I flew more of the Alps than I had climbed in a lifetime. Those three days with Klaus Ohlmann enabled an emotive return to summits previously fought for in the heat and toil of long summer climbs; only this time we were in the comfort of a spacious side-by-side cockpit. Not that it wasn't committed, mind you!

The aircraft was a Caproni Vizzola Calif A-21, F-CEUF. The A-21 is a 20.38m side-by-side two-seater, which was first flown in November 1970. The cockpit is glass-reinforced plastic (in later models, carbon-reinforced plastic) and the rest is basically light metal. For its time it was way ahead of everything like it and, according

'Klaus and I flew the north face of the Meije at less than a wingspan from its lofty galleries and snow ramps'

to the Caproni brochure, has a L/D of 43 at 105km/h. The comparable performance Schempp-Hirth glider came ten years later with the Janus C; the first German production two-seater.

Klaus and I flew the north face of the Meije in the Calif at less than a wingspan from its lofty galleries and snow ramps. I'm sure I saw the yellow patches of snow on the tiny bivvy ledge. That's how close I came on my return to this bastion once visited long ago. I knew that flying in this environment required the same level of sound judgment that climbing invariably does. In fact, it was spine-chilling, yet at the same time unbelievably rewarding.

Alpine flying was also giving me access to new peaks on a tick list I thought would never be realised. In the Dauphin I was able to traverse the Barre des Ecrins and gaze once again on the direct line of the Whymper route by which I had reached its summit in 83. The face seemed barer now, with the snow scoured by the heat of successive summers and poorer winters. Next, Pelvoux rushed into view and my mind span back to my ascent of Couloir Chaude, a near-vertical ten-pitch ice-climb, on which I had held the rope for Hinksy. It was here that I first experienced the blood-curdling, gut-emptying feeling of total fear brought on by the roar of stone fall down the narrow *couloir* in which we were climbing.

Now Klaus and I pushed on across the Parc National de la Vanoise to the Mont Blanc Massif. After traversing the Chamonix valley we turned right past Montenvers and entered the Mer de Glace. On the opposite side of the valley we soared on weak thermals triggered by the warm rock of the north face of the Petit Dru, magnificent and shimmering as it towered over the glacier below. After gaining good height here we pushed on up the glacier, past the Couvercle hut, where I had stayed prior to my ascent of the east face of the Moine in '84. Because the cloudbase was well below the peaks and I knew that the glacier system here led up to the highest mountains in France, I realised we had flown into a valley where the only exit was the way we had entered – behind us. Flying above Europe's longest glacier with towering buttresses and ice fields either side and a ceiling of complete cloud cover was like flying into someone's hall passageway through their letter box.

The great north face of the Grande Jorasses swept by, revealing all its intricacies and closely guarded secrets, reserved for the brave, bold and technically proficient. The Shroud, the Walker Spur and Croz Spur were magnificent, poised above the Glacier de Leschaux, and I was seeing them so close that I could reach out and feel the ➢

Left: Gran Paradiso in Italy, visited by Klaus and Steve on one of three Alpine trips together (Steve Derwin)
Above: the Calif heads the grid at Serres, Klaus' base

wet rock, breathe in again to smell the sulphur of the stone fall. Here were of many of the routes I had dreamed of in my youth. Had I never dared to tackle them? Or had they been snatched away before I could test myself? Who's to know, this much later – and what do I care? I'm here now; they're just as inspiring from this perspective; and survival still depends on perfect judgment; on airmanship and finely-honed flying skills as well as sound mountaineering decisions.

This summer, as well as the tremendous feeling of regaining a life thought lost, I had the ultimate privilege of flying with a world-class pilot in the fantastic Calif, a machine able to enter a vertical dive and, because of its speed-limiting brakes, not go beyond VNE (velocity never exceed). At one point as we tracked south, after soaring the buoyant air enveloping the Gran Paradiso, we found ourselves low in a remote valley with no apparent landing fields. So low, in fact, that I swear I saw the whites of the eyes of a Chamois as it grazed unconcerned beneath us. Not only low, but worse, the vario did not indicate any detectable lift. We were in so close now, scratching for height, that full circles were impossible. Somehow, I've no idea how, Klaus sensed where we needed to be and guided the Calif through air currents only he could detect. He flew with such delicate precision and beautifully choreographed figures of eight that we eventually pulled away from what I had thought was a definite crash-landing. His manoeuvres were in so tight that at the end of each beat I heaved a sigh of relief that we were turning out from the unforgiving cliff – at least, until I looked forward into the valley to see just how low and remote we really were. But, beat by beat, we maintained altitude, and after what seemed like a lifetime we gradually began a climb of a few metres. Eventually, we ascended into better lift. Full thermalling circles signalled our escape from joining the grazing chamois.

How can I describe flying with Klaus? Well, he is an man who quietly exudes enthusiasm for flying and who inspires tremendous confidence through his understated and always flatly honest appraisal of any situation. His skills and judgment are never in doubt; his infectious commitment to what he is doing leaves you convinced that you want to be in the air with this man. In three days we were airborne for more than 22 hours and on one journey covered a GPS recorded track of 1,100km. On one flight we saw the Vercour, the Ecrins, the Mont Blanc Massif, the Verdon, and more other mountains than I can recall. We visited Italy and the Gran Paradiso *en route* from Mont Blanc to the Verdon and were within striking distance of the Mediterranean Sea before turning north for Klaus's home field at Serres, near Gap in France. What a journey!

In the cockpit Klaus is totally absorbed in the task of flying. Not, it seems, because of any pressure, but because to give it less than full commitment would be to fail to honour the role of pilot. You shouldn't expect a lot of conversation when flying with Klaus and, indeed, that would be unnecessary. The activity and the environment speak for themselves, and Klaus knows this.

He also understood how much returning to the Alps meant to me and at one point said, unsolicited and in a moment of complete empathy: "You know, Steve, I'm a mountaineer too". He is. His love of the hills and his ability to traverse them so boldly and in such style sets him squarely in that category of mountaineers, pilots and other great men.

Klaus is far from ordinary. He is a doyen of his sport, a pilot extraordinaire, a mountaineer and an inspiration to be with. I can only thank him for helping me return to the mountains I love.

Le Doigt de Dieu, seen from the south on Steve's flight

100 years of gliding technology

The Wright brothers may have stopped gliding but motorless flight didn't end there. Afandi Darlington examines a century of development and anticipates the next leap in technology

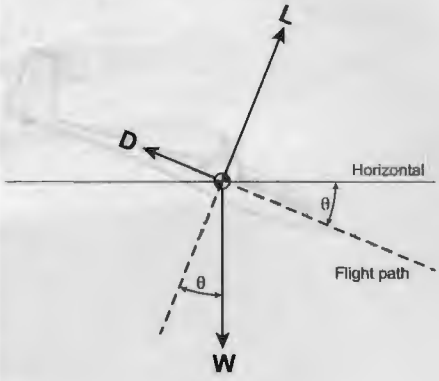


Figure 1 – Gliding flight *(Steve Longland)*

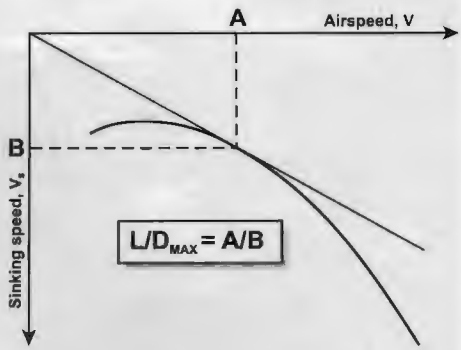


Figure 2 – The speed polar *(Steve Longland)*

BEFORE describing the evolution of gliders over the past 100 years it is useful to define a "figure of merit" used to measure gliding performance – the lift to drag ratio (L/D). Lift to drag is equivalent to angle of glide, and for cross-country gliding flights, the higher the L/D ratio the better as this allows the glider to cover more distance before having to find another thermal to climb in, or a field to land in!

The performance of a sailplane can be described in terms of a "speed polar," which is simply a graph showing the sinking speed of the sailplane as a function of airspeed.

In addition to the requirement for a high maximum L/D ratio, the sailplane pilot also desires high values of L/D across as large a speed range as possible, typically between 40 and 120kts, as this enables very long distance flights to be completed, and gliding contests to be won. The design drivers that determine the L/D ratio are:

- Wing span and aspect ratio
- Wing aerofoil shape
- Fuselage shape and wetted area
- Surface waviness
- Weight

– all of which are critically dependent on the airframe construction material. Surface waviness and finish are critically important to achieving laminar flow in the viscous "boundary layer" of air adjacent to the surface of the glider – if the surface is too wavy or rough the laminar boundary layer will be tripped into a turbulent state with a large increase in drag; Figure 3 *(below)* shows a laminar boundary layer undergoing transition into a turbulent layer.

The first documented glider was the Cayley man-carrying glider of 1853 *(see photo, below, of a replica)*. The original device had a large wing composed of a sail attached to a wooden framework, which took up its lifting aerofoil shape only in an airflow. Control was achieved by vertical and horizontal tail surfaces connected to the "pilot" – actually Cayley's erstwhile coachman, as Cayley was 80 years of age – by a wooden tiller as in a sailing boat.

Whilst Cayley's glider did fly for a short distance his achievements were quickly forgotten after his death in 1857 and, despite the efforts of Lilienthal in the 1890s and the Wright brothers in 1900-1902, it was not until the late 1920s that practical gliders were produced and available to the everyday "club" pilot.

Typical of this early generation of sailplanes is the beautiful Minimoa, designed by German pilot Wolf Hirth in 1936 *(see photograph, overleaf)*.

It was an advanced machine for its time, featuring a cantilevered wing rather than the strut-bracing common on gliders that preceded it. The wooden structure was fabric covered and the wingspan was close to the practical limit for wood at 17m with an aspect ratio of 19. The wing section used was the very thick Gottingen 601, and possessed limited laminar flow, leading to a modest maximum L/D of only 28.

Besides giving low performance, the wooden structure required highly skilled craftsmen to build and was vulnerable to handling damage.

Aerodynamic design techniques progressed rapidly during World War Two and aerofoil sections capable of significant laminar flow were available to sailplane designers immediately after the war was over in 1945; however, these proved impractical with the wooden structures in use at this time as the small lumps and bumps on the surface of the glider tripped the laminar boundary layer into a higher-drag turbulent boundary layer. ➢

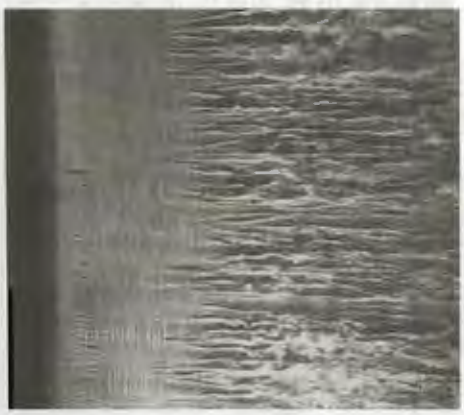


Figure 3 – Transition to turbulence in a boundary layer

The 2003 replica of Sir George Cayley's 1853 man-carrying glider *(www.whiteplanes.com)*

Left: Minimoa, showing cantilevered wing (Alan Self)
Above: Akaflieg Stuttgart fs-24 Phoenix

➢ Even extensive filling and profiling of the structure was only partially successful due to the instability of wooden structures caused by temperature and humidity variations. What was needed was a much smoother surface.

The breakthrough was initiated in Germany in 1952, when Stuttgart Akaflieg began studying laminated paper/balsa core sandwich structures for sailplane use.

This system failed to meet the necessary strength requirements, but in 1955 the paper was replaced by woven glass-fibre cloth and the construction method for all modern composite aircraft was born.

The first glider to make use of glass-fibre reinforced plastic was the Akaflieg Stuttgart fs-24 Phoenix, designed by the brilliant German designers Richard Eppler and Hermann Nagele. The Phoenix was a conservative design but even so had a maximum L/D of 38 that exceeded all wooden gliders that had preceded it.

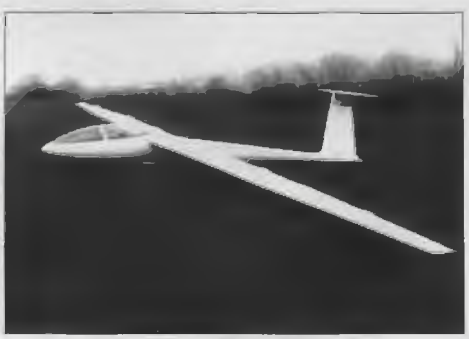
Before we move on in this story, a few words on the Akafliegs or 'academic flying groups'. The incomparable Akafliegs are sub-departments of German university technical faculties in which interested students and staff take part in the whole process of concept, design, manufacture and testing of cutting-edge, state-of-the-art sailplanes, over a five to seven year period. The Akafliegs combine:

- Enthusiastic young scientists and engineers who are active participants in the sport with a high level of personal achievement;
- Ability and opportunity at an early career stage to explore new advanced technology without the constraints of commercial risk;
- The mature support and guidance of older faculty members, who are usually ex-Akaflieg members;
- Support from local industry, which benefits from technology developed within the Akaflieg and from employment of ex-Akaflieg students upon graduation
- A nursery for the types of skills an advanced country needs in the 21st century.

The success of the German Akaflieg system can be seen not only by the success of the German sailplane manufacturing industry, which is world-leading, but also in the ex-Akaflieg members that are active in the senior management of the German aerospace industry. It is a system that should be encouraged in the UK by partnership between academia and industry.

Returning to our story, the smooth surfaces available using composite structures had unlocked the performance of laminar flow wing sections whilst at the same time, providing higher tensile strength and stiffness that allowed larger-wingspan gliders to be built. In addition, the smooth wing surfaces were stable over the long term, reducing the maintenance requirement compared to the ageing wooden gliders.

The early 1960s saw a proliferation of glass-fibre sailplane designs in the German Akafliegs, including the Braunschweig SB6 of 1961 designed by Bjorn Stender and his team. Stender went on to design the BS-1 sailplane, similar to the D-36 described below, which went into production in 1966. Meanwhile the H-301 Open Libelle designed by Wolfgang Hutter and Eugen Hanle became the first composite glider to be mass produced, with 100 built between 1964 and 1969.



The D-36 Circe pioneered trailing-edge flaps

Another significant glider in our story was the very advanced Akaflieg Darmstadt D-36 "Circe" of 1965. Whilst the 17.8m wingspan of the D-36 had raised the L/D to 44 the D-36 was important because it pioneered the use of trailing-edge flaps to increase the performance at high speeds between 70 and 90 knots, where the flap was deflected upwards to increase the extent of laminar flow over the lower wing surface. Flaps have become a standard design feature on high performance sailplanes ever since.

The manufacturing methods used in the production of the Phoenix remain basically unchanged today, due to the high price and repair difficulty of more modern techniques such as autoclave cured pre-impregnated (pre-preg) composite materials. The benefits of pre-preg over traditional wet lay up carbon-fibre composite structures are tabulated below:

	Wet lay-up	Pre-preg
Weight	100%	95%
Strength	100%	110%
Fibre volume	60%	70-75%
Cost	1	2 or 3
Repair Ease	Moderate	Complex

Carbon fibre pre-pregs with their higher material design allowables are beginning to be used in gliders such as the world's largest glider, the 30.8m span Eta *(photo opposite)*. The Eta wing has an aspect ratio of 51.3 and a maximum L/D of 70, and is easily the most efficient aircraft yet conceived by mankind.

Besides improvements in material science, great advances have been made in aero-dynamics to maximise the extent of low-drag laminar flow over the wings, fuselage and empennage of a glider such as the Eta.

Modern computation fluid dynamics (CFD) software has been used to design both the 2-D wing aerofoil section, as well as the more complicated three-dimensional regions such as the wing-fuselage fairing and wingtip. Subtle changes in wing aerofoil shape in the wing root region reduce the triangular-shaped turbulent 'wedge' of airflow to reduce drag. At the wingtip,

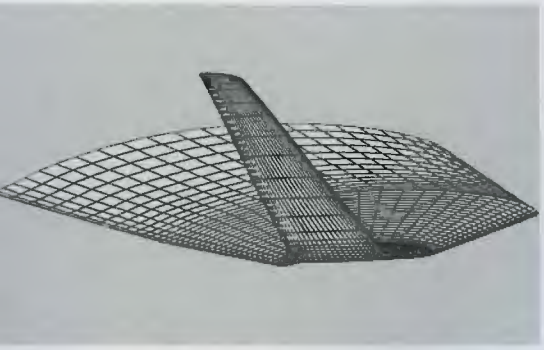


Figure 4 – CFD mesh for wing-winglet junction
Right: Eta, the world's largest glider (Ian Seager/Flyer)

optimised winglets reduce lift-induced drag by up to 5%, further boosting L/D.

With currently available technology, glider performance has reached a plateau, and ever enlarging the wingspan to increase L/D leads to gliders that are impractical to handle on the ground. A recent design exercise undertaken by students at Delft University of Technology in Holland has shown that to reach an L/D of 100 the wingspan must be increased to 42m! A technology leap is required.

The technology leap most likely to occur will be boundary layer suction, probably using battery-powered suction pumps to suck away the turbulent boundary layer that exists over 40% of a typical glider. Whilst a design for a similar glider was proposed in 1985 by Walter Pfenninger (although this design used a windmilling propeller to drive the boundary layer suction pumps rather than battery power) the manufacturing costs involved mean such a glider cannot be produced today at an affordable cost.

Promising developments are under way, however, such as pneumatic drilling of tiny 0.2mm diameter holes through the outer carbon fibre wing skin to allow the turbulent boundary layer to be sucked away. Various wing skin core materials are being considered, which allow the internal spanwise suction plenum chambers to be formed at a reasonable cost and current aerodynamic work at TU Delft has shown that only three or four of these suction plenums need to be built into the wing for the suction to work. Wind tunnel tests on practical glider wing sections with suction running will occur in 2004 and it may be only seven to 10 years before this technology is industrialised into production sailplanes, providing a Standard Class glider with maximum L/D ratios of ~60:1 and open class gliders with L/D > 100:1.

Boundary layer suction sailplanes will offer the opportunity to smash the existing world gliding distance record, which now stands at 3,008km, with the potential of flying 4,000km in one day without the use of an engine.

It is interesting to note that with such a 100:1 glider, the scale of the world's weather systems becomes the limiting factor to flying big distances in gliders. The high-pressure systems that produce good thermal conditions for gliding are around 1,000km across, only allowing a triangle of 2,600km to be flown; longer-distance tasks will have to be flown in wave systems.

Summary

The development of the high-performance sailplane over the last 100 years has closely followed engineering advances in structural materials and aerodynamics. A virtuous circle driven by composite construction led to smooth and stable structures, which in turn encouraged the development of more efficient laminar-flow wing sections. Reduction in wing drag spurred designers to make advances in other areas such as retractable undercarriage, moveable flaps on the wing trailing edge and addition of large quantities of water ballast that would have been impractical with wooden structures.

The threefold improvement of sailplane L/D ratio between the early 1920s and 2000 has enabled pilots to experience flights that would not have been possible before – including flying into the stratosphere to set the world height record of 48,500ft or high above the Andes to fly 3,008km in one day without the use of an engine.

Further aerodynamic, structural and manufacturing advances are foreseeable and will occur within the next 50 years; for the sailplane pilot the prospect of the 100:1 L/D glider is a something to savour and will enable outstanding long distance flights to be completed.

The limit may well be the geographical scale of our weather patterns rather than our application of advanced engineering in sailplane design.

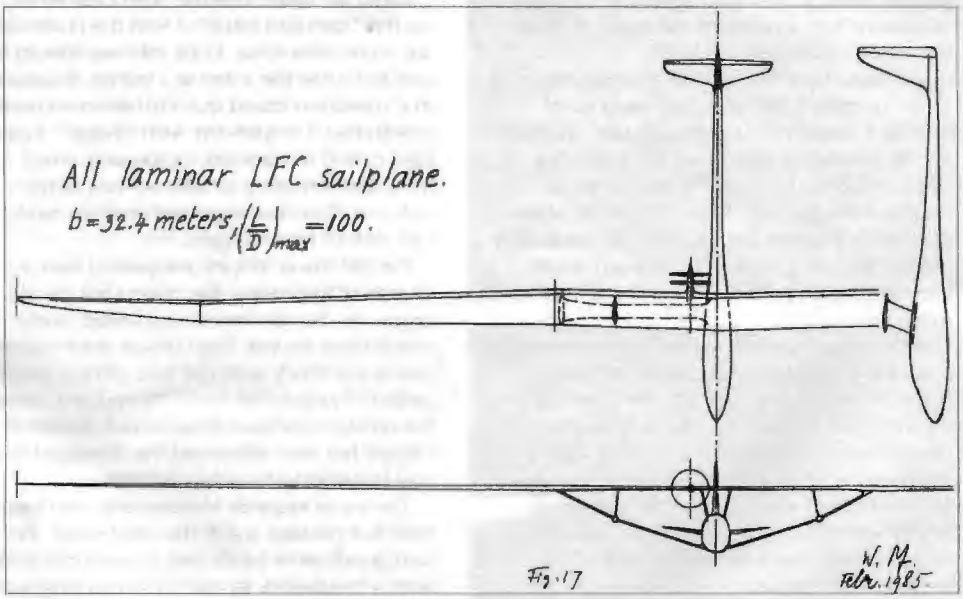


Figure 5 – Pfenninger's 100:1 L/D glider design of 1985

Above: Guy ridge-running around Naples airspace
Below: Paul (left) and Guy in Turin
Right: tail chases replaced car chases in this "Italian Job"

The Italian

Intrepid adventurers Paul Barker and Guy Westgate have managed to take the ultimate TP photo – Mt Etna's crater – on an epic out-and-return from southern England to Sicily. Now for the homeward leg ... all 2,500km of it

WE HAD taken 12 days to soar from England to Mt Etna, and spent the night with new friends from the dirt microlight strip at Paterno, just south of the steaming volcano. They told us that Etna is getting more active; that night, the looming silhouette was a constant reminder of how close and vulnerable we were.

We were taken on a drive the next morning to get breakfast, but after half an hour of touring a deserted construction site "looking for the ice cream man," we were nervous. Had we committed some heinous social *faux pas* the previous night? Were we about to witness the way the Sicilians dispatch their guests? We were both very relieved when the ice-cream van arrived – and not a concrete mixer!

A thin plume of steam and smoke was rising from the north-east crater as we arrived at the strip, but by the time we launched, the convergence cloud had returned, largely obscuring our view of Etna. Agatha, Italy's Patron Saint of eruptions, watched over us as we climbed along the north-west flanks of the volcano in thermals for the last time and psyched ourselves for the start of the long journey home.

We crossed over a busy airfield at Cherubino that we had not noticed before, a few miles north of Paterno: 20 microlights were stacked up alongside the very short runway. Away from the convergence cloud, we thermalled quickly towards controlled airspace; cloudbase was at 7,000ft with excellent visibility. We called Catánia air traffic control, who cleared us on the "standard route". I told the controller we were unfamiliar, to be told we should be and to follow the route as cleared. Realising that questions could quickly become counter-productive, I responded with "Roger". Later Paul called our position again and asked for a direct routing to take us west of the volcano. This was approved and our next call should be to Reggio.

On the lower slopes, we passed over a cluster of fumaroles, the craters left by old eruptions. Some were tree covered, some much more recent. The colours were varied too, some black with old lava, others sulphur yellow. Towards the northern end, we crossed the most recent lava flows, much pinker in colour, but also witnessed the damaged roads and large sections of burnt forest.

The route towards Messina was much easier than our passage south the day before. We said goodbye to Sicily and crossed the Straights with a headwind, to reach the first ridges on the mainland just high enough to taste some weak rough thermals, but not high enough to prevent a short engine run. We flew east initially to contact better-developed clouds down the Ionian coast, where we found almost 100km of sea breeze that delivered us easily to the Lamezia control zone. Having called our position, we were surprised when the controller cleared a charter jet on to the runway localiser less than a mile away. The controller's misunderstanding was highlighted again when he described to the airline pilot that his traffic was a single microlight flying up the coast some distance from our position.

'We glid north, but soon got caught in lower convergence cloud and dived even further north until we ran out of cumulus, useful mountains and landing options'

We left the coastline but wasted time and height routing north to keep in radio contact; even so, the high ground blocked the signal before we could close the flight plan with Lamezia. We sank towards the cloudless coastal delta and the town of Crotone. The southern Apennines were sucking cool sea breezes across the flat ground and the air was dead. We decided to go for extra distance but the inversions in the plain would not let us

Above: Paul above the Matese mountains east of Naples
Right: the familiar field at Pavullo, visited twice on the trip
Below and bottom right: fumaroles and lava flows on Etna

n job

reach the last cumulus over the Sila Mountains. We took another short engine burn to escape the delta and made use of the last mountain thermals up to 8,000ft. The verdure-covered high plateau south of Cosenza had an air of the lush northern pre-Alps. For a few moments we could forget the hostile, arid rocks and dust of southern Italy. We glid north but soon got caught in lower convergence cloud and dived even further north until we ran out of cumulus, useful mountains and landing options.

The 4,000ft Catena Costiera ridge was now the last obstacle between us and Scalea's microlight strip on the west coast, the only landing site for the next 110km. We hoped to find helpful sea breezes against the giant coastal ridge but the air was surprisingly still. We set off direct to our GPS co-ordinates but tension rose when we realised they did not mark an airfield. I was below 500ft when Paul spotted the narrow grass strip a few miles north of the resort town and we both landed safely to roll up to the derelict buildings on the far end of the field.

Students were preparing the strip as a staging post for the return leg of the annual Alps to Etna ULM rally and we realised that we had passed over the successful competitors north of Paterno that morning. The locals explained that the flying club buildings at Scalea had been destroyed by fire a few years before, and now the club faced an uncertain future as construction of a regional airport had started only a few miles further north.

We walked into the resort for a beer and watched as the blood-red sun set over the Mediterranean. The tranquillity belied the harsh terrain in the mountains: the testing soaring conditions that we had already encountered and that were sure to lie ahead.

We chose an abandoned van on the airfield to sleep that night instead of the burnt-out clubhouse but woke at first light. A Jurassic-sized wasp was patrolling the van above us. We packed up quickly then noticed the nests in the roof and crept out before we angered the beasts. The nature trail did not stop there, as there were geckos and lizards basking in the morning sun on the charred clubhouse walls.

We talked with the club students again before the race aircraft arrived and learnt that despite the freedoms ULMs (microlights) enjoy in Italy, they are not allowed into international airports or controlled airspace, must *not* carry radios and have stringent maximum altitude limits. We decided that to prefix our call signs in Italy with ULM would certainly close more doors than it opened.

The land breeze changed early as predicted and we waited for signs of convection in the mountains between arrivals from the Etna race. A few competitors delighted in telling us that they had just come from Sicily – we looked at our own sleek white gliders with pride and allowed them their moment of glory.

When finally off, we took a high burn 25km up the Loa valley, to get clear of the sea air, and were soon in 6,000ft mountains with good cumulus. Paul complained of a rough-running engine but that was soon forgotten as the ➢

thermals improved on our route north, following lines of energy over the Apennines on to the high plateau towards Foggia. We enjoyed half an hour of cloudbases up to almost 9,500ft and thermals to match. Our first hint of trouble was an all-too-familiar white line on the forward horizon. The anvil head grew until a wall of storms developed, completely shutting off our route north, forcing a change of gear and of direction. Cloudbase tumbled to 6,000ft as we traversed west towards Naples. Foggia air-traffic control let us through without restrictions but conditions continued to deteriorate. We made our last glide on to the high ground north of Benevento as cloudbase dipped again to 4,500ft but our reward was worsened visibility and turbulence as the wind shifted, sucking moist sea air across the chaotic system of ridges and deep valleys east of Naples.

We had reached the back of the Matese Mountains, which we had successfully soared on our route south, but after a scare apiece in low-level turbulence, we needed a burst with the engines to cut us some thinking time. The veering sea-breeze was now blowing up the south-west facing slopes at 10kts, so we crept along the edge of Naples' airspace. For the next two hours we were treated to some of the most exhilarating flying we had done. Weak ridge lift let us explore first north-west up the 4,000ft limestone cliffs past Piedimonte Matese, and then across an awkward transition where the ridge breaks and jumps 17km into wind from Monte Cappella to Presenzano. We leapfrogged each other, taking it in turns to risk the next unknown ridge until we had reached Cassino and had a glide to the familiar large grass airfield at Aquino. We had stolen the last 80km from an unsoarable afternoon. Elated, we circled Aquino to find the runway covered in sheep. The ridges had abandoned us, and with a dead sky ahead, we had no option but to fire up the engines again and push north to another landing site. We first inspected some co-ordinates at Ceccano, but the runway looked too short, so continued over the Lepini Mountains to Artena, one of the biggest ULM centres in Italy, and only 35km south of Rome.

The airfield looked deserted, but soon we found some activity in a hangar and secured a lift down the five-mile farm track to the nearest fuel station and take-away pizza. Back on the airfield, we fell on our feet once again, and were allowed to sleep in Giuliano's private maintenance hangar. He had not only beds but also a Rotax licence and set to work on Paul's engine the following morning.

We left the picturesque strip and the cornfields south of Rome with a significant sea breeze and climbed out north-east away from Rome's controlled airspace. Paul's engine started misfiring as soon as he was airborne despite Giuliano's tweaking and tightening and we considered returning for more advice. We were soon distracted, though, by good lift and soared north over the Simbruini Mountains.

As we crossed the Salto valley the airmass changed and we sank along the sunny, into-wind ridges under Monte Velino (8,160ft), confused by the abrupt change in our fortunes. Engine time was looking likely as we limped into the L'Aquilla Valley, where Paul decided enough was enough and landed at the gliding club to seek engineering help. I took a short engine climb on to the mighty ridges of the Gran Sasso d'Italia to wait.

Paul reported that the first engineer he had met instructed him to take off immediately, as L'Aquilla was closed through lack of fire cover. He should not be there and if an official caught him, the glider would be impounded. He cut his radio call short as more figures were walking towards the glider. He wasted no time in taking off again but his 6,000ft climb to Rieti aggravated the engine further and he called that he was worried that it showed signs of stopping altogether. After hearing he had a safe altitude, I could relax, liberated for an afternoon with my "hurry madness" temporarily cured. Whatever solutions were needed, I could do nothing now and was free to soar around Mt Cartio Grande at 9,561ft, exploring the delicate lakes, grassy rises and rocky outcrops without rushing. Despite 10kts of wind blowing up thousands of feet of rock, inexplicably, the lift would barely carry me above the ridge and the afternoon turned into another tactical struggle. I was outclimbed by a pair of walkers, scaling an outcrop off the main ridge, and they were well on the way back down before I could finally top out myself at 8,200ft.

I started the 55km glide west to Rieti from Mt Corvo, following the switchbacks of the Aterna river through the Reatini hills. I found more ridge lift that let me play over the abrupt corners of the river valley, covered in dry yellow grasses and hassled by the wind. Paul had found an engineer at Rieti, who tinkered for an hour or so, then sent Paul on a test flight. Despite being denied take-off initially because of the Italians' Monday rule (no visiting pilots can fly on Mondays), it was immediately clear there was still a problem. Paul's despair deepened as the engineer went off home, but promised to continue in the morning.

I sat in the last of the thermodynamic ridge lift at 7,000ft under Mt Terminillo before returning to console Paul.

We met Erik and Verner, two Bohemian Germans who had rented a DG-800 for a month or so; they reported that they had experienced some superb conditions, but were fatigued by the current pattern of heat and thunderstorms.

The next day forecast a similar inversion,

Steve Longland

Above: Parked up at Scalea's microlight strip

Right: ULM rally staging post at Scalea. The new regional runway under construction is clearly visible under the wing.

Text and photos by Guy Westgate

breaking to the south. We set off eager to make some distance. Paul's engineer determined that the problem was limited to high power settings and identified a failing magneto. We took advice from Bob McLean, the UK DG agent, by phone, who suggested it was acceptable to run on a single mag as the PIK-20E, with a similar Rotax engine, was designed with only single ignition. So we decided to proceed.

The south-westerly wind had increased so that north of Terni the obvious route was to follow the Apennine spine past Foligno as it swept in an arc east of the Perugia Basin. The ridge was kicking off powerful thermals to over 7,000ft but as we pushed north, we were driven down on to the ridges more frequently as the inversion dropped. We ran out of ridge 140km north of Rieti on top of Mt Nerone at 5,000ft; our motorway had ended. The escape paths downwind towards Rimini and due north looked rugged and quite uninviting.

We considered our next overnight stop but with few thermals left our options were limited to the fields *en route* to the west and north-west. Our only choice was to drive 18km into 20kt of headwind to the next low hills but we first milked every foot of height. By some miracle, we arrived just high enough to contact dynamic lift again and climbed against the new ridges leading up to Mt dei Frati. Above the peak, we found that the tree-covered slopes were popping weak thermals and again took a leap forwards towards Arezzo GC, 35km across the valley.

We tracked a little north and tested the shallow slopes under Mt il Castello, halfway to the airfield. Curiously, the wind had turned to strike the highest bowl, giving us an extra 1,000ft – just enough to make the next field at Il Borro, now 25km north. By this stage, our unlikely progress had imbued us with a sense of inevitable achievement, so it did not concern us that we never found the field. We did reach the base of the Pratomagno Plateau, however, and with the strengthening wind now almost square on to the 3,000ft ridge, we were handed yet another stepping-stone in the afternoon's adventure. After playing Don Quixote with the wind turbines on the far end of the escarpment, we paused for a while to work out our next move.

We had crashed right up to the Florence control zone; the next ridge in clear airspace was more than 70km to the north-west. We had daylight and the will to continue but knew any extra distance would be by ridge or engine only, so took the comfortable glide north to Mugello, under the San Benedetto mountains. The gliding club was packing up when we arrived, and we got a lift down the steep hill to find a pizza restaurant in Borgo San Lorenzo but had to find our own way back, through swarms of dancing fire-flies.

The inversions were stronger the next day. We climbed in weak thermals over the Ferrari racetrack next to the airfield, but

'We couldn't decide which was worse: storms or stability'

once in the mountains, the wind showed an aggression that we had been spared over the past few days. Less than an hour away from Mugello we were stuck over inhospitable terrain in a deep tree-filled valley, unable to escape the lowest inversions. We both took long engine burns and climbed to the start of the last big Apennine chain before the mountains run into the Po valley. I tracked up the hanging valley in front of the massive Corno alle Scale but despite 10kts blowing directly up the mountain, it was a struggle to even make the crest of the ridge. The nearest landable fields *en route* were all blocked by hostile terrain; the lift was so marginal we needed maximum concentration just to keep level. It was some of the more taxing flying we had tried – debilitating heat, dehydrating conditions, huge rock faces, dry screed fields and frustratingly marginal lift – but despite our two-hour search for a change in fortune, the lazy air showed no tendency to climb. Despite the adventurers' code that there is little progress without a struggle, we felt we had resisted the inevitable for long enough and slipped over the back of Mt Cimone and backtracked to the familiar field at Pavullo.

Bruno extended the same hospitality we had enjoyed a week earlier and was fascinated by our stories of Etna. He told us that the Alps were currently deep in heat-triggered storms. We couldn't decide which was worse: storms or stability.

Little had changed the following day. We took a long climb up to Mt Cimone to continue where we had broken off, expecting to motor into the Po valley if progress was similarly frustrating.

We followed the Lima River in front of Mount Giovo and then the northern end of the Tosco Emiliano Apennines. There was enough of a breeze to soar, but high ridges linking the peaks shifted in and of wind enough for us to keep on our toes and take nothing for granted. The air was heavily inverted but a little less stubborn than yesterday. We made progress by hugging the mountain spines and ridges carefully.

My fortunes turned when I crossed a spur 100ft lower than Paul. I slipped out of the best lift and, frustratingly, found myself sinking into the valley. The hot humid air was forming scruffy cumulus well below the ridges and after reaching a soaring stand-off, I took the only way back into dynamic lift, with the engine. The Mediterranean air was forming orographic cloud on the highest ridge past La Spezia but conditions finally went blue past Mt Molinático, marking the end of the giant Apennines.

I met up with Paul under a single cumulus, boosted by some convergence pattern over the valley split at Borgo Val di Taro. We climbed to 6,000ft and set off into very different conditions: a drop in visibility and a change of terrain as the ridges now lined up against our path. The change of air quality made for fickle climbs and it was not long before we were stuck in deep tree-lined ➢

➢ valleys with safe escape options running out fast. We split, taking routes north and south around the last big peak, Mt Ebro. I climbed with the engine one last time, just high enough to confirm there was no ridge lift, and took a very marginal glide into the Po valley and Novi Ligure. It was the first gliding club we had found on the trip that had a real club feel. We borrowed a caravan in the middle of one of the derelict military hangars and shared a club meal that evening.

We walked into town for a cappuccino and spent a relaxed morning looking for signs of convection. We launched towards good-looking cumulus and climbed to 3,500ft easily. The ragged cumulus thinned as the visibility tumbled and our problems started as the hills of the Ligure Apennines loomed up out of the haze. Our operating band was getting squeezed, so we turned north a little to leave the Ligurian vineyards for the more intense agriculture of the lower Tanaro river valley.

At cloudbase we could see anvil heads of new storm clouds, building both south and in a line to our west, so we were on borrowed time again. We had enough fuel to climb through the Maritime Alps but as we slipped under airspace around the top of Cuneo the storms took hold. A rough thermal suddenly accelerated in a convergence zone and the view towards the mountains was obliterated by dense haze and cloud despite 10,000ft peaks only a few miles away. We climbed 2,000ft with the Rotax to explore a route west but the biggest anvil was now lying over us and with storms on all sides we turned around, back to Cuneo. After a KLM jet was safely on the ground the controller relaxed enough to let us join visually and we taxied to the apron for an afternoon of forecast chasing in the dispatcher's office.

The weather hardly changed the next day, anvil heads and high cloud all but shut off convection in the Po valley and it was a two-hour fight to fly the 60km north towards Turin. There seemed little point in pushing hard into the mountains in marginal weather so we chose one of the ULM sites from Bruno's guidebook and landed at Musine. The strip looked narrower than advertised, and appeared to taper. I put it down to perspective until it I was committed. Not only was it very narrow but also too short. I immediately told Paul that under no circumstances should he land and set about finding help. The place was deserted so, figuring things couldn't get any worse, I backtracked to the thinner end when it became evident just how narrow the strip was. With my main wheel against the high grass on one side, my wingtip wheel was only inches from the bushes along the other side, making the width at most 9m. To make matters worse, I had to accelerate the first 100m with the lower wing hard into the grass to keep the other clear of the bushes. I took the entire length of the strip to get airborne, and mercifully climbed.

Paul had found some weak lift to stay to watch proceedings and we made the brief

Above: Black and White Glaciers in the Ecrins massif

Right: Dome de Neige at the head of the Glacier Blanc

transition to Torino Aeritalia, a stone's throw from the city. The controller gave us some strict instructions on landing procedure and we taxied up to the hangar. It turned out to be a gliding club; yet again we were well received. The members had a good forecast and several were planning cross-countries for the next day. We took a bus into the picturesque city and watched storms circle the Piazza Castello and the Po River. Despite the weeks of storms, the river was many metres below its normal level.

The airfield was guarded by the army, and two conscripted sentries looked longingly across at the club barbecue for most of the evening. The storm clouds parted far too late to be useful, but gave an inspirational sunset, bathing our proposed route in warm orange. Three weeks into the tour, our "Italian job" was almost complete. Just one day of even average weather and we could clear the Alps.

After a very short climb, we entered the Alps along the Susa Valley, a deep winding valley that cuts straight into the heart of the mountains. The south-facing slopes provided a weak mix of dynamic and thermal lift above the Riaria River. I had refitted my wing-mounted video camera, and the loss of performance did not help progress west as we contoured the rising peaks. Once below the crest, the lift vanished and I twice glid towards the river, starting the engine over a car park in Susa and again at the head of the valley as Paul was reporting difficulties over Bardonècchia. I found weak lift under Mt Chaberton and pressed on to better thermal sources, but to no avail. I was in a slide towards the head of the valley but, as there were no landout options, I did not dare go for the engine. The transition between Po valley and mountain weather was proving too complicated and on my escape route back out into the wider valley I ran into a saving climb under the towering flanks of L'Aiguille Rouge at 8,360ft.

The view of the colossal peach-and-ruby rock wall rushing up on every turn was almost psychologically choking, but as the vario screamed, the daunting cliff face fell away and I could breathe again. Paul was under power and joined me as we passed a group of climbers on the summit. We had found the key into the mountains and the scenery was fantastic. I was wriggling with excitement, thinking of all the superlatives I had wasted in life, leaving few to truly describe the panorama of mountain peaks that expanded with every climbing turn.

The 14,000ft cloudbase was still some way off as we dived away from Briançon, down the Guisane River towards the Ecrin Massif. Paul had a date with the spectacular Glacier Blanc on the north side of the highest peak, the Barre des Ecrins, standing at 13,460ft. We played with other gliders around the Pic des Agneaux and then the "Black" Glacier before turning our attention to the prize itself. Although not the biggest, the "White" Glacier has few equals in the Alps for pure theatre and it was hard to resist running it as if on a toboggan.

We followed the natural rising ridgeline towards the highest peak and the Dome de Neige, which even in late June was thick with dirty snow. Great creases in the slumped layers gave the impression that if we flew too close, we might trigger the whole mountain to slide off into the glacier.

We escaped the Ecrin into the Veneon Valley. The awesome peaks of La Meije just appeared above the horizon as we sank towards the ski station of les Deux-Alpes. The following hours proved just how easy Alpine flying can be when you are above the peaks, and the 13,000ft cloudbase made the transition over the Rhône valley towards Mt Blanc deceptively easy.

The thermals were in decline as we passed Lake Annecy and the familiar Savoie ridge and we took our last climb over the sunny ridges of Dents du Midi into the Rhône valley. We plugged far destinations into our computers, looking for a sensible landing site, and plumped for one of the airfields south of the Jura Mountains; if we arrived with enough height, we might be able to continue further into France.

The glide was disturbingly still, and with the drag of the camera I arrived overhead Lake Neuchâtel almost 1,000ft below Paul. There was lift in the lower Juras but we concluded any further distance might need an engine burn, so we landed at the gliding club next to the lake, with another warm reception. The pilots described the paradox of the local systems, that when the Juras were good enough to get into the Alps, the Alpine weather was often poor. We had stolen much of our progress through Italy from unreasonably hostile conditions, and looked forward to a strong finish to romp home.

Next issue: the last leg of the journey

Goodbye to Mont Blanc and the Alps

3,000km in a day

When Paul Watson, a relative newcomer to gliding, went on his first expedition with fellow members of London GC, he was impressed to find three 1,000km Diplomas among the haul of badge claims

Standing (L-R): Ed Downham, Carr Withall, Robin May and Mike Abbott – all flew 1,000kms with Mike P2; kneeling (L-R): John Reed and Steve Lynn; sitting (L-R): Walter from Germany, Nick from Booker, Tom Rose, Michel from France and Paul Watson

DECEMBER 4, 2003 was a successful day for three out of five London GC members who attempted a 1,000km double out-and-return (O/R) task. The flights by Robin May, Carr Withall and Ed Downham were not without some nail-biting moments as nightfall rapidly approached their temporary base at New Tempe airfield, Bloemfontein, in Free State, South Africa. Attempts by LGC members Steve Lynn and John Reed didn't quite make it but ended in creditable performances of 780 and 930km respectively – there being no landouts.

The day started with a thorough weather brief delivered by Soaring Safaris' Dick Bradley. The forecast encompassed an appraisal of various data supplied by the local met office at Bloemfontein. This included: thunderstorm probability along intended task route, forecast wind velocities at various levels, predicted thermal strengths, dew point variations and the usual study of skew T data leading to trigger surface temperature, and other parameters. The outlook for success looked good but it was certainly not going to be a "walk in the park" – daylight hours being a big factor, especially with only 15 minutes between sunset and official night due to the latitude of New Tempe.

At the launchpoint is Robin in an ASH 25 with friend and colleague Mike Abbott riding shotgun in the rear seat; Carr is in a Nimbus 3; and Ed is in a Standard Class LS8. The first visible signs of worthwhile thermals are the faint milky show of nascent, popping cumulus clouds, and these signal launch commencement at 09.40hrs. Aerotows were provided by a Safaris Cessna 182 flown by Etienne Gerber. Ed gets away just before 10.00 and he radios back a positive report of weak lift conditions. Then, soon, with all away, normality returns to New Tempe: lesser mortals set off on more pedestrian 300km and 500km tasks!

Airborne with Robin in the ASH 25, P2 Mike Abbott picks up the story:

"Airborne at 10.03 local time – field elevation 4,500ft amsl – field temperature already into the mid-20s – the flight starts with a straight northerly leg of 341km to the first TP at Mansfield. At 60 minutes into the flight and only 72km, we are finding it difficult to be optimistic. Every thermal is appraised, some are selected for circling climbs; every climb must be centred quickly, and every exit must be straight on to track or next planned thermal source with precision acceleration to transit airspeed. 50° of bank becomes the routine when circling.

The heavy ASH, being flown without waterballast by choice (and I'm not sure what that says about my own bulk and mass) is thermalled at indicated speeds of about 55kt and flown straight at between 75 and 105kt, these speeds then benefiting by the effect of density altitude. It is hot, the sun having risen six hours earlier, and we are surrounded by our harnesses, parachute straps, plastic oxygen pipes (which are always too long), and Camelback or Platypus water pipes, all vying for the right to snag on those sticky exposed bits of flesh, plastered in Factor 20.

R/T contact is important, and information passed between the five gliders at times affects selection of sources of lift.

Release took place at 7,500ft and the condensation level is scarcely 10,000ft. For long-distance flying this translates into a smallish height band, but is expected for this time of day. An on-board policy had been devised to conserve oxygen. GPS distance along track is already being appraised at 15-minute intervals: 153km/h – 115km/h – 156km/h – 104km/h – we don't need too many in the 100s range or we'll fail.

The expected light westerly wind is just as expected – good old Dick! It is blue to the west of track, and the cu to the east are looking too much on the boil for us – the plan is to squeeze between each of these less-than-ideal areas – good old Ed, who has masterminded the chosen route to precision! He's along with us, and so are the others. The first TP is reached though, as John says, there are some "turnpoint blues". A 50km blue spell half way along this first leg must be re-encountered as we head back south 275km to TP2 near Dealesville.

Now we are moving – Ed's battery state causes him to choose to go off air – we think we're pulling away from the others. The quarter-hour checks continue, and a pattern settles, with turning safety becoming a major role for the P2. The blue hole is an intimidating sight and we drop to 8,000ft by the time we safely cross the Vaal River for the second of four times. By TP2 I'm able to tell Robin that if all goes well, we're looking like landing back at New Tempe at 18.30, against the last landing of 19.15. It's tight all right! I mustn't distract him. I've watched 'em all, and thermal selection, centring, and exits have all been textbook, but still we have nearly four hours to go.

TP3, the silos at Amalia, is south of TP1, making a big letter "W" of the whole trip. Cloudbase is rising continuously, and now reaches about 14,500t. The oxygen bottle tap is in my domain, and our workload increases as it is turned on and off. Stronger and longer climbs are now the pattern. The concentration level and endurance level of the P1 astound me – can he keep this up?

We fly close to track with few exceptions. Here's a climb, the first of its kind – it ends pointing 180° away from track, in sink. This mustn't happen again. There's silence on board for a while. As the distance between gliders on the task increases, and we're clear of TP3, we realise and acknowledge the real hazard of flying straight – sometimes at 115kt – between thermals. In Robin's front cockpit, the final glide computer dies on us. Robin thinks a final glide is possible from here, at 100kt. Rashly, I suggest maybe 120kt. I am insisting on an arithmetical check every few kilometres, and to our surprise we discover that we have only 1,300ft above final glide with no allowance for a circuit, and 95km still to fly.

Back to best L/D airspeed, we are hitting

Above, from left: Ed Downham, Carr Withall and Robin May, who averaged 40 hours and 4,000km each for the week *(www.whiteplanes.com)*

-2.5kt and even -3.5kt – uncertain thermal sources ahead – Robin is really beginning to feel fatigued now – have we cocked it up? The tension is immense – we make a straight-in and land on RW18, but the airbrake is only used passing 400ft, quickly followed by the loud but reassuring clonk of "gear down".

We know nothing of Ed's whereabouts."

On the ground back at New Tempe in the late afternoon, *resumes Paul Watson*, all flights except the "1000kms" have safely returned. For anybody on the ground, a working day started, took place, and is already over. Attention turns to the north-west and the entry-corridor access through Bloemfontein's Class C CTR. Steve and John land safely with some disappointment and incomplete tasks, but solid performances nonetheless. Rumours abound that the other three are inbound but have fallen short of the 1000km target as well. The sky reddens as the sun sinks slowly ever closer to the horizon.

Robin calls New Tempe on 124.8mhz: "New Tempe this is one-six-two on final glide at 16km – request runway in use". It's RW18 or 36 and Robin completes his 8 hours 23 minutes flight with a typically immaculate touchdown.

He confirms over the R/T that he has completed the task and impromptu applause erupts as his ASH comes to a halt opposite the hangar line. He also confirms that Carr is not far behind but that he has not heard anything of Ed for some considerable time – since his radio packed up with some 400kms to go, in fact, only five hours into the flight...

With Robin and Mike too exhausted to leap out, the ASH is manhandled clear of the strip as he confirms that Carr is still in with a shout, but not too flush on altitude in sinking air. Carr appears in the north-west sky – the sun is just setting – and his water-ballast dumping makes his craft have all the menacing look of a B52 approaching low and fast. Carr has no spare energy to engage in a competition finish and creeps in over the northern field boundary for a smooth touchdown on RW18.

With the sun below the horizon hopes for Ed's successful arrival dwindle and thoughts turn to perhaps a long retrieve in the dark or a night landing on New Tempe's lit tarmac strip on the western side of the airfield. Then disappointment turns to elation as Ed appears as if from nowhere, crossing the airfield at high speed dumping the last of his waterballast – and finishes off with a victorious loop to set up a landing on RW36.

After landing, Ed confirms problems with battery life: he had had to turn off his radios to conserve what little power was left for navigation equipment and the vital flight recorder, hence the self-imposed silence. Ed falls wearily out of the LS8 cockpit on to the grass soaking up the congratulations of his colleagues. With the light fading rapidly, the gliders were tucked up for the night and everyone repaired to the bar for the usual celebration of a job well done.

Robin, Carr and Ed completed the 1004.3km double O/R at between 8 hrs 10 mins and 8hrs 50 mins. In addition, Ed's performance when ratified is believed to represent a new British free distance record for a Standard Class glider, beating the previous 955km record by punching through the 1,000km threshold.

Congratulations to all three on personal firsts, most unlikely to be their last.

LGC achievements at Bloemfontein:

Ed Downham 1004km for first 1,000km and British 15m Free Distance record (LS8);
Robin May 1004km for first 1,000km (ASH25)
Carr Withall 10004km for first 1,000km (Nimbus 3)
John Reed 930km, his longest flight ever (LS6)
Steve Lynn 780km his longest flight ever (LS8)
Tom Rose 535km Diamond distance (LS4)
Mike Abbott 315km Diamond Goal plus 1,000km P2
Paul Watson: Bronze, Cross-Country Endorsement, then Silver distance and height

Crossing the Vaal River – a transit made four times by each 1,000km pilot

Time to bale out?

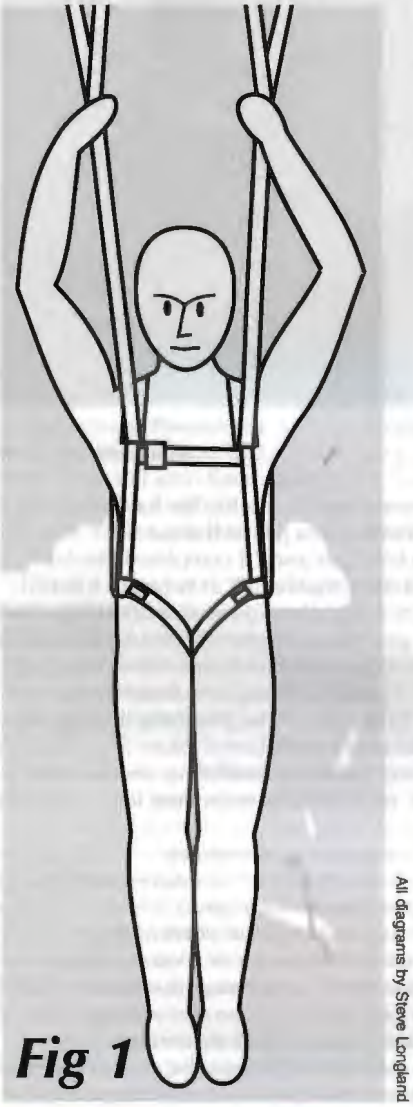


Fig 1

All diagrams by Steve Longland

In the second of his two-part series, Edward Gardener of Mendip GC looks in detail at the emergency jump

I THINK that the simplest way to describe an emergency jump is to break it down into five phases:

1. Decision

There is a natural tendency for a glider pilot to want to stay with his aircraft and the last thing anyone wants is for people to bale out of perfectly 'landable' gliders. However, the time available to make the decision whether to get out may be very limited and any hesitation or time wasted thinking about what to do because the drills are not instinctive could prove fatal. What might appear to be a minor problem at a relatively high altitude could develop into total loss of control lower down, when it could be too late to change your mind.

I am not sufficiently experienced to advise about what loss of control or other flying situations would justify a bale out but "when in doubt – get out" is perhaps a good maxim. Consideration of the circumstances when a bale-out might be necessary and what to do should surely be included in pre-take off checks as part of *Eventualities*.

There is no precise figure for the height required for a parachute to open because it depends on many factors but, with the correct drills, it would normally be safe to bale out as low as 500ft **AGL**; I stress the latter because, of course, this may not be what your altimeter is reading; a continual awareness of roughly how high you are above the ground is therefore advisable.

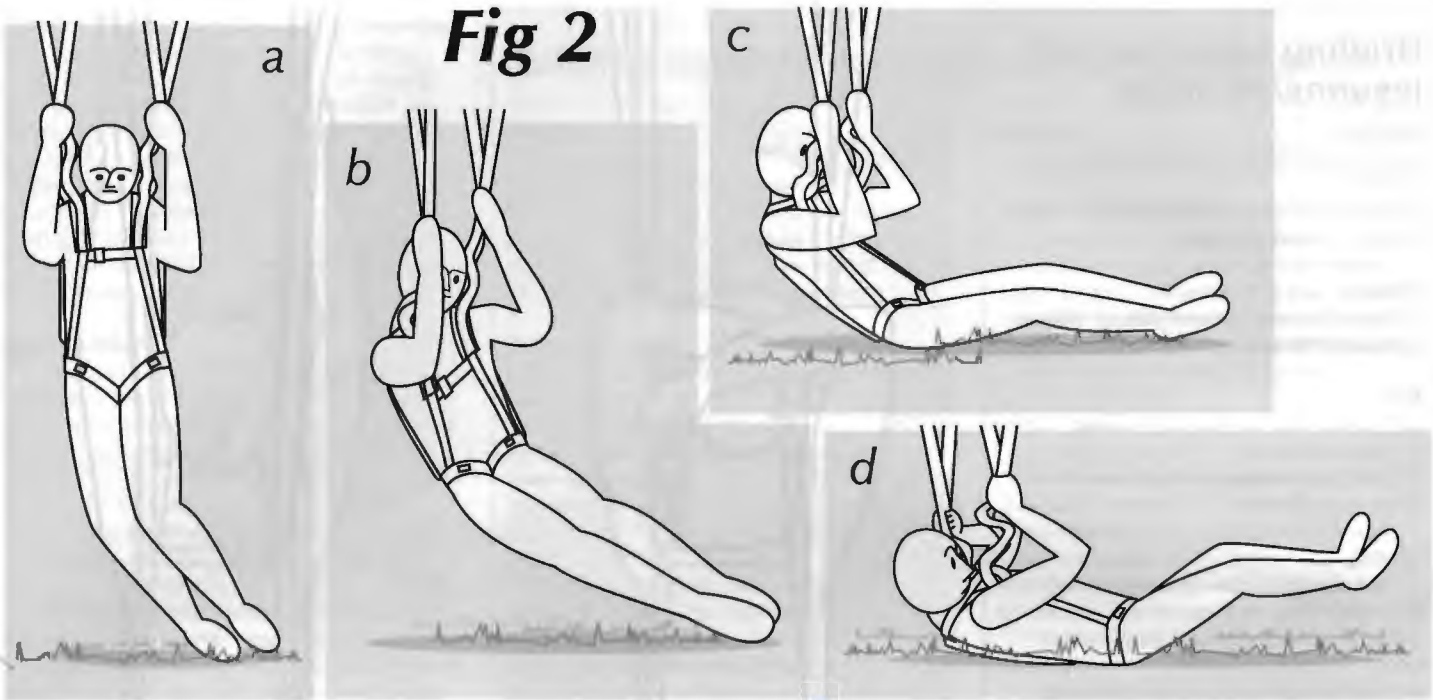
Also, as covered below, bear in mind how long it may take you to exit after making your decision. If there is no urgency to get out it might be worth delaying your departure until you are over or heading towards open country but, in most cases, don't worry about trying to select your dropping zone or where you glider will crash – there is far less risk of causing casualties on the ground than if you were in a powered aircraft.

2. Exit

Bear in mind that, particularly following a collision or structural failure, you may be shaken and disoriented and have little or no control of the glider, which may have a high rate of descent and be subjecting you to severe 'g' forces.

Having made your decision to go, the first thing is to jettison the canopy before undoing your straps – if the canopy won't go you are stuck inside and will stand a better chance of survival with these still done up (how familiar and confident are you with your canopy jettison device?). If necessary, push the canopy clear, as it could be held in place by the slipstream. Look for your strap release before trying to undo it and push the straps clear of your body so that they don't snag you as you start to exit. It should then just be a simple case of standing up and diving over the side; however, any 'g' forces may eject you or, conversely, pin you to your seat, in which case a lot more effort will be required. It is, apparently, amazing what a shot of adrenaline can do to assist your attempts.

In a two-seater I would suggest a clearly understood and standardised procedure in which P1 gives the order "Bale Out" three



Try to dissipate the landing force over as much of the body as possible – the feet, the side of the leg, the buttocks and the shoulders – by rolling like a ball

times to P2; the canopy(s) should then be jettisoned but, height permitting, P1 should undo his straps only after P2 has exited (shades of captains and sinking ships!). Remember that the departure of the latter may result in considerable or further instability in the glider.

It should go without saying that these drills should be practised regularly, wearing a parachute, in any type of glider that you may be flying. Check the time that it takes you to exit and add a bit to allow for the fact that you are doing this under ideal conditions (stationary on the ground). Calculate how much height your glider might lose in this time and add this to your minimum decision height.

3. Opening

The risk of your being struck by the glider or of it entangling with your parachute is extremely slim so normally go for your ripcord as soon as you have fallen clear – ideally after about three seconds. It would be unwise to experiment with skydiving at this stage! A body in free fall accelerates to a terminal velocity of about 176 feet per second in 12 seconds; as a rule of thumb it takes 10 seconds to fall the first thousand feet and five seconds for each thousand feet thereafter. Apart from the height loss involved, there is a significant risk of the untrained jumper going into a spin resulting in disorientation and possibly poor deployment of the parachute. So even if you are at a relatively high altitude it is safer to open quickly. At heights up to about 20,000ft you won't die or suffer any more brain damage than you already have through lack of oxygen; you might pass out briefly but would regain consciousness long before landing. You may have a very cold and uncomfortable ride down, but at least you will be alive.

When going for the pull look for the ripcord handle, grasp it with both hands and punch it downwards and outwards away from your body – it has only to move a few inches to release the parachute. There will probably be a moment's hesitation and then quite a jolt as you are brought up short under a fully-deployed canopy – unlike sport parachutes, most emergency ones are designed to give you a rapid but not necessarily comfortable opening.

4. Descent

After opening, the first action is to quickly check the canopy. Malfunctions are very rare and most would not prove fatal; some of them you may be able to do something about. Perhaps the most common is twisted rigging lines between you and the canopy; if height permits, try pulling the lift webs apart and kicking with your legs to help untwist them – but if you are close to the ground ignore them and carry on with your drills.

If you were tumbling during the opening you could find yourself hanging upside down with a leg caught between the lift webs; a bit of frantic wriggling should get it free. The infamous Mae West, where a rigging line over the top of the canopy splits it into two lobes looking like an oversized bra, will result in an increased but not necessarily disastrous rate of descent; pulling sharply on the appropriate lift web may release the offending line.

However, assuming you have a good canopy above you, assess your height, drift and likely landing area and adopt a good parachuting position (see Figure 1, *opposite*). This is best summarised by the little rhyme:

"Feet and knees together, shoulders round, chin on chest and watch the ground."

Your body should be like a coiled spring – not too rigid but with muscles slightly tensed. Feet should be level with the ground and knees very slightly bent. With a plain canopy, having assessed your drift, reach up high with both hands and grasp the lift webs – the front pair if you are drifting backwards and the rear pair if you are drifting forwards (that is, the ones in the direction you would like to go). Pull down until your hands are at about head height and keep your elbows well in; this will have the effect of reducing your drift and any unwanted oscillations in the canopy. If you have plenty of height there is no need to remain in this position all the way down, but practise it and make sure that you are finally holding it well above the ground. If you have a steerable canopy you will notice some slots in it and, possibly, steering lines attached to the rear lift webs; pulling on the toggle attached to one of these lines or pulling down the relevant rear lift web will rotate the canopy in the same direction. The slots in the canopy provide some limited forward drive so, with sufficient height, you can steer to avoid an obstacle and reduce your drift by facing into wind – but don't play around with them close to the ground and, again, keep your elbows well in for the landing.

One further thing worth mentioning which could make your descent more interesting is if you are caught in severe turbulence or thermal activity; there is not much you can do about this but you could have a bumpy ride and even find yourself going upwards!

5. Landing

This is the only bit that is likely to hurt if you don't carry it out correctly. The whole idea is ➢

Briefing notes for trial lessons/*ab initios*

Pre-flight
- ❑ Demonstrate fitting of parachute and location of ripcord
- ❑ Explain glider canopy jettison and strap release
- ❑ Brief on procedures below

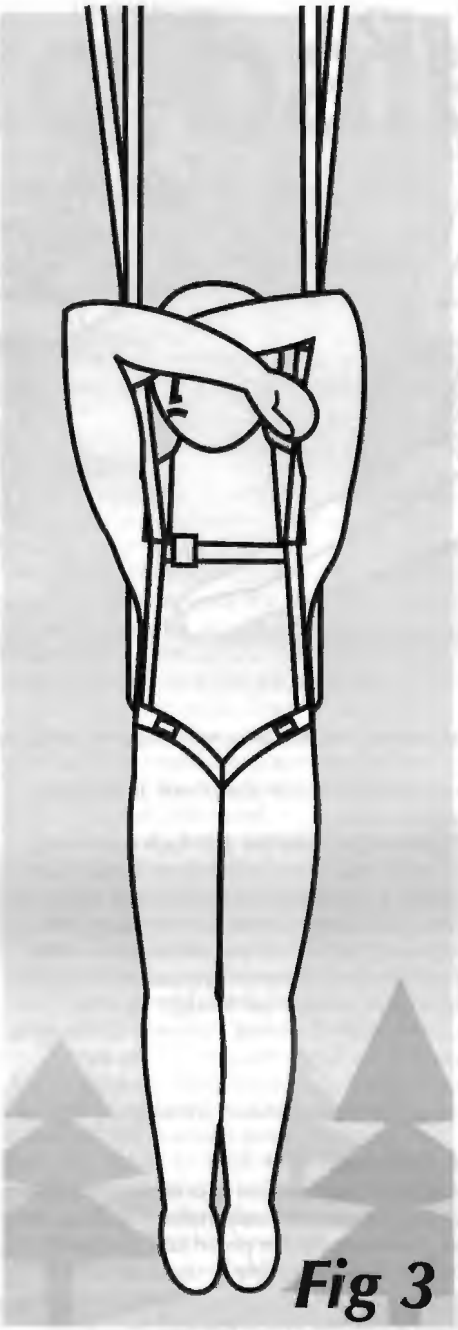
Decision
- ❑ Explain circumstances when bale out might be necessary (P1's decision)

Exit
- ❑ P1 orders "Bale out. Bale out. Bale out."
- ❑ Jettison canopy(s)
- ❑ Look for strap release, undo and bail out as quickly as possible

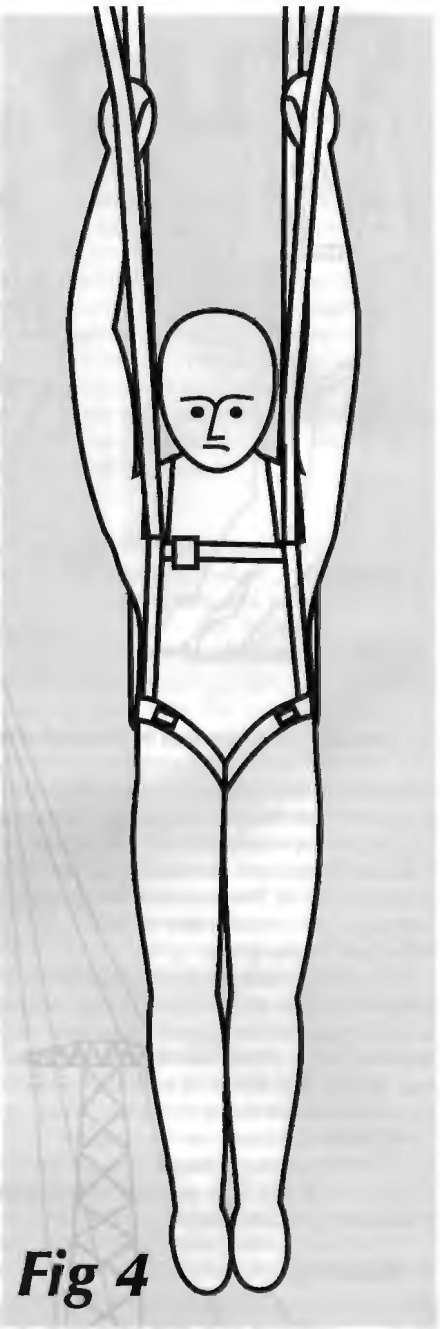
Opening
- ❑ Count slowly to 3 ("One thousand, two thousand, three thousand")
- ❑ Look for ripcord handle and grasp with both hands
- ❑ Punch downwards and outwards from body

Descent
- ❑ Check canopy
- ❑ Assess height, drift and landing area
- ❑ Adopt parachuting position
  "Feet and knees together, shoulders round, Chin on chest and watch the ground"
- ❑ Hands high on lift webs and elbows tucked in

Landing
- ❑ "Coiled spring"
- ❑ Roll on landing: feet, side of leg, buttocks, shoulders
- ❑ Run round canopy or pull in lines to deflate



Right: if landing in trees or buildings, raise your thighs slightly and cross your arms in front of your face. If you end up suspended more than a few feet above the ground, do not try to release yourself – wait for help



Far right: if going into power wires, straighten your legs and raise your arms straight above your head to try to avoid contact with two lines

➢ not just to escape with your life but to be able to walk away from the experience afterwards. Most emergency parachutes have a faster rate of descent than sport ones – depending on size, design and weight of the user, probably about 20 feet per second, but this is quite acceptable for a comfortable arrival. However, your landing speed may be increased by any drift and oscillation of the canopy: it is these sideways components that are more likely to cause any injury. Drift may, of course, be in any direction and the landing roll should be adapted accordingly – this can really only be learned by demonstration and practice. However, in outline, the purpose of the roll is to dissipate the landing force over as much of the body as possible – the feet, the side of the leg, the buttocks and the shoulders by rolling like a ball (see Fig 2, *on previous page*). Assuming that you have arrived in one piece, get up and run round your canopy to deflate it – otherwise you may be unceremoniously dragged through the nearest barbed-wire fence.

Of course you can't necessarily choose your landing area or conditions and some variations in the procedure may be required.

If going into trees or buildings raise your thighs slightly and cross your arms in front of your face (see Fig. 3, *above*); if you end up suspended more than a few feet above the ground, do not try to release yourself – wait for assistance to arrive.

If going into power lines straighten your legs and raise your arms straight above your head to try to avoid contact with two lines (see Figure 4, *above*).

If going into water do not attempt to release your harness before entry but shed it as quickly as possible when you come to the surface; if the canopy collapses on top of you, try to create an air pocket and carefully work your way out from under it without getting entangled.

In a high wind you may not be able to get to your feet, let alone run round your canopy; so roll on to your front and pull in a bunch of rigging lines hand over hand until you can grasp the skirt of the canopy which should then collapse (in very high winds parachutists have been injured or even killed, not by landing but by being dragged because they failed to collapse their canopies).

In low visibility (fog or darkness) if you can't see the ground, adopt the parachuting position and wait for the ground to come up and hit you; don't try to anticipate it or you may unwittingly try and reach for it and lose

the correct landing position. Finally, assuming that you have made a successful landing, don't forget to carefully roll up and recover your parachute, including the ripcord if you haven't dropped it (if you can remember, slip the handle over your wrist or tuck it under your chest strap after the opening). Your glider may be written off or badly damaged but there is no reason why your parachute should not be returned to service after inspection and repacking.

Conclusion

I realise that I have covered a lot of detail about this subject, some of which you are unlikely to remember if you ever have to put it into practice. Don't worry – most glider pilots who have made an emergency jump have done so quite successfully without knowing or remembering all the correct procedures. But the more knowledge and practice you have, the greater your chances of surviving the experience in one piece.

I have included some suggested briefing notes for instructors for both trial lesson/early P2s *(see panel, opposite left)* and for longer-term students/solo pilots *(see panel, right)*.

Some people have asked me whether they should do a practice jump at a commercial parachute centre. The short answer is: it is perhaps desirable but it certainly is not necessary. Apart from the (hopefully) enjoyable experience, you would doubtless benefit from the flight and landing training and you should feel more confident about the prospect of an emergency jump. But it would not cover decision-making in an emergency or exit from a glider. Indeed, sport parachuting has progressed so far that few clubs or centres now offer even first jump courses on circular parachutes except possibly by special arrangement; they are nearly all specialised courses on ram air parachutes which are not really appropriate for emergency parachute training.

As the odds are against you doing it in anger, some limited instruction followed by regular personal thought and practice should be sufficient.

I hope all the above has not put you off either gliding or parachuting! Both are relatively safe activities with the correct knowledge, training and equipment. However, while your interest is mainly in the former and the likelihood of your ever needing to use the latter are slim, it does seem sensible that you should at least be prepared for the worst.

Should this unfortunate situation ever arise there are perhaps three compensations.

First, you will probably be able to drink out on the story for free for a long time to come (even if you will soon be regarded as a crashing bore).

Second, you will be entitled to become a member of the Caterpillar Club, membership of which is restricted to those who have made an emergency jump (another badge!).

And finally, you may be so thrilled by the experience that you might decide to take it up as yet another exciting activity.

Briefing notes for long-term students/solo pilots

Pre-flight
- ❑ DI parachutes
- ❑ Check fitting and location of ripcord
- ❑ Check glider canopy jettison and strap release
- ❑ Practise exit (wearing parachute) and time it
- ❑ Allow for parachute weight under "Ballast"
- ❑ Consider situations under "Eventualities"

Decision
- ❑ Be aware of height AGL and time taken/height loss during exit
- ❑ Minimum exit height 500ft AGL
- ❑ If at low altitude and/or glider is damaged make decision quickly
- ❑ "If in doubt, get out"

Exit
- ❑ Jettison canopy (push clear if necessary)
- ❑ Look for strap release, undo and push straps clear
- ❑ Dive over side (anticipate "g" forces)

For two-seaters
- ❑ P1 orders "Bale out. Bale out. Bale out."
- ❑ Jettison canopy(s)
- ❑ P2 undoes straps and bales out
- ❑ P1 then follows

Opening
- ❑ Delay approx 3 secs
- ❑ Look for ripcord handle; grasp with both hands
- ❑ Punch down and outwards from body

Descent
- ❑ Check canopy
- ❑ Malfunctions:
  - Twists – kick out if height permits
  - Entangled leg – wriggle free
  - Mae West – sharp pulls on relevant lift web
- ❑ Assess height, drift and landing area
- ❑ Adopt parachuting position:
  - *"Feet and knees together, shoulders round, Chin on chest and watch the ground"*
- ❑ Elbows tucked in
- ❑ Plain canopy
  - Forward drift – pull down rear lift webs
  - Backward drift – pull down front lift webs
- ❑ Steerable canopy
  - Pull down control line/rear lift web in direction you wish to turn
- ❑ If height permits steer clear of obstacles
- ❑ Face into wind well above the ground

Landing
- ❑ "Coiled spring"
- ❑ Roll on landing: feet, side of leg, buttocks, shoulders
- ❑ Run round canopy to deflate

Trees/Buildings – raise knees slightly and cross arms in front of face. Wait for help if suspended
Power Lines – legs straight and arms above head
Water – release harness after entry. Try to avoid entanglement with parachute
High wind – roll on to your front and pull in rigging lines to deflate canopy

First time lucky

Tony Cronshaw, who belongs to Cambridge GC, explains how he planned – and achieved – his Gold Distance

THE TIME had come. Whilst I rarely go cross-country, unless it is for a badge flight, the time had come to pluck up the courage and tackle a 300km Gold distance. Not that local flying isn't great fun, but I was coming home too often thinking I could have done much more with the day than just messing around locally. At least those local flights had become increasingly like cross-countries, covering distance and visiting chosen turnpoints. So this felt like a confident springboard to doing more.

But how best to go about tackling a first 300km? My experience of cross-country was limited to a Silver distance and a 100km Diploma, Part 1, so 300km would be a big step up from what I had done before. The worry was that I might get half-way round the task and then find conditions deteriorate. Or that I would not be fast enough and run out of time. Either way, the thought of landing out miles from home was a not pleasant. Having helped retrieve several fellow club members from assorted farmers' fields in the past, and landed out myself once (fortunately at an airfield), the fact was that a landout far from home could be time consuming, not only for the retrieve crew, but also risking domestic repercussions!

But the desire to go cross-country was certainly there. The thought of achieving a 300km Gold distance was a powerful driver. It would mean a lot to me. Previous cross-countries had proved exhilarating and I had vivid memories of these. So I had to find a way to manage my nagging concerns.

The key seemed to be planning everything to minimise the risk of landing out. This would mean coming up with a task with plenty of fall-back options, setting off on a good looking day, and allowing plenty of time for contingency.

The right day came along on August 14, 2003. The forecast looked very promising, the Pegasus was available, and I had booked the day off work. But an urgent business meeting meant calling into the office on the way to the airfield. So despite rapid rigging, I found myself near the back of the grid.

Not to worry: I was at the launchpoint at 11.15 and provided I was airborne by about midday, a 300km should still be on. At least there was time in the launch queue to talk to others and get my declaration signed. But when I mentioned my plan to fly a zig-zag task, round three turnpoints, routing past the club twice during the 300km, there was much pursing of lips and sucking of teeth. "The advantage", I insisted, "is that one can land home if things aren't working out".

"I wouldn't use that task if I were you," came the reply. "The temptation to land home might be irresistible, and if you did a triangle, you could claim a Diamond, too".

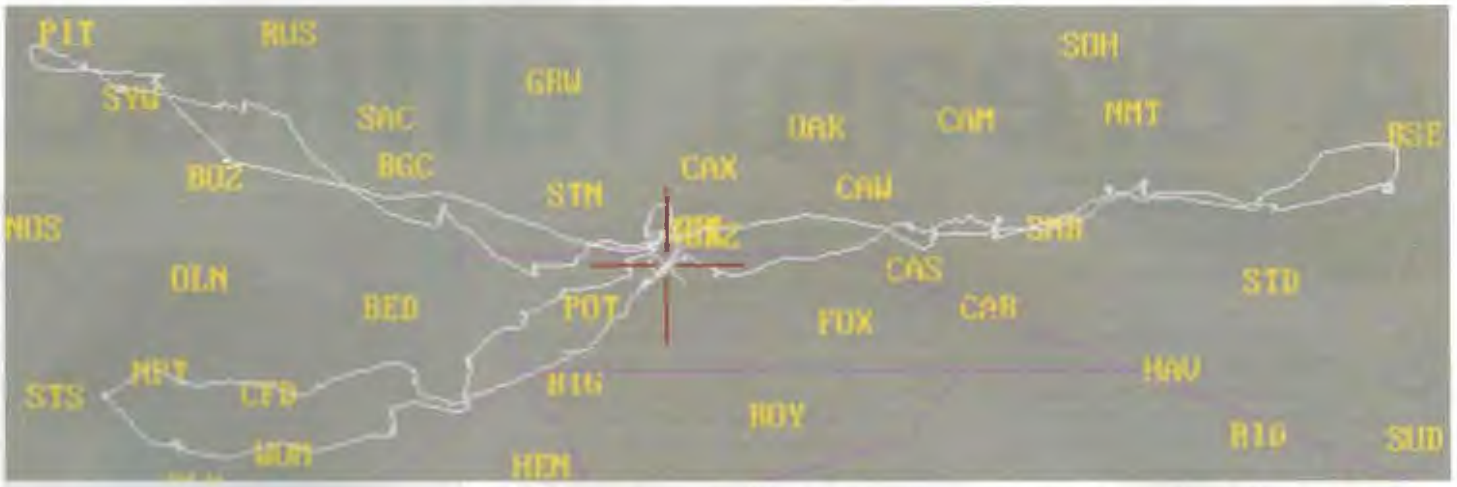
Should I scrap my carefully prepared plan? According to my understanding of the FAI rules (it is well worth reading *Make sure of your claim*, by Basil Fairston in, June-July 2000, p41) it is permitted to have up to three TPs for a distance flight instead of a conventional triangle (using two TPs) or an out-and-return (via one TP). My plan was to start at Gransden, route to my first TP to the west, then back past the club to a TP to the east,

Above: airborne near Gransden. Opposite: the task

and then back once again to a third TP to the west, finally returning to the club. The task, GRL-NPT-BSE-PIT-GRL, also had several airfields *en route* as landout options.

The advantage was that it would be remarkably compact. I would never be that far from home as each TP effectively acts as a 50km out-and-return task. And with prevailing westerly winds, there should be a good chance of flying along streets or lines of energy, although this was not the case on this particular day as there was a light northerly. At least the variations in weather conditions would be less of an issue than for a task covering a larger geographic area since one would be doubling back frequently and revisiting known conditions.

The disadvantage of this approach, due to the three TPs, was that it would not qualify for Diamond goal, so I would have to save that challenge for another day. And I would face that "irresistible temptation" to land



home part-way through the task.But I felt reluctant to change plan: my map was already marked up, I had a task sheet prepared with details of *en route* airfields, the GPS was programmed, and I was familiar with more than half the route from my previous cross-countries.

Yes, despite the advice of others setting off north, I would stick to my guns.

Meanwhile the aerotow queue was slowly reducing, and I finally reached the head of the queue only to see the tug disappear off into the distance for re-fuelling. Never mind: keep calm! A few minutes later I was airborne, but by now it was already 12.42 and a 300km seemed under threat.

Fortunately, there was plenty of lift about by this time, so I quickly got established, flew across my chosen start line and headed off west. But the sky looked less promising here, with only sparse cu, and I began to see why conventional wisdom had chosen to fly north, where the sky looked better. However, there were enough wisps, and keeping in mind blue day techniques, I located lift and kept moving on steadily, if not that speedily, towards the first TP, the Newport Pagnell service area on the M1. Here conditions improved and I felt pleased to have maintained a decent 3,000-4,000ft.

Conditions were improving as I doubled back towards base, but time was passing. When I got back to the club, I saw that the first "out-and-return" had taken more than 90 minutes, discounting the time to get established. It was already 2.30pm. There was a lot more to do if I was to succeed.

Pushing forward as much as possible, I made good progress past Cambridge and Newmarket. Continuing good conditions allowed me to see-saw between 3,500ft and 4,500ft all the way to Bury St Edmunds, where I rounded the second turnpoint, and then back again through these same excellent conditions. But I was clearly under time pressure, and when I arrived back at the club for the second time it was now 4.20pm, and there were no gliders in the air near the club to help signpost the way.

The question was, should I carry on, knowing there was 100km to do? If that took another hour and a half, that would be a 6pm finish, and Weatherjack had warned that things could finish early today.

On the other hand, I was well established at 4,500ft, making steady progress as I dolphined through lift, choosing to turn in only the stronger cores. I really couldn't see a compelling reason to land. The logical decision had to be to press on at least for a few more miles and see what happens.

What did happen was that I flew into a large area of sink just to the west of the club! Having had excellent conditions so far, this was a bit of shock, and even a couple of local hot spots didn't seem to be working. I was losing height rapidly, not helped by being forced to push through the sink.

'It was decision time! Turn back and probably end up landing home? Or push on? The decision was the most critical of the day'

It was decision time! Turn back and probably end up landing home? Or push on? The decision was the most critical of the day. I pressed on convincing myself that going back would be "wimping out" and I still had plenty of options ahead.

So with my back firmly turned on the club, I headed west with the altimeter steadily unwinding. The decision paid off when I contacted lift a few minutes later, at a low point for the flight of 2,600ft, and I started breathing again. This turned out to be the best thermal of the day; my emotions soared as this "elevator thermal" lifted the Pegasus to 5,400ft, a remarkable 2,800ft climb in just five minutes. This confirmed my theory that glider pilots are basically optimists who work on the principle that "what comes down, must go up"!

From here, thermals continued to boom, marking the culmination of a day that had offered me 2kts at 2pm, 3kts at 3pm, 4kts at 4pm, and 5kts at 5pm – except of course that I had found 4kts-plus down at 4pm.

The "out-and-return" to Pitsford Reservoir went quickly, including a thrilling fast glide home, touching down at 17.35. I had been airborne for nearly five hours, completing the 308km task in 4 hours 38 mins at an average 66km/h. As I opened the canopy, it felt great to be surrounded by familiar faces and the bustle of club operations once more. Thank you, Martyn, for being there to take possession of the logger and completing the Official Observer paperwork, which I am pleased to say has been ratified by the BGA.

So was a zig-zag task the right task for my first 300km? Definitely "yes" given my late start and therefore the need for an opt-out towards the end of the task. The task's compactness, my familiarity with the terrain and the *en route* airfields were also positive features.

However, I can see the argument against it. Had it been a more typical English day with a peppering of less reliable moments, and assuming I had I set off earlier, I might have been very tempted to land home after 200km, perhaps missing the chance to finish the 300km in the late afternoon.

The greater lesson I came away with is that planning is a major success factor. Not only can one build in opt-out options to shorten a task as I did, but I can see that an opt-in option to lengthen a task would be good strategy if one got launched nice and early on the right day. Planning things like the route and *en route* airfields is also a great way of getting one's brain into gear.

I think this all goes to illustrate how the sport of gliding can be a powerful, character-forming way of enhancing one's self-reliance and decision-making abilities.

Tony, a winch driver, has c 300hrs gliding, and Silver

A dream fulfilled

World Champion Andy Davis gives his own account of the flight that clinched Gold

SATURDAY the 9th of August 2003, Leszno, Poland. The 12th and final competition day of the 28th World Gliding Championships. After several days of very good soaring, the air is stabilising, the forecast is for predominantly blue conditions around Leszno with a few short-lived cumulus to mark the lift. Thermals forecast to average 4kt to 5,000ft with isolated stronger climbs. A frontal system to the north of Poland is expected to bring more cloud and deeper instability to the north of the task area by late afternoon with a risk of cloud spreading out and even showers. The Standard Class have been set a 432km arrowhead-shaped racing task, starting at the fairytale castle of Rydzyna (10km south-east of Leszno), then 107km south-east to the first turning point at Grabow, 150km north to the second TP Barcin, 105km south to the third TP Jarocin and then 80km west back to the finish line on Leszno airfield.

After 11 days (some 60 hours!) of racing I have a 141-point lead (equivalent to about 14 minutes) over the French pair of Olivier Darroze and defending champion Laurent Aboulin. Olivier and I have been exchanging places since the third day, but over the last few days I have slowly built a small but comfortable lead.

The three of us are virtually out of reach of the opposition and, barring any major calamity, are guaranteed podium places. Mike Young, my team mate and Silver medallist at the previous worlds is out of the running, having had one very poor daily result, and is committed to helping me protect my lead in any way he can.

We discuss our possible start time options based on our anticipated average speed. With soaring conditions on the previous days having faded away earlier than expected in the late afternoon, starting too late would be too risky, yet in blue conditions to start too early would be tactical suicide as the later starters would steadily catch us by using us as thermal markers. What will the French pilots do? Will they take tactical risks or settle for a guaranteed second and third place? Will they start very late and gamble on a high average speed by using all the early starters as thermal markers, or will they go early in the expectation that we would perhaps start too late? Eventually, we decide on a plan; our ideal start time would be between 13:00 and 13:30.

I will fly well away from the start area after take-off to "hide" from the French and tell Mike in code (French "spies" monitoring the team radio frequency!) when I am ready to start, he will immediately start and I will follow five to 10 minutes later, making rapid progress – we hope – by using his information about conditions ahead. However, if Mike should come across the French team gliders whilst waiting to start he will tail them and report their progress to me.

"Good lucks" from all sorts of people and then I drive out to the grid with Pami, where my fully-ballasted Discus 2a, 80, waits for us. While Pami busies herself with the various crewing chores, loading water and sandwiches into and polishing and keeping dust off the glider, I load and check the details of the day's task into the Cambridge GPS navigation computers. Then I do my best to look relaxed while posing for press photographs and being interviewed by Polish television. "No, I am not nervous. No, I am not tired. No, being in the lead isn't a worse position than second place – the French pilots are the ones who have to come up with something extra. Yes, I am looking forward to a good day's racing. Flying in Poland has been very enjoyable. The Polish people have been very friendly. I only ask for a straightforward racing day so that the best pilot can win." The press

Andy at Leszno in his glider, 80 *(David Roberts)*

contingent moves on to Olivier Darroze and I lie under the wing and doze while waiting for the competition director to announce the start of launching.

Launching at 11:40, I quickly climb up over Leszno town under a good line of cumulus. Locally conditions are developing very well and on reaching cloudbase I move away 30 or 40km to the east, where the clouds look a little watery. Climbs are weaker but still soarable, and further away towards our first turning point I can see well-formed shallow cumulus, promising good lift. It looks as if the day is going to be better than forecast.

I relax and concentrate on remaining well clear of all other gliders... especially those with French registrations! Mike and I start to review our start time options when suddenly he tells me that he has found and is now tailing the two French pilots and will keep me updated on their movements.

At 12:52 Mike reports that he is crossing the start line behind the French pilots but suspects that this is a ruse and anticipates their return for a second start. I move back toward the start line and hold at the top of a convenient thermal. Mike reports that the

French are continuing on track but flying slower than he would expect so he is still not convinced it was a genuine start. Finally, he reports that the French pilots have climbed up 40km down track and have continued towards the first turning point, concluding they really are on their way. At this point I am sat just behind the start line at 6,000ft with a small group of gliders, including Mak Ichikawa of Japan and Tomas Suchanek of the Czech Republic, both of whom have been flying well and are determined to improve their top 10 placings. Suddenly Mak and Tomas peel away to dive through the start line; I wait another 30 seconds and also dive away at VNE to get below the maximum start altitude and follow them through the start line. The time is 13:14 and Mike and the French pilots are 50km ahead.

Tactically it is a super start chasing along at 100kt behind Mak and Tomas, who are really going for glory. I take a few more turns in lift here and there to remain at a comfortable altitude while they charge on ahead doing all the hard work of finding and centering the gusty narrow, but strong thermals. Climbing at 5kt in their thermals and racing along at 100kt between the climbs, I arrive above the first turning point at 14:02 and 5,500ft, having averaged 133km/h for the leg. Mike, meanwhile, reports that he has had to abandon following the French pilots, who have been taking enormous tactical risks, in order to climb himself and is rather low 40km ahead. I am confident I am catching them.

Now taking my turn to lead the gaggle, I head northwards and eventually find very good climbs of 5-6kt under well-formed cumulus clouds over the large forest north-west of Kalisz. By halfway along the leg we have closed up to 35km behind Mike, who reports that the clouds ahead are spreading out with not much sun to be seen on the ground. I take care to remain high, close to cloudbase, and find large areas of weak lift as I cruise northwards over the forest. Shortly after that, Mike calls he is getting low 20km short of the turning point; Steve Crabb of the Irish team bursts on to our frequency to report that he is with the French pilots, rather low 30km short of the turning point and climbing in weak lift. This is great news as I am only 25km behind and at 7,000ft. With so many warnings about conditions ahead I slow down to conserve altitude and continue to follow a line of decaying spread-out cloud producing weak lift towards the turning point.

Mike reports finding a strong climb 20km from the turning point and bursting out into strong sunshine I see a large gaggle of gliders climbing below and ahead. Steve Crabb calls that he is climbing in the same thermal with the French pilots. As I approach the thermal, one glider, Mike's, leaves from the top 1,000ft above me, but I am busy scanning the gaggle for the French gliders and then spot the purple markings of "EF", Olivier's glider, just below me. I dive down to his level, fly one circle around him to be sure he sees me and then pull up into the 7kt thermal. It is a moment of joy: all I have to do is follow the French gliders home and the gold medal is in the bag. For Olivier it must be a psychologically devastating moment and he immediately straightens up and leaves the best climb of the day!

Later, I find out that at this moment Jean-Marc Caillard, the French Team Captain, approaches Pami back at Leszno with the news that I have caught his pilots and to offer his congratulations.

I climb until the thermal fades away approaching cloudbase and then turn the second turning point in the company of many other gliders at 15:19 and 5,200ft, having averaged 117km/h for the into-wind leg. We head away for a distant bright patch over the forest to the south-west and in the company of French pilot Laurent Aboulin find a 4kt climb at the start of a long scrappy cloudstreet, which heads away on track.

Meanwhile Olivier Darroze's flight continues to go from bad to worse as Steve Crabb's happy voice tells me that he is low with "EF" and they are having a *terrible* time! Reaching cloudbase I set off along the street. Mike is 10km ahead reporting that he isn't finding any good climbs, and as Laurent Aboulin doesn't appear to be racing any more I slow down to conserve my height.

The decaying cloudstreet runs directly into the final turning point and, having conserved my altitude, I arrive at 16:07 and 4,300ft, passing over the top of Mike, who is considerably lower. There are powerful-looking clouds about 10km along the final leg. Aware of Mike's situation, I accelerate to 100kt to find and centre the lift under the next cloud for him. Climbing at 5kt I am pleased when Mike reports that he has contacted lift and is climbing below at 7kt. Meanwhile at the top of the gaggle, nobody seems to be in a hurry to leave as the climb rate dies away with altitude and we all bunch up at the top of the thermal. I don't want a repeat of the previous day's marginal final glide and in any case have only to cruise home with the French pilots to win, so climb slowly to a ridiculous altitude before losing my patience and setting off for the finish 58km away with a massive pack of gliders in train. Mike, meanwhile, has continued to climb at 7kt up to my level and is just a couple of hundred feet below on my right.

A wonderful feeling of pleasure and satisfaction washes over me as I weave under the clouds to follow the energy and lead the pack back towards the Leszno finish line. I call the team base radio to say we are only minutes away and I have won the gold. I warn Pami to be ready on the ground as the airfield is going to get very busy. Approaching Leszno burning off the excess height, just above the rooftops of the old town then down into ground effect for the last couple of kilometres into the finish line, the Discus2a slowly pulls ahead of the other gliders and – streaming waterballast – I cross the line first at 16:37, pull up, wheel down, brakes out and roll to a halt at the far end of the airfield. Out of the glider, parachute off, dance with joy, hug and kiss Pami for we have done it. Average speed 127km/h, much faster than the French pilots and World Champion for the second time.

We won't say too much about the last night party, but I enjoyed my first beer for six weeks, and as for Pami...

Once again I should like to thank Pami for all her help, motivation and understanding during the big push over the last couple of years to get back to the top, and for being a brilliant crew who just makes everything on the ground right so that I can go and do my thing in the air. And to my Standard Class team mate, Mike Young – without our friendship and teamwork in the air none of this would have been possible.

First published in Severn Skies

First impressions

Our anonymous contributor offers advice to aspiring CFIs on how to make an impression

I HAVE BEEN reading articles in *Sailplane & Gliding* since the 1960s: lots of pundit stuff, lots of "Howidunnits" and lots of interesting articles on how to fly the new hot ships, but not a lot about what it's really like out there.

So, I thought, since I am into my third CFI-ship I would address the matter with a few jottings of my own regarding how to make an impression. Note that I did not say the *right* impression, just an impression.

I have deliberately used only first names so that the innocent are protected – but they will know who I mean – and I have deliberately not used my name at all for fear of retribution. I can now deny all knowledge of who/what is being referred to.

So here goes...

When you are promoted (or victimised) into becoming CFI, your mind set changes and you start to think of other ways to impress the mere mortals that are hanging on to your every word and every deed. Beat-ups are now out, low-level aerobatics are banned, marginal final glides are definitely frowned upon, so what's left? How does a new CFI make an impression on members? It's all right for them – they know who they've got to impress – but what about me?

I thought about it a lot and then decided that impressing the Chairman would be a good place to start; after all, he's the real top dog, is he not? (At this point, I imagine, you are laughing, or crying, or losing your temper, depending upon your persuasion, but I will leave this delicate point for others to discuss.)

Our club Chairman is an avid fan of cross-country flying. So much so, in fact, that he doesn't always come back. My great idea was, therefore: "Why don't I go out and find him some good fields for landing in?" I began my quest on the club Open Day in June. I chose him a super field, just to the south of Boston, full of young Brussels sprouts. Then, in August, I had a little run-out around Norwich and Newmarket... and on the way back, I spotted a super stubble field, ideal for a Chairman, just to the side of the A47 near Thorney. I thought: "This is a good one if he gets tired whilst local soaring". (The fact that the electric wires were higher than I was at the time had no influence on my decision.) A quick left turn, dangle the Dunlop, select the flap, hand on airbrake and "splat"... down safe and sound.

(Here's a quick note for all prospective cross-country pilots: Always reach the decision to land out as late as possible; this leaves less time to worry about it. Any more than 15 secs between making the decision and climbing out is enjoyment wasted.)

It was a nice stubble field, well up to the expectations of a Chairman, and it had a road running right past the end.

Then a couple of interesting things came to pass. First, I made a phone call to the club. In fact, I made several phone calls, but no b****r answered. *(Thinks... How did they know it was me?)* Eventually, after about an hour or so, the phone was answered... by the last person you would expect to hear it ringing. It was Tony. (Tony has highly-tuned selective hearing, especially in the bar). I requested an aerotow retrieve, told him where I was, and Tony said he would come out as wing-runner for the take-off (that tells you how near home I was).

By now a couple of onlookers had arrived at the end of the field, so I took a stroll over to them to say "hello". (I looked real macho in my baggy shorts and beanie hat). One guy, sitting astride a motorbike, dressed from head to toe in red leather, offered me a lift to the end of the road to wait for Tony. I thanked him kindly, climbed carefully on to the back of his throbbing machine (no underpants) and did a lot of things I hadn't done before...

Until this day, I had never put my arms round a bloke... Especially not one dressed in leather... and especially not from behind. But on this day, I did... I hung on to him like a long-lost lover... as we accelerated to something like Warp 4. He had the handle-bars to hang on to... I had only him! We shot up this narrow country road like something demented. Then, just as things seemed to be settling down and I had mentally "adjusted" myself to the situation, he hit the brakes. Imagine a male frog and a female frog in hot pursuit of tadpoles. That was us! The only thing that stopped me from flying over the top of him was his armpits and my tight grip. I didn't dismount for quite a few seconds, not because I was enjoying the experience, but because I wasn't sure what still worked. Anyway, I eventually let go, thanked him, and collapsed onto the side of the A47 to wait for Tony.

'We passed the usual pleasantries, about lack of wind, then I asked if he would mind an aeroplane landing in his field to tow me out'

Now, if you knew Tony, you'd know he is a law unto himself. I waited for half an hour or so (base was only 15 minutes away), but no Tony, so I decided to walk back to the glider. It was at this point that a Battleship Class Mercedes Benz pulled up beside me, the driver's window wound down and a stern-looking bloke dressed in a dark suit, and wearing a black tie, looked up at me. Now, I'm not normally superstitious, but on this occasion I was prepared to make an exception...

It turned out, however, that I was in his field! We passed the usual pleasantries, about lack of wind, and so on, and then I asked him if he would mind an aeroplane landing in his field to pull me out. His response was: "Young man," (I immediately started to like him) "I've just come from a funeral; you can do what you like as long as you don't kill yourself". And off he drove.

Then the tug arrived. The circuit was perfect, the approach was perfect; the landing was perfect; in fact, everything was perfect. Then the bubble burst. Guess who was flying it? The holder of the club wooden spoon! (He had won it because of his indifference to Carb Heat and Cabin Heat on a check flight.) He taxied back, shut down the engine, and came up to me with a silly grin all over his face. I also had a silly grin on my face because I knew that he

hadn't done a field retrieve before. I also knew that we couldn't climb over the high tension cables just the other side of the road and I also knew that I wasn't going out under them either! Sooooo... we chatted about our options, decided on our plan of action and set things in motion. Still no sign of Tony. With the use of radio, I guided him through the "up slack" and then the "all-out"... and then he disappeared.

(Another note for prospective cross-country pilots: It's always the same in a stubble field, all you can see when the tug opens up is a couple of feet of rope and not much else because every bit of straw – and chaff – and crud – and muck – within 50 yards comes straight back at you.)

I knew we were moving because of the bumpy bits but I didn't know much else at this moment in time. Then, all of a sudden, the bumps stopped, the mist cleared, and there he was – heading straight for 33,000 volts. As the mist started to cloud my eyes again, he turned left, paralleled the wires, just outside the static jumping zone and continued the climb, oblivious to the fact that my wings were bigger than his.

I couldn't fly out to the left 'cos it would turn him into the wires, I couldn't speak to him either, 'cos my voice wouldn't work... so I just hung on. By the time we got to 2,000ft, the height we had agreed on for the retrieve, all of the damp patches I didn't know I had began to itch.

We passed over our nearest village, and I released the tug and called him on the radio, asking him to maintain speed and I would come up on his right wing for a formation fly-by at the airfield. What a waste of sweat that was: everybody had cleared off to the pub (typical) and left us to it, except Billy, who didn't seem impressed at all.

Still no sign of Tony...

We had just finished putting the aeroplanes to bed when Tony arrived back, in my car, saying that he couldn't find us, but had followed us back when we shot up out of a nearby field.

Thanks Tony, and thanks Brian, you can come and drag me out of a field anytime.

Now for the field retrieve that I really want to tell you about.

It was getting late in the afternoon. It was the last Friday of our flying fortnight, and the Chairman had done it again. Yes, folks: another field... another county... another retrieve...

"Right, you b****r," I thought, "you won't use the fields I picked for you, so let's see what sort of a pig's ear you've made of your own choice." I climbed into the Pawnee, flew across three or four counties and found him in a field between Bury St Edmunds and Newmarket.

Let me describe that field to you...

It was a stubble field.

It was soft.

It had a hump in the middle.

It had trees at the take-off end.

There was no wind.

It was small.

It was suicide.

But – it *was* the Chairman.

I walked to the end of the strip (which took about 30 seconds) to check it out and to look at the trees. There was a gap, just big enough to get the Pawnee through, but I wasn't too sure about the glider.

Then again, I wasn't flying the glider...

"Right," I thought, "I haven't come all this way to go back empty-hooked... I should be able to get the tug through the gap... we'll find out about the glider later."

We chatted about the options – how to pick up a wing on take-off, height and speed for the tow, and so on – pushed the glider into the hedge as far as it would go and then climbed into our respective machines.

We used the radio for "take up slack" and "all out".

Note that it was the chairman's decision to take up slack, and it was the Chairman's decision to give the all out. So I took up slack...

(Here's another note for prospective cross-country pilots: As is usual in these cases, as soon as he gave the "all out," he disappeared! In a holocaust of straw, and chaff, and crud, and muck...)

I knew he was still there because the tug didn't move much.

Now, you might think this is dangerous.

Not for the tug pilot, it isn't.

If it looks doubtful, he firewalls the throttle, he pulls the bung, he rockets up over the obstacle in front and gets the Hell out of it!

The poor old glider pilot is too busy trying to see his way out of the straw, the chaff, the crud and the muck, to be aware of anything else going on around him.

I thought to myself: "He'll know it's not right when the wings come off in the trees," but I was pretty busy myself by now, so I didn't give it another thought.

By the time we were half way across the field, we were up to a fast trot, jumping about in the tractor tracks and fast approaching the shadow of the trees.

The engine was screaming... the propeller was screaming... *I* was screaming.

Three-quarters of the field behind us now: my eyes are like saucers, my backside's gripping the seat, the trees are towering above us and I'm thinking: "OOOOOOOh SH*****TTTTTT!"

Meanwhile, the Chairman is oblivious to all this – he's still covered in straw, and chaff, and crud and muck...

Then I lift off and shoot through this hole in the trees. I didn't dare look in the mirror. A while later, this soprano voice says: "turn right 10 degrees" – so I knew he was still with me.

"I bet that taught him a lesson", I thought.

And then I realised, he hadn't seen any of it: he had been covered in straw, and chaff, and crud and muck...

So, the next time the Chairman lands out, and he doesn't use a field I've picked for him, some other mug can go fetch him.

I'm still looking for a suitable way to make an impression, any impression.

Any ideas?

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	5	0	342	52	69	0	19	32	0
Angus Gliding Club	3	1	4	0	537	0	102	0	11	2	0
Aquila Gliding club	3	3	25	2	1312	1312	934	5176	66	360	3
Bath Wilts & North Dorset Gliding Club	4	3	30	1	3490	979	1705	11375	121	230	9
Bidford Gliding Centre	3	3	45	0	2949	2649	0	0	89	604	3
Black Mountains Gliding Club	2	1	32	1	2176	2176	2611	0	79	447	5
Booker Gliding Club	8	9	86	5	9175	9175	0	233	1500	34	
Borders Gliding Club	3	2	34	2	2132	2048	1961	104	65	4	
Bowland Forest Gliding Club	3	4	30	0	5409	0	2126	0	141	387	13
Bristol & Gloucestershire Gliding Club	4	4	67	2	4893	1813	3587	206	475	17	
Buckminster Gliding Club	3	2	22	1	3309	2007	1829	4010	74	241	5
Burn Gliding Club	5	3	31	1	5668	1474	2309	9200	121	571	7
Cairngorm Gliding Club	2	0	11	1	998	880	929	600	36	79	3
Cambridge Gliding Club	4	5	68	2	10080	2742	6800	223000	239	1629	17
Carlton Moor Gliding Club	1	1	0	0	458	0	70	0	9	43	0
Channel Gliding Club 2002	2	1	6	0	1827	0	217	41	249	3	
Connel Gliding Club	2	0	7	0	0	0	0	0	4	0	0
Cornish Gliding Club	2	2	6	1	928	738	363	0	36	261	1
Cotswold Gliding Club	4	4	47	0	8366	219	3164	0	177	666	10
Crown Services	1	2	4	0	116	100	39	14	0	2	
Dartmoor Gliding Society	2	2	11	0	2311	0	616	850	58	151	6
Deeside Gliding Club	3	3	16	2	3958	3958	4452	63370	84	471	12
Denbigh Gliding Centre	3	1	15	0	3790	150	1650	3500	50	96	4
Derby & Lancs Gliding Club	4	3	41	0	5775	0	2545	5500	167	569	7
Devon & Somerset Gliding Club	4	1	43	1	6271	532	2317	8806	186	361	22
Dorset Gliding Club	2	2	12	1	1583	351	509	0	38	161	2
Dukeries Gliding Club	2	2	11	0	2023	19	344	1500	38	168	4
Dumfries & District Gliding Club	1	1	2	0	366	0	100	200	12	13	0
East Sussex Gliding Club	4	4	17	1	3892	935	1387	9854	105	599	7
Essex & Suffolk	4	3	21	0	5055	15	2163	30225	115	275	7
Essex Gliding Club	4	3	26	1	2782	670	1096	94	335	5	
Herefordshire Gliding Club	1	1	8	1	685	685	510	23	75	1	
Highland Gliding Club	1	1	15	0	1898	743	352	0	44	101	5
Imperial College Gliding Club	1	2	0	0	506	135	199	25	23	3	
Kent Gliding Club	4	3	36	1	7021	1280	2200	0	173	787	18
Lakes Gliding Club	2	1	11	1	671	661	384	0	34	47	1
Lasham Gliding Society	11	0	150	5	25000	10000	535	2186	29		
Lincolnshire Gliding Club	3	1	7	0	2259	0	377	1987	50	121	3
London Gliding Club	7	5	127	4	17889	8927	7128	278000	262	2054	12
Mendip Gliding Club	4	2	10	1	2693	72	708	2500	71	274	4
Midland Gliding Club	4	4	39	1	9683	615	4726	16437	178	501	9
Needwood Forest Gliding Club	3	2	9	0	2629	0	741	52	255	6	
Nene Valley Gliding Club	3	2	18	0	3259	10	1006	2499	61	202	6
Newark & Notts Gliding Club	3	4	10	0	3734	84	929	2780	65	319	6
Norfolk Gliding Club	3	3	49	2	4277	2404	2295	71000	127	326	8
North Devon Gliding Club	2	0	8	0	996	996	0	0	13	270	1
North Wales Gliding Club	2	2	4	0	1030	0	160	27	72	0	
Northumbria Gliding Club	3	2	12	1	2614	625	681	1000	88	462	5
Oxford Gliding Club	4	4	24	0	4369	0	1318	6000	90	405	12
Oxfordshire Sportsflying Club	0	0	7	0	0	0	1450	18000	56	15	3
Peterborough & Spalding Gliding Club	3	2	33	2	2236	2236	1685	67	448	8	
Rattlesden Gliding Club	3	2	2	0	3214	541	1276	4500	83	352	13

OCTOBER 1, 2002 TO SEPTEMBER 30, 2003

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	2	3	8	0	250	225	245	0	15	13	1
Scottish Gliding Union	4	4	52	1	9787	1076	5060	0	263	618	13
Shalbourne Soaring Society	3	3	30	0	4251	58	1358	7000	84	374	9
Shenington Gliding Club	3	4	41	0	9203	879	2200	174	450	19	
Shropshire Soaring Group	0	0	8	1	195	195	297	2600	17	0	1
South Wales Gliding Club	2	4	31	1	2985	888	1625	16000	78	211	4
Southdown Gliding Club	3	3	54	3	4680	3966	3618	43386	176	681	20
Staffordshire Gliding Club	3	4	20	0	3768	738	1503	8000	108	272	10
Stratford On Avon Gliding Club	4	3	27	0	6473	0	2280	24945	114	619	13
Strathclyde Gliding Club	1	1	6	0	220	0	21	0	11	28	0
Surrey & Hants Gliding Club	0	12	0	0	0	112	6	5			
Surrey Hills Gliding Club	4	3	5	0	4929	0	665	0	85	487	4
The Motor Glider Centre	0	0	0	0	205	2000	18	0	1		
The Soaring Centre	6	6	97	3	10913	6870	6194	35156	307	1214	22
Trent Valley Gliding Club	3	2	19	1	3655	712	1439	66	229	4	
Ulster Gliding Club	3	2	17	2	1657	1600	1060	800	65	218	5
Upward Bound Trust Gliding Club	2	1	5	0	1456	0	427	177	23	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	10	1	1155	975	839	7650	45	126	3
Vectis Gliding Club	2	1	6	1	706	706	242	33	82	4	
Welland Gliding Club	3	4	20	0	2380	356	952	7332	59	3	7
Wolds Gliding Club	4	2	41	2	8724	1355	3248	4560	184	1050	5
York Gliding Centre	5	3	28	2	5138	3615	2003	10000	188	1059	12
Yorkshire Gliding Club	5	5	48	3	5259	3861	4479	112582	184	615	9
SECTION TOTALS	226	191	1930	66	286603	93252	114216	1064057	7317	28726	540
CLUB TYPE: SERVICE											
Anglia Gliding Club	3	3	1	0	2204	3	505	1540	51		
Bannerdown Gliding Club	4	3	19	0	5112	37	2150	6856	89	318	10
Chilterns Gliding Club	2	3	14	0	4607	17	1612	6053	97	369	
Clevelands Gliding Club	2	3	11	2	1530	916	1100	12000	52	40	4
Cranwell Gliding Club	3	3	15	1	3838	389	1463	7515	58	287	8
Crusaders Gliding Club	3	1	1	0	2603	10	366	36	1	3	
Fenland Gliding Club	2	2	4	0	1641	6	532	3500	28	167	1
Four Counties Gliding Club	3	3	10	1	3894	524	1840	28302	42	13	2
Fulmar Gliding Club	2	1	2	1	271	183	139	540	16	27	4
Heron Gliding Club	2	2	5	0	1341	33	396	0	30	50	4
Kestrel Gliding Club	2	2	5	0	1381	457	9965	24	108	0	
Portsmouth Naval Gliding Club	6	5	18	3	6322	2088	1440	17256	208	663	9
RAF GSA Centre Bicester	5	5	31	3	11534	4870	7335	103000	106	448	10
Seahawk Gliding Club	3	3	4	1	1932	1210	419	300	46	233	3
Wrekin Gliding Club	3	4	6	1	2604	731	864	5500	82	0	6
Wyvern Gliding Club	3	3	7	0	6753	111	1789	9943	59	108	3
SECTION TOTALS	48	46	153	13	57567	11128	22407	212270	1024	2832	67
CIVILIAN CLUB TOTAL	226	191	1930	66	286603	93252	114216	1064057	7317	28726	540
GRAND TOTAL	274	237	2083	79	344170	104380	136623	1276327	8341	31558	607

Midland

THE MIDLAND GC was formed in 1934 at a flat site near Birmingham. Due to the foresight and financial assistance of Espin Hardwick, a small plot of moorland was purchased at the top of the five-mile long west-facing ridge of the Long Mynd. A hangar, incorporating the clubhouse, was built and is still giving good service to this day. Early members included Charles Wingfield (UK Gold C #2), Amy Johnson and Prince Bira of Siam. The bunkhouse, kitchen and workshops have been added over the years. Gradually, as land became available, more was bought and we now have more than 330 acres.

The result is a comfortable, well-equipped club with excellent facilities in a stunning location, which will celebrate its 70th anniversary this year.

The prime method of launching is by a professionally operated winch and retrieve system. This can give a very rapid launch rate of up to 25 per hour to 1,200-1,500ft, with over 2,000ft in a brisk southerly. We also have a Pawnee tug and an SF25c Falke motorglider. The cherry on the cake is our bungy launch, which is something every glider pilot should experience. Quietly propelled from the hilltop by industrial-strength elastic ropes into a 25kt headwind with 4kt of lift, you'll find that a couple of beats of the ridge will take you to 1,000ft agl. From there use thermals to fly towards Wales in search of wave. If you don't contact it you can always retreat back to the ridge for another try.

The club has a very active group of pilots competing at National level, both Junior and Senior. Our younger members produced some very promising results in the Junior Nationals and our Inter-club League team won our region and came second in the finals last season.

As part of our commitment to promoting gliding to young people we have recently entered into a partnership with the Faulkes Flying Foundation to provide subsidised trial lessons. A DG-505 has been supplied for the purpose. This has proved to be extremely popular with local Scout groups and we have had a positive response from the county youth officers. We also host the University of Wales Aberystwyth GC and pupils from Shrewsbury School and Hereford Cathedral School.

Being 1,500ft above sea level we get both the best and the worst of the elements. The course season starts in March and we operate seven days a week until the start of November. Through the winter, weather permitting, flying takes place from Wednesday to Sunday, although we will open up if a good wave day is forecast. Expeditions are always welcome. We can accommodate up to 40 in the bunkhouse and private rooms with a full catering service on site. The sleeping quarters are currently undergoing complete refurbishment, following major improvements to the showers and toilets.

The original hangar and club room with its long dining table all contribute to a unique atmosphere. It is just a very pleasant place to be even when the weather is unflyable; as a consequence, we draw members from all over the country, many travelling from as far afield as London and Scotland to spend the weekend. Some people have a country cottage; others have a country gliding club.

Chris Ellis

At a glance

Full membership cost: £310 pa

Launch type and cost:
Aerotow £20/2,000ft, Winch/Bungy £6.50

Club fleet: K-21 (x3), K-13, K-23 (x2), Discus, K-8, SF25c Falke, Pawnee. Also DG-505

Private gliders: 45

Instructors/flying members: 30/150

Types of lift: ridge, wave, thermal

Accommodation:
Private rooms and bunkhouse. Professional catering

Operates:
Seven days (March-November course season)
Wednesday to Sunday (November-March)

Contact: Tel 01588 650206. Fax 01588 650532
MGC Ltd, Long Mynd, Church Stretton SY6 6TA
office@longmynd.com/www.longmynd.com

52° 31.119 N 00° 52.587 W

Radio frequency: 129.975

Clockwise from top left: bungying a K-21 off the Mynd (Chris Ellis); the Long Mynd, with the valley to the right (Malcolm Huddart); the Mynd after the dry summer of 2003 (Chris Ellis); clubhouse in winter (Mark Wakem)

Club news

Award-winners at the Bath, Wilts and North Dorset GC's annual dinner included CFI Stuart North (far left) and Mike Thorne (fourth from the left, behind)

Aquila (Hinton-in-the-Hedges)

AQUILA is now easing into the winter routine of repair and refurbishment with our Pawnee about to be re-covered and overhauled, hangar roof leaks sealed, coach repairs under way and glider repair workshop bookings on the increase after what has been an excellent flying year. The AGM has also been held, as Peter Fincham stood down as secretary after doing an excellent job with Robert Cronk stepping into the breach. Our thanks to Ian Hammond, who will remain as our much-appreciated chairman for one more year, and Clive Stainer, who will continue as treasurer.
Barry Woodman

Bath, Wilts & North Dorset (The Park)

BECAUSE two of our Bocians had recently been back to Poland for refurbishing, they were soon flying again after the ban. The club has purchased a second Puchacz, and the committee has now decided to sell our third Bocian. Work is progressing on the Motor Falke, and the Pawnee is being re-covered in the hangar, thanks to Dick Yerburgh and helpers. In November we enjoyed our usual annual club dinner, during which Mike Thorne received the Keevil cup and the 100km cup, our CFI Stuart North took the new Park cup for the fastest non-turbo flight, Mark Hawkins the Ladder cup and Mike Edwards the Four Cathedrals cup. Malcolm Smith, our treasurer, was awarded the Gordon Mealing trophy in appreciation for his work in keeping us solvent over many years. Jan Smith was presented with a token of our thanks for her services as our very efficient club secretary. John Garland has taken over from Jan, and Ron Lynch has retired as chairman.
Joy Lynch

Black Mountains (Talgarth)

IT HAS been a cracking autumn at Talgarth with good easterly wave often going to Gold height and many visiting pilots enjoying themselves in the uncluttered airspace we enjoy. In terms of launches, we are well ahead of last year and expect to top out at around 2,500 by the end of December. We are delighted that Don Puttock is coming back this summer to look after the club and run dedicated courses aimed at post-solo pilots both from Talgarth and other clubs who want to get up to Bronze standard quickly and start on cross-country flying. With more time in the air per launch than any other UK club, we think these courses will be popular and will be putting details on our website in the New Year. Work carries on in the clubhouse with full heating now installed to keep us cosy and warm us after long times at altitude. As this is being written early in December, the radio is alive with calls of pilots climbing above 10,000ft in the "oh-so-predictable" easterly wave. Claims are coming in thick and fast for the Tony Burton Trophy that will be presented at the AGM for the best gain in height at BMGC. The AGM is on April 17 rather than over Easter.
Robbie Robertson

Booker (Wycombe Air Park)

DAVE Byass has resumed the role of chairman (so soon after his last flight on Concorde as well) as Bruce Cooper was regrettably forced to stand down after only a year in the position. Danny Lamb has also stood down from the committee. Our thanks go to them both for all their effort and commitment. Rod Christie has joined the committee. Rod, now the proud owner of a beautiful ASW 20L, brings the experience of some 1,500 hours on "Soaring Parachutes" with him. We're very sad to announce the sudden death of two more club members, Brian Edwards and Bruce Owen (see obituaries, p61). Club training continues almost unabated, with a highest-ever recorded number of intensive courses sold this year. Recent solos include Anne Chapman, Jonny Horne, Steve Jones, Julian McCarthy, Masha Musika and David Tomlinson. To cope with all these we will have a second K-8 on line next season, making a total of nine single-seaters. Both of our Rubin tugs are being overhauled by the French factories this winter, one of them having a complete rebuild. We're holding a dinner-dance this February, the first for several years, and next season's plans include spring expeditions to Shobdon and the French Alps (racing group), and a Regionals starting June 12.
Roger Neal

Borders (Milfield)

AS THE wave weeks slip quickly into history, we can reflect on a mixed bag of events. Some weeks offered excellent conditions, whereas on others pilots were forced to be content with rockpolishing above the local hills; however, we hope that all our visitors enjoyed their stay and we look forward to welcoming them all back next year. Repairs to our Alliance are well under way following a heavy landing in October; we should take delivery by late December. Following a landout in the club's K-21, Kevin Charlton executed a first-class PR exercise, when, after the customary tea and cake, he was asked if he could lay a new carpet. Not one to refuse a challenge, and spurred on by the promise of more cake, he expertly laid said carpet to the delight of the landowner's wife. I wonder what other chores lie in wait for the next pilot who drops in unexpectedly? Finally, a big thank you to Russell and Chris for hauling our damaged Alliance down to Rufforth after their visit in October – thanks, lads.
Mike Charlton

Bowland Forest (Chipping)

DECEMBER has arrived and the weather and the field have both held out for us to keep on flying! The refurbishment of our third K-13 is still on target for completion by spring, and a sparkling new canopy has been fitted to another K-13. The work on the upgrade of the Gents facilities and improvements to the central heating system is still ongoing. We had our Christmas party, which was well attended, and very much enjoyed by all. Congratulations to the following, who were awarded trophies at the recent AGM: A League (Experienced Pilots), Geoff Bailey; B League (Early Solo), no claim; Hogben Triangle, John Richardson; Cross-Country Trophy; Nigel Dickenson and Ian Pendlebury; Progress in Early Solo, Tony Levitt; and Enthusiasm, Tom Gregson.
Eileen Littler

Bristol & Gloucestershire (Nympsfield)

A SPECIAL open day was held on December 17 to mark the centenary of powered flight with cheap trial lessons to 2,500ft. A team has been working on making our Pawnee prettier and sounder, saving thousands. John French and Nigel Smith now have inspector's tickets, lowering the average age of club inspectors to below 60. We have has several thermal and ridge days despite November being generally wet and miserable and Martin Talbot achieved a Cross-Country Endorsement. We have new brochures to advertise our courses and trial lessons. Interest has been shown in a proposed six-aircraft hangar and costs are being investigated. Another new hangar is proposed for Sailplane Services. The dinner-dance is on February 28. And does anyone know how to discourage badgers from digging up turf?
Bernard Smyth

Burn (Burn)

OUR best wishes for a long and happy flying career go to Frank Thompson, who at 84 has decided to stop flying the tug and concentrate on flying the gliders and the motorglider. Our Bonfire Night was a great success as was our clubhouse Christmas dinner. Many thanks to Edna Sharples and her team of helpers. The cup for best flight in a club glider went to Mike Howey for an epic Diamond goal in our Janus. Looks like our fight to stay at Burn will now go to court early in the new year. If there is anyone in the movement who can offer us any advice from experience please get in touch.
John Stirk

Cairngorm (Feshiebridge)

DURING this period of enforced grounding due to runway repairs, members have decamped to Easterton for continued flying and training, and we thank our hosts, Highland and Fulmar, for their superb hospitality. We should be operational by February or March, but until further notice please obtain PPR before arriving. Meanwhile, back at Feshie, inspectors and members have been busy attending to their Cs of As and preparing for the seasonal social activities, and our thanks go to Ray and Maggie Lambert for all their hard work in this area. Dates for "Mayfest" have now been confirmed as Saturday, May 1 to Sunday, May 16, 2004 (lots of 300kms up for grabs). Bookings to Chris Fiorentini on 01540 673231 or *chris@capercaillie.flyer.co.uk*
Check out our website at www.gliding.org
Chris Fiorentini

Chilterns (RAF Halton)

BELATED congratulations to Gordon Howarth, who gained his 100km diploma during the summer. The thermals at the weekend of November 15-16 facilitated some memorable flights/cross-countries, with high climb rates that no-one could recall so late in the year. More recently many members have been keeping

Please send news to *editor@sailplaneandgliding.co.uk* or Helen Evans, 7 Ollney Road, Minchinhampton, Stroud GL6 9BX to arrive by **February 10** for the next issue (April 13 for the June-July issue)

current using the local ridges and occasional wave. Meanwhile, Ian Pettman has been providing Bronze lectures to while away the winter's early evenings. UCL's successful freshers' fayre continues to bear fruit in the form of numerous different students turning up at the airfield each weekend. We are settling into our temporary bolt-hole accommodation while the hangar/office refurbishment takes place in time for the arrival of the JSAT(G) and RAFGSA Centre from Bicester. Oh, and other news is that one of our members, a certain Dave Postlethwaite, completed his Diamond distance (and an 820km flight) in November – albeit in Australia...
Andy Hyslop

Clevelands (Dishforth)

WE ARE pleased to announce the arrival of our new baby, a K-21. This replaces the Grob Acro, which has been a solid workhorse for many years, but now needs a rest and some TLC. Dick Cole has also retired, in his case after some 30-plus years of flying fighters, and is now looking forward to concentrating on his gliding. Jim McLean visited the Darling Downs Soaring Club in Australia as part of an RAFGSA expedition, did eight flights on eight different aircraft, and returned with Gold and Diamond distance flights (both badge claims done on conversion flights!). Despite the increased airfield access requirements imposed by the Army, gliding people are still welcome to our site, but please ensure consult *www.dishforthairfield.freeserve.co.uk* before your visit.
Polly Whitehead

Cotswold (Aston Down)

OCTOBER always signals the club expedition to Portmoak and this year was no exception with more than 15 members heading north. Regrettably, the weather was not kind and no badge flights were made. As always we renewed our acquaintance with the local hostelries and a good time was had by all. Thanks to Irene and the team for a warm welcome. This summer the club will be hosting both the Standard Nationals and Competition Enterprise so get your entries in and fly at one of the country's finest soaring sites. Full details are to be found at along with details of our spring lecture programme, AGM and annual dinner dance. The "Friday Fliers" celebrated with a robust Christmas dinner, when George Ford entertained us with a flying display from his indoor model aircraft.
Frank Birlison

Cranwell (RAF Cranwell)

A RECORD year in that we reached late November before being rained off. Pete Kingwill, Tim Davies and Rick Jones returned from Australian exped to the frosty plains of Lincolnshire, each having flown more than 60hrs in the sun and achieving what ought to have been a sackload of badge claims. Meanwhile the club began its round of deep maintenance and Cs of A, not to mention preps for the Station Commander's inspection. Apart from this James Hale went solo and a number of conversions were achieved. Chris Franklin remains as both OIC and treasurer as well as holding down a busy day job. We hope to let Chris have some of his life back asap and before the AGM in the new year. Trial flights have proved to be popular Christmas gifts this year.
Paul Skiera

Dartmoor Gliding Society (Brentor)

ALTHOUGH flying has often been restricted by weather our indefatigable T Taylor managed to get through very severe rotor to make one of his 12,500ft climbs and our indefatigable secretary, I Rolfe, has carried out his long-standing promise to make a field landing. Gavin Short has replaced Dave Hooper as Safety Officer. The two shipmates, Gavin and Martin Cropper, have been celebrated in the local press as the tortoise and the hare. Martin gained his Silver after 15 years, Gavin after 15 months. The accompanying photo, all resplendent gold and blue, gave us eye-catching publicity. Ian Reedie and team have brought the second winch back into service. Thanks to the generosity of Rex Grayling of North Hill we have been able to replace our lost K-8 with his delightful K-6CR. It is giving great enjoyment. We are very grateful also to Steve Clarke for helping us to buy a new radio for retrieve vehicles, which should make our operations even slicker in the New Year.
Phil Brett

Deeside (Aboyne)

PILOTS have enjoyed some excellent soaring in wave conditions with flights to Inverness, Pitlochry, the Spey Valley and beyond. Members' notable successes include a Diamond goal flight by Dave Smith; Tom Holloway and Andy Mason (a visitor) gained their Diamond heights and Bob Dunthorne his Gold height. Roy Garden completed his Silver Badge, Mark Farquhar his Silver height and a Bronze leg. Alex Smith also gained his first Bronze leg. Robin Dransfield got his Cross-country Endorsement and Bruce Alexander completed his first solo. Congratulations are also due to Tom Holloway, who became a Basic Instructor, and to Robin Cutts, who went solo again in the Pawnee. Bookings are being taken for the 7th UK Mountain Soaring Championship, which runs from September 5-11, and for the 2004 wave season. Visitors are welcome at any time, not only for the wave season. We offer courses to suit a range of requirements, contact Roy Dalling on 013398 82767. We wish everyone the best of soaring in 2004 – come and see how we do it on Deeside!
Sue Heard

Denbigh (Denbigh)

IT HAS been a year with many ups and few downs. We have seen lots of visitors from other clubs, including Cambridge, Essex and Devon & Somerset, all of them bringing lots of glass a long way to use our fantastic ridge. The wave has not disappointed either – after all, this is the best wave site in England and Wales. If you don't believe me, why not come and see for yourself. Photos on the website (*www.denbighglidingclub.co.uk*). Special thanks go to Keith Lewis and Tony Cooper, without whom I think the club would cease to function. Congratulations to John Watkinson and Chris Gooch-Butler on becoming BIs; they are now helping to ease the burden. John finished his Silver with a flight to Sleap in our new K-8, which was surely the bargain of the decade, thanks to Suffolk GC. We now have a Falke on site, which flew down from her old home at Portmoak in July. Quite a thrilling flight for first solo on type. Big thanks to all at Portmoak. Zulu Whisky has given many club members an opportunity to explore further afield. We would like to extend a warm welcome to any motorgliders, so come and pay us a visit. Keith and Tony (again) have completed the repairs to the super Blanik ready for the new season; however, thanks to the Tarmac, we will be flying right through the winter. Last but by no means least we need more instructors, both midweek and at weekends. If you're interested contact Tony Dickinson our CFI on 01745 813774 or *office@denbighglidingclub.co.uk*
Ian Walton

Derby & Lancs (Camphill)

THE series of talks, including safety lectures, is now planned for Saturday evenings over the winter. The AGM was on December 13; thanks to all those who have served the club, and to those who will be serving by the time this appears. Congratulations to Dave Bailey for obtaining his BI rating. Peter Gray got to 12,000ft, on the way opening the higher flight levels of our new wave box by talking to Manchester ATC. The field is in excellent condition, and the latest smoothed and seeded area is now useable. As I've said before, if your airfield is waterlogged, come to Camphill and fly. We fly mid-week on Tuesday, Thursday and Friday. The new glider flying symbol near the windsock is now a rival for a certain white horse. There is great activity on the caravan front; the service trenches make it look like a battlefield. We have a new Puchacz on order for delivery in the spring, and the K-8 we acquired some time ago is proving both popular and profitable. We also hear rumours about a new Ximango on order, and yet another ASW 20 coming. We were sorry to hear about the recent death of one of our members, Phil Farnham, and our sympathy goes to his wife Jean and his two sons. Phil had not been active in the club for some years, but maintained contact through friends.
Dave Salmon

Dorset (Eyres Field)

IT IS good to report that we have enjoyed a very encouraging 2003. Much flying has taken place, 12 new members joined this year and there have been many achievements by our pilots. Our instructor base increased with Dave Piercy completing his Assistant rating. Gerry Cox and Carol Marshall have gained their BI ratings, joining Nathan Hanney who got his last year. Rob Wooton and Wolfgang Fischer have both re-soloed and are making good use of the K-8s. Barry Thomas is flying regularly again, both in the tug and in single-seaters. Rob Linee flew a 300km in his Skylark 4 to complete his Gold while his brother Tim, completed Silver in his Skylark 3. Jon Marshall (ASW 19) is well on his way to Silver, and Rob Monk has achieved his Bronze and also the Cross-country Endorsement. John Halford, having spent many hours totally restoring a Dart 17R, took a cloud climb to 9,500ft to give it a good airing. His Dart is one of only two in the country, we believe. Our Beagle Husky tug, G-ATMH, has been re-engined and is now working well. Increased numbers of trial lessons and many more instructional flights are helping to offset the large cost of the repairs. We now have six tug pilots available thanks to Bill Cook and Peter Molloy (CFI) who have helped with their training.

Club news

Alas, poor Doris! "Sorry – no 2 seat flying today" read the sign as ***Mendip GC****'s Bocian DRS disappears up her own thermal on Bonfire Night, condemned as a time-expired airframe... (Keith Simmons)*

Thank you to Gary and Jim for their help with catering and the clubhouse maintenance, and to Bill, Barry, Alan, Peter and Chip, who have kept our club gliders and the tug well maintained. Thanks as well to all the people whose various efforts help the club to run – you know who you are! We always welcome visitors so do drop in and fly with us. See our website for details.
Gerry Cox

Essex (North Weald)

A GROUP of members made the long journey to Aboyne from North Weald and thoroughly enjoyed the experience of flying in wave, some for the first time. Not only was the flying good, but the hospitality provided by the Deeside club was excellent. Our thanks go to them for making us so welcome. As in past years members have enjoyed a "flying visit" to the Mynd, which they thoroughly enjoyed, and our thanks also go to the Midland club for once again providing us such a good welcome. At last we have our Pawnee back to full working order, and we are all getting used to arriving at 2,000ft in a little over three minutes as opposed to five to six minutes! We must congratulate Rhys Dyer an ex-member of our club, now residing in Australia, on achieving a flight of 781km. Our CFI Don Ling is currently sunning himself in Spain. We hope he is bottling some good thermals to release on his return!
Peter Perry

Fenland (RAF Marham)

HOW do you have a Bonfire and Fireworks party without a Bonfire and without any Fireworks? A disco, barbecue and sparklers were the answer. And what a party we had! Cheers to Del and everyone who did their little bits for a wonderful evening. Oh, what rejoicing there was on a certain Sunday afternoon when Johnny Broom was sent solo by Bic Smith. Congratulations to JB. Congrats also to Rick Bartlett, who went solo at Bicester. Personal thanks to everyone at Crusaders in Cyprus for hosting my one-man exped! The AGM is approaching, so it will be time for my annual holiday in some sandy place not known for its liberal alcohol laws! I'm sure that you can guess where I'll be. One volunteer required please to look after all my trophies till I get back.
Graham French

Essex & Suffolk (Wormingford)

NOT having reported since August due to one thing and another I'll restrict my ramblings to the really significant achievements. Top of the list must be the fourth place achieved by Robbie Nunn in the Junior Nationals, followed by George Green, Tom Brenton and Peter Hibbard who finished respectively, 11th, 22nd and 45th. Once again we put up an excellent show in the regional competitions, with Paul Rice, Dennis Heslop and Johnny Gilbert finishing 3rd 11th and 12th and we also won the Anglia TV cup. It has been the best soaring summer for many a year and this has been reflected in many notable distance flights: Viv Halley did 800km for Diamond, Paul Rice, John Gilbert and Dennis Heslop all did flights of 600km or more and no less than nine people did flights of 300km or more (Ian Agutter and George Gren for Gold/Diamond) and seven others added various bits to their Silver Badges (three duration flights on the same day). Finally, Ged Coles and Doug Johnson soloed. Let's hope that 2004 is as good.
Steve Jones

Glasgow Caledonian (Portmoak)

DESPITE the winter we are managing to pull some members out of their comfortable beds every weekend for flying. We also had our first club meeting of the season and the new committee looks something like this. Sarmed Mirza, convener; Kareem El-Farargy, secretary; and Alisdair Pye, treasurer. First staff member of the University Stephen Wigley had his first flight and loved it. More interested students have contacted us from Glasgow University and we are looking forward to more new members joining us after the January exam madness. Just a reminder here that (thanks to Gordon McTweed at Caley Uni and Kevin Hook at Portmoak), students based at any Glasgow College and University can come and join us and fly at Portmoak. Contact us for more details. More information is also available on our website at *http://CaleyGlide.sarmed.com*
Sarmed Mirza

Highland (Easterton)

OCTOBER is the month that will be remembered this year by Geddes Chalmers. He had just brought a LS8 and on his third trip in it he declared his Diamond goal – and got it by flying in wave from Easterton to Ballachulish and back. This was very well reported in a local paper with the art and aims of gliding being well explained. An added bonus for Geddes was to claim the CFI's crate of beer for the first declared and completed 300km from Easterton. Well, done Geddes! Over the past few weeks it has been a pleasure to welcome members from Feshie to fly with us while their strip had some repairs carried out on it. They were able to sample our ridge and some wave flying. With oxygen bottles charged we hope to have a few height claims over the winter.
Roy Scothern

Kent (Challock)

WE WERE very pleased to welcome BGA Chairman David Roberts to our annual dinner. Among the award winners this year was Andy Young, who gained the Ab Initio Shield for his determination in going solo. We have a good number of new members and are currently running an ab initio course so, we hope, come the spring there will a new group of pilots sporting Bronze legs. On the subject of Bronze, the committee has decided to issue a new annual award for the most deserving pilot of Bronze standard. This is in memory of club member Don McLeod, who died after a short and sudden illness. Don had been at the club only a few days before, having just completed his much-coveted Bronze Badge. A hard-working and popular member, he is and will be sadly missed.
Caroline Whitbread

Lakes (Walney Island)

THE annual bash was ably organised by Linda Dawson and Andy Tebay, Andy undergoing on-the-job training for his new post as social secretary. The silverware was dished out as follows: The Duddon Trophy, Lonsdale Trophy, Leighton Hall Trophy and Elegant Windows Trophy all went to Peter Redshaw. He was forced to share the latter with Dave North, but only because it was a prize for the best flight in a two-seater! The Dodd Trophy for most outstanding progress during the year was won by Jan Eldem, who gained solo, Silver height, Gold height and the Club Ladder in his first flying year. The Alsford Trophy for the best gain of height went to Peter Lewis for a gain of 13,650ft. The Sir Leonard Redshaw Trophy for the best flight by a non-Silver pilot was jointly awarded to Jan Eldem and Phil Storer. The Optimum Financial Services Trophy for best gain of height in a two-seat glider was won by John Martindale and Emma Griffiths for a gain of 8,600ft. The Club Ladder went to Jan Eldem, who showed a clean pair of heels to the pundits. The Wooden Spoon was, perhaps, the most hotly contested trophy this year but fear of litigation prevents the nominations being printed. Suffice it say that Peter Redshaw added it to his collection, despite a strong entry from the previous recipient – who had managed to lose the spoon! Airfield improvements are being undertaken by our landlords at present and preventing any flying so any visitors should visit out website – *www.lakesgc.co.uk* – for updates before travelling.
Neil Braithwaite

Lasham Gliding Society (Lasham)

WE welcome Gordon MacDonald as our new CFI, and Colin Watt as Senior Staff Instructor. Gordon holds the

record for the shortest time from a field landing to an ice-cream purchase, four-and-a-half minutes in a field in Gloucestershire. Our new manager, Colin Dennis, is attempting, with the help of Phil Phillips, to eradicate 20 years of power flying bad habits and move on to the pure sport of gliding. Al Bamford enjoyed his summer as staff tug pilot, logging 200 power hours. After four years as chef, Rob Ellis is leaving to join the police force. He will be returning for tea and the famed Lasham rock cakes. Over 40 powered aircraft flew in from Popham, Old Sarum, Brimpton and Bournemouth. A repeat has been requested for next year. A motorglider NPPL glider pilot conversion course in one week has been organised. Nan Worrell is editor of the *Lasham* newsletter. The autumn issue contained 20 pages of informative and interesting news. Thanks to all those who helped to organise 2003's successful competitions. Bob Johnson welcomes applicants for the Lasham Cadet Scheme. This year has produced several Silvers and two Bls are in the pipeline. Our launch prices were reduced this year, resulting in a significant increase in the number of launches. We are discussing the future development of the clubhouse, hangar and caravan park.
Tony Segal

London (Dunstable)

OUR flying season continued well into November with pilots taking advantage of good thermic flying days. At the annual dinner, cups were presented including the new Ray Steward Trophy presented to Steve Jarvis for best aerobatic instructor. Our memories of the Black Mountains are still fresh from October when we found easterly wave for six days, which took us to 10,000ft each day in spite of the strong rotor. Graham Paul gained Gold height. Thank you Black Mountains GC for the enjoyable time. Our winter evening programme is again popular from quiz night Full Cat Challenge to Parachute Safely presented by Mike Woollard, when a chute was deployed and inputs given by two pilots who recently made use of their parachutes to escape safely. Weekend and club ladder statistics showed a total of 103,427km flown – probably the best on record. Bonfire Night's Buttocks Trophy found a winner in Richard Cooper, who managed to launch an egg by rocket and land it safely without breaking the shell. Welcome to the BBC GC who have joined us with a K-21 for winch launching and trial lessons. Our spring expeditions to Cerdanya and Sutton Bank are filling.
Geoff Moore

Mendip (Halesland)

IT WAS touch and go whether to submit this entry as an obituary. Doris is no more. With tears welling up and a choking voice I must reluctantly report on the demise of our Bocian 1E, DRS, better known as Doris. In the first flush of youth she spent her time at the Coventry club and appeared in the famous picture being carried across the road. She then spent a few years at Easterton before coming to the South West in 1996. When her elevator push rod failed – on the ground, fortunately – it drew attention to the fact that she was, well, a bit long in the tooth! Last-gasp surgery was rejected as costing more than she was worth and at our Bonfire Night party she was consigned to the flames and disappeared up her own thermal. We shall miss her but her replacement, the new K-13, is rather nice!
Keith Simmons

Needwood Forest (Cross Hayes)

THE year might be drawing to a close, but that's more than can be said for our soaring season. Our site is in a fantastic condition and the weather is allowing us to operate frequently with good soaring flights achieved. We've been making the most of the time and as a result I must congratulate Terry Middleton and Berian Griffiths for completing their Bronzes. We've also got a new glider on our fleet in the shape of a K-13. Thanks go to those who did the legwork in finding her. Our launches were down a little throughout the year compared to last, but that seems to be because we're better at staying up. Our airtime increased somewhat over last year and the various other achievements we have made mean that this year will have been our best in the time we've been at Cross Hayes. The committee are busy putting together various events for the winter after the success of the events we enjoyed last time. If you'd like to find out more then come to *www.gogliding.co.uk*.
Paul Machacek

Norfolk (Tibenham)

APPROPRIATELY, the 100th anniversary of the Wright brothers' flight at Kitty Hawk on December 17, 1903, fell on a Wednesday, traditionally our senior citizens' day at Tibenham. Our oldest, boldest pilot first soloed in 1937 and was instructing in 1939 and we have others with WWII experience. So the anecdotes flew, as ever, thick and fast. Those attending received a commemorative mug and the day's activities ended with a fine roast dinner plus trimmings. Sadly the *Tibenham Thermaller*, our club magazine, has now ceased publication. Sincere thanks go to the long-time editor/producer, Bonnie Wade, who is stepping aside to concentrate on her roles as club secretary and competitions administrator. Our previous secretary, Josie Briggs, has kindly undertaken to fill the gap using the club website. Like most clubs, we recorded some fine flights last year. Bob Grieve completed his Diamond Badge, with Phil Foster, Jim Lawn and Chris Pollard achieving Diamond goals. Tim Davies and Des O'Brien gained their 100km Diplomas; while young Tom Smith duly went from solo to Silver in one year. Phil Burton also completed his Silver and, at the very end of 2003, Mike Tate soloed. This year we are looking forward to hosting the 18-Metre Class Nationals and later in the season the Open Class Championships alongside the Eastern Regionals.
Alan Harber

Oxford (RAF Weston-on-the-Green)

SO, just like last year we had the AGM. In a sombre moment, chairman Pete Brooks announced he would be stepping down from the chair (sic) after many years of stalwart service to recharge his batteries. Many thanks to Pete for all he's done during his tenure. Paul Rogers was voted in unopposed to fill his shoes, about the only thing that will keep him still. Awards handed out that evening went to Howard Stone for topping the club ladder (again!), Graham Barret for taking 'Lou-Lou' off around the country for hours, Chris Shepherd for continuously getting the CFI out of the effluent and Anthony Buck for being the first to stay up for five hours in a club aircraft. Simon Walker had it taped and was presented with the bouncing brick.
Steve McCurdy

Peterborough & Spalding (Crowland)

WE have two new solo pilots, Alex Hopwood and Ben Gilbert, congratulations to them both. Alex, like many of us, had some setbacks during training, but sheer grit and determination pulled her through. Ben, one of our Cadets, took his solo flight just before his 17th birthday and, in December, joined the Royal Air Force as a trainee Flight Ops Controller intending to convert to pilot training. We wish him good luck and thanks for his hard work and commitment. Our annual trip to Aboyne produced four Gold heights – Sheena Fear, Rob Theil, Martin Ewer and Dave Crowhurst – and, not to be outdone, Peter Kettle attained his Gold height in the USA. Dave Mason has now taken on the task of tug manager from Al Flintoft. We thank Al for his hard work over the past few years. More than 50 members and guests gathered in the clubhouse in November to celebrate the completion of the lease agreement for our airfield. We partied the night away in true Crowland style. Happy New Year, everyone. Fly safely.
Joan Pybus

Cadet Ben Gilbert, solo, at ***Crowland*** *with Gerry Pybus (by kind permission of the* Peterborough Herald & Post*)*

Portsmouth Naval (Lee-on-Solent)

THE summer seems a distant memory, but we are keeping busy with lots of *ab initio* flying, particularly with our members from Southampton and Surrey Universities. Our new K-21 is proving very useful in this role and together with our existing K-21 and the Faulkes Flying Foundation DG-505, the two-seater fleet has taken on a distinctly modern look. Our instructor ranks are also looking more modern with the addition of Mike Pettican and Dave Youngs as new Bls. Only slightly less modern, Mick Hazzard makes room for them by moving up to an Assistant rating. Belated congratulations are also in order to George Gifford for his five hours, which I omitted to mention in the last issue. Mike Hazzard is using his vast knowledge of bars around the world to lead the redecoration of the club bar. Tony World, our Chief Financial Instructor, has managed to save the club £33,000 per year by obtaining 100 per cent relief on the rates. It remains to be seen if he can do the same for all the members. Taking stock as the year is drawing to a close, it is pleasing to report that launches are up by nearly 25 per cent over last year and we look forward with eagerness to what the New Year will bring.
Steve Morgan

Rattlesden (Rattlesden)

A FITTING end to the season was had by the attendance of many at our annual dinner. The venue was The Angel in Bury and our thanks go to the organisers. Solo certificates were presented to David Salvage and Gary Shepard; and Karen Wright and Simon Barnes both received certificates for re-soloing. The landlord's cup for the most improved pilot went to Keith Goldsmith. The woody winch went to Pete Harrison (again!). Mark Taylor was presented with the numb bum cup for a flight 518km long and the Jean Towse cup for the best flight in a club glider went to Tony Bartlett for his flights in the Pegasus during Inter-club League. Site improvements continued over the summer with the clubhouse being re-plastered and, in memory of the 447th bombardment group, who still visit us every four years, it has been returned to its original camouflage colour. The workshop hangar is now complete with new doors thanks to Nigel Clarke and the grass cross-runway has had its holes filled in thanks to a dedicated team one work weekend. A trip to Sutton Bank in October was successful. We took our club Pegasus and although the ridge lift seemed to be elusive a good time was had by all. Our K-21 has been sent to Poland to be re-gelled, ➢

Club news

***Stratford** members caught on camera at **Camphill** (from left): Dave Whitehall, Dave Benton, Club News contributor Harry Williams – demonstrating his motorcycling skills – and Peter Kenealy (Melanie Whitehall)*

but should we hope be back in the New Year just in time for white card checks! Congratulations to Kevin Western on the completion of his Silver, Nigel Clarke on becoming the latest Basic instructor and to Geoff Armes for finally finding Gransden for his 50km. It is during these wet months that we are grateful for our concrete runway, so any members from flooded grass runways will be made welcome.
Cathy Page

Scottish (Portmoak)

AS I write this, we are almost half way through December, and its been a long time since we've had good flying weather this late in the year. The badge-hunting visitors have gone home with a good haul this year so if you're looking for that elusive badge leg, why not join us at Portmoak? Our recently appointed full-time instructor, Graham Smith, is now well settled and preparing for a busy year. At the end of November, around 60 members attended our Information Meeting and were given an opportunity to discuss the club's 10-year strategic plan. High on the agenda was our new hangar, and we even had an animated 3D slide show showing aircraft layout inside the hangar. Achievements since last issue include: first solos by David Turtle, Martin Ling and Graeme Neill; and Bronze Badges for David Hyde, Gary Scott and Craig Chatburn. Graeme also gained his Silver height, as did Jim Mattocks. John Munro completed his Silver. Alisdair Stewart and David Allan are now BIs, and Archie McGirr completed his NPPL (SLMG).
Ian Easson

Shalbourne Soaring Society (Rivar Hill)

CONGRATULATIONS to Steve Gaze for his first solo, and to Martin Hoskins for gaining his Full rating. Both Martin and Jim Gavin are now joint DCFI, Carol Pike having stepped down from this post. The AGM took place in early December, and was probably the shortest for some years. Geoff Nicholls and Colin Baines have stepped down from the committee to be replaced by Siegfried Vallei and Ayala Liran. John Day was awarded a well-deserved honorary life membership. You know that the poorer weather has arrived when the winter lectures begin. Cross-country lectures kicked off with Liz Sparrow and Kay Draper telling us all about their flying experiences in the 2003 Women's Worlds. Ayala Liran has been busy sorting out other guest lecturers. The lecture series for aspiring Bronze Badge holders is being assembled under the guiding hand of Richard Dann.
Liz Seaman

Shenington (Shenington)

WE'VE had a great autumn but finally our intensive courses have wound down until March. We will be flying midweek on the better days – ring the office for details or check our website at *www.gliding-club.co.uk* for details. With two hard runways it takes a lot of rain to drown our site! Congratulation to Steve Codd for doing Diamond goal/Gold distance. Dates for the diary: our annual dinner is on Saturday, February 7, 2004; we may be hosting the Wooden Ships comp in May; we have a British Medical Pilots Association Meet in July; the task week will be in August. We are also hoping to run an Overseas Soaring Course for members, courtesy of the European Soaring Club. We look forward to seeing you in 2004.
Tess Whiting

South London (Kenley)

WE have been flying on every available week day during the winter. Our new Grob two-seater and our new Tost winch are giving excellent service. We had an excellent Christmas dinner enjoyed by more than 70 members and their guests. Roger Coote joined us and told a few stories. Congratulations to Dennis Henley who has managed to secure his ambition of achieving over 1,000 launches in K-8s. Dennis, 78, is working hard on his second thousand. We plan an expedition to Jaca at Easter and flying at Le Blanc this summer.
Peter Bolton

Southdown (Parham)

THE superb weather during 2003 raised morale, enhanced the flying statistics, and put a smile on the face of the treasurer. We bought a motorglider to speed up the basic training programme, and it has proved to be a great success. We are running the new NPPL TMG and we are delighted with the response from up-and-coming young pilots. John Wilks has retired from instructing; the members who graduated on evening courses will be particularly grateful for his many years of service. We hope to add a high-performance two-seater to the club fleet as soon as a suitable machine becomes available. This will provide opportunities for advance cross-country training, in anticipation of the fabulous summer that we are all expecting this year. With a new 21-year lease, a modern fleet, and prospects of a fast-track course for *ab initios*, we feel that Southdown really is a club for the 21st century.
Peter J Holloway

Stratford on Avon (Snitterfield)

OUR chairman, Geoff Butler, has now officially handed over to his successor, John Dickinson, after nine years in the hot seat. We thank Geoff very much for all his efforts in steering the club through some difficult and controversial times, including the infamous foot-and-mouth epidemic. With our new secretary, Andy Balkwill, and our new chairman, we look forward to some steady progress, with increasing membership and a sound financial footing as reported at the AGM. All we need now is a new safety officer to take over from Roy Wood, who has held that post for eight or so years. Also at the AGM, Peter Fanshawe was presented with a Chairman's Award for his contribution as CFI; Peter acknowledged tremendous support from members and fellow instructors. Thank you again, Geoff, Andy, John and Roy from us all. Other awards at the AGM were: Best Flight in Club Aircraft (John Dickinson); Spitfire Trophy (Mark Parsons for two flights of more than 300km in his Dart 17); Fred Haines Shield (Allan Wright for long and meritorious service as senior instructor); and the John Simonite Trophy (Lee Ingram, for seeing through various ground maintenance projects). Congratulations to Dave Beckett on his first solo, in October. The new diesel generator has been completed in time for winter weather, thanks to sterling efforts from Barry Monslow, Martin Greenwood and Bob Horsnell, to name a few.
Harry Williams

Surrey & Hants (Lasham)

IN 2004 the club will be extending its support for younger members by making its reduced rates available to all in the "25 and under" age group – basically, the BGA "Junior" definition – and in full-time education. This means reduced membership and soaring charges and access to a "free" (free soaring) K-8. Not surprisingly given the weather, 2003 ended with almost all the gliders – not to mention some of the members – having flown more hours than for some years past. The exception was a few weeks of high summer when the hot-and-blue clamped down on us, and it shows in the figures. It all seems a long time ago! We welcome new and continuing members to a new year with S&H, and hope it is even more successful for everyone than 2003.
Graham Prophet

The Soaring Centre (Hus Bos)

CONGRATULATIONS to Kevin Fisher on completing his Cross-country Endorsement, and to Paul Crabb, who flew the last 100km of the year. The annual home-made hot air balloon competition was very well attended with about 15 balloons being launched in total. In spite of strong winds, most took to the air, and provided a fun couple of hours for participants and spectators alike. An excellent bonfire and fireworks display followed. An EGM was held in November to propose that our current CFI remain in position for the time being. There was also an excellent presentation and discussion on the future plans for the club. On December 6, the club celebrated 100 years of flight, with a small gathering and drinks and nibbles. The annual dinner was once again a great success. Congratulations to the many club members who received awards and trophies! A further part of the peritrack has been resurfaced, which much improves our winter operation. The single-seat hangar door is being rebuilt and the club Discus is being refinished. Many thanks to all of the club members who have willingly given their time to complete these important projects. One of our club Puchaczs is also in Poland being refurbished and re-lifed. During 2004 the BGA will be basing its flying operations at the club.
Siobhan Crabb

Ulster (Bellarena)

IT was nice to see a very large turnout for the AGM in early December, which saw the election of several new committee office bearers: Jay Nethercott, chairman; Philip Hazelhurst, treasurer; Richard Charlesson, site officer and Martin Earle, co-opted health and safety officer. Tom Snoddy was returned secretary, Bob Cochrane as technical officer, Alan McKillen as tug-master and yours truly as publicity/development officer. The complaints officer posts were filled by Jim Wallace

Obituaries

and Morag McClurg. Two new directors – Jay Nethercott (three-year term) and Harry Boyle (one-year term) were appointed. Tribute was paid to outgoing chairman and director Laurence McKelvie for his sterling stewardship of club business in what had been a sad year, with the death of two long-serving and dedicated members, Ron Lapsley and latterly Joe Taggart (see obituary, this page). Winter wave came good for Jim Weston and Harry Hanna with both achieving 100km out-and-return and heights of 9,500ft and 8,000ft respectively. For good measure Mike McSorley joined in with a 76km out-and-return in his K-6cr.
Seamus Doran

Vale of White Horse (Sandhill Farm)

2003 turned out to be a very good year for us, with the combination of fine weather and availability of our own tug resulting in nearly twice as many hours being flown as in recent years. Our annual dinner and prizegiving was in November and awards went to Ed Foggin, Stuart Pepler (for a wave flight from our flatland site to the Long Mynd and back), Mike Skinner, Mike Leach, Peter Scheiwiller, Bill Bolton, Pete Berridge, and Graeme Scott. We are now planning our winter activities, including an expedition in the spring, and thinking about next summer. We hope the coming year will be another good one for us, and indeed for everyone in the UK gliding movement, and we look forward to welcoming more visitors in 2004.
Graham Turner

Welland (Lyveden)

THE Sutton Bank Expedition experienced mostly thermal conditions in early October. Members tried out Yorkshire's DG-1000 and pestered our treasurer. Andy Lockwood, used to our K-8, took it easy with the Discus by initially flying it with the airbrakes out, much to the consternation of those on the ground. The Aboyne trip saw daily flying in warm southerlies. Bill Burgess flew to 16,000ft and his Gold Badge and discovered a safe if scary outlanding field in the Highlands. We are basing the club's Cirrus at Dishforth for the winter for more hill and wave adventures. The annual dinner and dance included our prizegiving. The CFI Shield and Ladder Shield went to me for persistently flying cross-country (3,200km without mishap); Mark Rushden got the Ladder Cup as runner-up: Ken Wells earned the Rigging Pin for attempting to launch the winch: Laura Lindell took the Flying Lara Croft Award for her NPPL and giving a blow-by-blow account on our web forum: Dom Chisholm took a cup, The Longest Pre-Silver Flight Award, and Michael Neal again took the Best in Wood Award. I think Lisa Shepherd was presented with an award again, for keeping the club finances afloat with the kitchen proceeds. There is a drive to instil a culture of early starting over the winter in preparation for the soaring season so that the tractors and winch have been warmed up recently before the coffee and bacon butties.
Strzeb

Yorkshire (Sutton Bank)

AS the nights have drawn in the unperturbed YGC have valiantly faced the cold and chased the wave. For the bonfire whole trees were gleefully piled together and a small but merry group was treated to an impressive display of fireworks. Nanny Oggs' punch helped lubricate the cold revellers and a pumpkin competition was won by Emily Carter. Since then our K-13 has been sold to Needwood Forest as part of our ongoing upgrades to the fleet, and we wish them many happy flights in her. We received a visit in December from Jean Watson, a lady whose father was a member in the 1930s, and she returned the trophy he had won 70 years ago!
Alex May

Hastings Bryan Middleton – Bicester, Oerlinghausen, Scottish, London

BRYAN (1944-2003), who died on December 10, came from a Dorset landowning family of Norman origin. Following family tradition, he joined the Army, learning to glide at Oerlinghausen and continuing at Bicester. After service in Borneo, he left the army, taking an American CPL in 1970. He worked at Perth instructing airline students (gliding at Portmoak), at White Waltham, in the Sudan, Vietnam, and in Florida, where he was the target for a new generation of air-to-air missiles – dodging them to reveal flaws in the system. He then worked for Brymon at London City, Manx at Cardiff and Scotair at Luton. All this time he went gliding from Dunstable, being a stalwart on the tugs and always ready to go on a road retrieve. He had shares in an ASW 20 and a Sky, "Gertie," (whose 50th birthday he celebrated with a formidable home-brew – "Old Gertie") and owned a Lak 12 outright. He accumulated more than 18,000 flying hours, mostly on turboprops. A prominent member of the Vintage GC, he was a familiar figure at international rallies. Bryan married a glider pilot, Liana, in 1980, who intends to join the club in order to keep Gertie flying. Bryan was one of the old school, brave, loyal, and prizing loyalty, generous to a fault, intolerant of duplicity, and a stalwart friend. He will be much missed.
Richard Cooper

Brian Edwards – Booker, South Wales

BRIAN James Edwards (1937-2003) died suddenly in the autumn and with his passing the club has lost yet another of its characters and an ever-present instructor. He had clocked up more than 6,000 flights and 1,500hrs in over 30 years' gliding. He was born in Birmingham in 1937 and was educated at Moseley Grammar School and Birmingham University. Brian was a Fellow of the Institute of Chemical Engineers and an AMI MechE and spent a lot of his time, when not at Booker, looking after anything mechanical, ranging from a TR2 to a Banana yellow V8 Rover (which he owned for about 30 years) to his Citroen. His most recent glider was a DG-303 Acro, his first an IS-29, which he owned at Usk, where he started his gliding career in 1971, after a strong desire to learn to fly years earlier as a teenager. Shortly after moving to Wales as a gas apprentice he accepted a job at Monsanto as a Chemical Engineer, moving to London (and Booker) after about 15 years and staying with the company until the early 1990s, when he became a consultant and an almost permanent feature at Booker. Apparently as a teenager he built his own motorcycle, was an Elvis fan and a teddy boy, although we knew him as a quiet, kind and private man with a wicked sense of humour and commentary on the current Government. We all miss him greatly and our thoughts are with his two daughters, Michelle and Janine, and the grandchildren.
Roger Neal

Bruce Owen – Booker

IT IS with great sadness that we report the death of Bruce Owen. He came to Booker following a successful career in sailing. He had in fact been World six-metre champion, a feat that he later repeated. I met Bruce when I was asked by Brian Spreckley (then CFI/Manager at Booker) to introduce him to gliding after Brian had met him at a marina. Bruce immediately saw the challenge that gliding offered and, like everything he did in life, nothing would stop him. It was only a few short weeks later, by now flying solo, that he bought his first glider, a Centrair Pegase, which he had finished in his own bespoke trim and colour scheme. We were beginning to realise that Bruce was somewhat special; however, the next thing he did was quite astounding. Hearing that the recently introduced ASH 25 was arguably the best available glider in the world, and had the advantage of two seats, he called Schleicher and ordered one for the earliest possible delivery – and should they have a cancellation he could take delivery within a week. A month later Bruce was the owner of 162, the most beautiful glider I had ever seen. Bruce was a man who seemed to have the ability to achieve almost anything he wanted, yet to say he was big-hearted and generous is an understatement. Many people had the opportunity to fly in his wonderful glider and Booker never had a better friend. To be taken from his friends and family at the far too early age of 57 is a tragedy. Bruce was one of a kind and we will miss him.
Martin Breen

Jimmy Robson – Yorkshire, NE 31 GS

JIMMY ("Robbie") Robson (1913-2003), who has just died in Sunderland aged 90, was one of the diminishing band of pre-WW2 club glider pilots who helped lay the foundations of our movement. A school teacher by profession, he learned to glide at Sutton Bank in the late 1930s and became an officer in the Sunderland Air Defence Cadet Corps No 111 Squadron. Here, his gifts of leadership and instructional ability, as well as his skills as a craftsman, helped inspire many of the cadets in their choice of a future in aviation and the RAF. An EFTS instructor at 15 RFS in the first part of the war (during which time two or three of us cadets benefited from some highly unofficial dual on Tiger Moths), by mid-1944 Robbie was ranging widely over Europe in photo-reconnaissance Spitfire XIs, dodging Me 262s and 163s as necessary. After the war he became a very effective CO of NE 31 Gliding School at RAF Usworth until it moved away in the 1950s. Robbie was a man of many parts; a natural pilot, a dedicated school teacher, an outstanding flying scale modeller, an artist, and a sometime designer of covers for *The Sailplane and Glider* (later *Sailplane & Gliding*). He liked to say that his log books twice showed an AD Piggott, initially as an RAF pupil pilot and later as a post-war RAF glider instructor "trapper" and an ATC Cadet, JD Spottiswood, later Air Vice Marshal and Chairman of the BGA.
Peter Hearne

Joe Taggart – Ulster

JOE Taggart (1930-2003) was one of the first members of the Ulster GC (founded 1930) when it was revived in the early 1960s and it remained his main sporting interest throughout his life. He was a tremendous asset to the club and a typical multi-skilled glider pilot. As well as being an instructor and tug pilot he was capable of fixing aircraft, repairing engines, driving tractors, tow cars and winches and skilled at building and carpentry. This was only to be expected, as Joe had his own building company, which constructed the radio mast network for the Northern Ireland Fire and Ambulance Services. When we moved to Bellarena, our present site, Joe took a break from gliding due to family and business commitments but returned again with great enthusiasm in the early 1990s. He joined a glider syndicate and had much enjoyable soaring before buying a Ventus Turbo three years ago, which he flew until his recent illness. Joe was a very forthright person. He could explain very succinctly to an erring club member the difference between a spade and a shovel! But he was also a most generous person, particularly to the club. One had only to mention that a bit of equipment was required – a box for tools, a compressor or a radio – and shortly they would appear. He was always cheerful and at weekends would often stay at Bellarena in his caravan, where there would be a few drams with friends after flying. Joe was one of those unforgettable characters who brightens everyone's life. Our thoughts are with his wife, Gay, and his family.
Jeremy Bryson

BGA Badges

No	Pilot	Club (place of flight)	Date
BGA 750KM DIPLOMA			
42	Craig Lowrie	Southdown – 759.6km	15/8/03
DIAMOND BADGE			
655	Ian Molesworth	Southdown	15/8/03
656	Alan Broadridge	Bidford	30/8/03
657	Dave Smith	Bicester (Aboyne)	24/9/03
658	Max Dowding	Lasham	15/8/03
659	Geoffrey Lyons	Booker (Abyone)	3/10/03
660	Ian Craigie	Four Counties (Hus Bos)	11/7/03
661	Mervyn Saunders	Lasham	15/8/03
Diamond Distance			
1-960	Ian Molesworth	Southdown	15/8/03
1-961	Alan Broadridge	Bidford	30/8/03
1-962	Max Dowding	Lasham	15/8/03
1-963	Mark Holden	Ports. Naval (Bicester)	14/8/03
1-964	Paul Foreman	Booker (Tocumwal)	27/12/02
1-965	Ian Craigie	Four Counties (Hus Bos)	11/7/03
1-966	Mervyn Saunders	Lasham	15/8/03
Diamond Goal			
2-2978	Ian Plant	Northumbria (Nympsfield)	30/8/03
2-2979	Robert Gooden	Essex & Suffolk	14/8/03
2-2980	Peter O'Connell	Lasham	15/8/03
2-2981	Nicholas Swales	Midland	15/8/03
2-2982	Mark Brown	Fulmar (Nympsfield)	30/8/03
2-2983	Philip Punt	Bowland For. (Hus Bos)	15/8/03
2-2984	Mark Rushton	Welland (Hus Bos)	14/8/03
2-2985	Michael Leach	Vale of White Horse	30/8/03
2-2986	Colin Sutton	Buckminster	30/8/03
2-2987	Mark Holden	Ports. Naval (Bicester)	14/8/03
2-2988	Paul Foreman	Booker (Tocumwal)	27/12/02
2-2989	Peter Nash	P&S (Dunstable)	16/8/03
2-2990	Nick Parkin	Cotswold	15/5/03
2-2991	Tom Newham	Four Counties	14/8/03
2-2992	Stephen Baker	Lasham	30/8/03
2-2993	Gavin Deane	Cambridge	16/8/03
2-2994	Derrick Sandford	Shenington	15/8/03
2-2995	George Green	Essex & Suffolk	20/8/03
Diamond Height			
3-1613	Dave Smith	Bicester (Aboyne)	24/9/03
3-1614	Andrew Mason	Four Counties (Aboyne)	17/9/03
3-1615	James Tait	Highland	13/9/03
3-1616	Philip Evans	Booker (Abyone)	6/10/03
3-1617	Geoffrey Lyons	Booker (Abyone)	3/10/03
3-1618	Emily Bryce	Bicester (Aboyne)	24/9/03
3-1619	Tom Holloway	Deeside	13/9/03
3-1620	Rodney Murfitt	Lakes (Portmoak)	7/10/03
3-1621	James Ewence	Yorkshire (Aboyne)	9/10/03
GOLD BADGE			
2302	Ian Plant	Northumbria (Nympsfield)	30/8/03
2303	Christopher Gill	Fulmar	19/7/03
2304	Philip Punt	Bowland For. (Hus Bos)	15/8/03
2305	Alan Boyle	Scottish (Gransden)	30/8/03
2306	Graham French	Fenland (Portmoak)	3/10/03
2307	Dave Crowhurst	P&S (Aboyne)	14/10/03
2308	Mike Knell	Bannerdown (Aboyne)	7/10/03
2309	Hannah Hay	Booker (Abyone)	7/10/03
2310	Michael Mann	S&H (Aboyne)	14/10/03
2311	Robert Theil	P&S (Aboyne)	14/10/03
2312	Tom Newham	Four Counties (Aboyne)	15/9/03
2313	Ernest Burgess	Welland (Aboyne)	13/10/03
2314	Roy Mitchison	Northumbria	24/9/03
2315	Ian Young	Oxford (Bicester)	15/8/03
Gold Distance			
Ian Plant	Northumbria (Nympsfield)		30/8/03
Robert Gooden	Essex & Suffolk		14/8/03
Peter O'Connell	Lasham		15/8/03
Nicholas Swales	Midland		15/8/03
Philip Punt	Bowland For. (Hus Bos)		15/8/03
Philip Jones	London		30/8/03
Kenneth Tutthill	Bowland For. (Hus Bos)		15/8/03
Mark Rushton	Welland (Hus Bos)		14/8/03
Michael Leach	Vale of White Horse		30/8/03
Steven Martin	Burn (Gransden)		30/8/03
Alan Boyle	Scottish (Gransden)		30/8/03
Colin Sutton	Buckminster		30/8/03
Thomas Beckwith	London		16/8/03
Mark Holden	Ports. Naval (Bicester)		14/8/03
Michael King	Cambridge		15/8/03
Paul Foreman	Booker (Tocumwal)		27/12/02
Peter Nash	P&S (Dunstable)		16/8/03
Nick Parkin	Cotswold		15/5/03
Tom Newham	Four Counties		14/8/03
George Green	Essex & Suffolk		20/8/03
Stephen Baker	Lasham		30/8/03
Gavin Deane	Cambridge		16/8/03
Derrick Sandford	Shenington		15/8/03
Ian Young	Oxford (Bicester)		15/8/03
Gold Height			
Christopher Gill	Fulmar		19/7/03
Graham French	Fenland (Portmoak)		3/10/03
Mark Szymkowicz	Bicester (Aboyne)		18/9/03
Errol Reilly	Booker (Aboyne)		3/10/03
Peter Berridge	Essex (Aboyne)		9/10/03
Dave Crowhurst	P&S (Aboyne)		14/10/03
Emily Bryce	Bicester (Aboyne)		24/9/03
Gail Stevens	Bicester (Aboyne)		24/9/03
Mike Knell	Bannerdown (Aboyne)		7/10/03
Tom Holloway	Deeside		13/9/03
Alistair Cook	Shenington (Sutton Bank)		9/10/03
Michael Smith	Bannerdown (Aboyne)		8/10/03
Hannah Hay	Booker (Abyone)		7/10/03
Charlotte Hocking	Bannerdown (Aboyne)		7/10/03
Paul Barnett	Lasham (Aboyne)		14/10/03
Robert Theil	P&S (Aboyne)		14/10/03
Martin Ewer	P&S (Aboyne)		14/10/03
Hendrik Stheeman	Lasham (Aboyne)		14/10/03
Alan Simmonds	Lakes (Aboyne)		7/10/03
Tom Newham	Four Counties (Aboyne)		15/9/03
Sheena Feer	P&S (Aboyne)		14/10/03
Ernest Burgess	Welland (Aboyne)		13/10/03
Roy Mitchison	Northumbria		24/9/03
Amanda Millar	East Sussex (Talgarth)		18/10/03
Rachel Hine	Four Counties (Aboyne)		18/9/03
SILVER BADGE			
11327	Ben Dorrington	Clevelands	31/8/03
11328	Michael Sandford	Kent	31/8/03
11329	Graeme Alexander	Bowland Forest	16/8/03
11330	Martin Cropper	Seahawk	9/9/03
11331	Ewan Crosbie	Scottish	12/9/03
11332	David Fear	Vectis	20/8/03
11333	William Bolton	Vale of White Horse	30/8/03
11334	Joan Munro	Scottish	12/9/03
11335	Simon Berkeljon	Lasham	31/8/03
11336	Bryden Mossop	Wolds	2/8/03
11337	Andrew Palmer	Lasham	20/8/03
11338	Michael Birch	Lasham	30/8/03
11339	Frederick Ballard	Bristol & Glos	4/10/03
11340	Andrew Durston	Portsmouth Naval	9/9/03
11341	Eugene Lambert	Cotswold	1/9/03
11342	Michael Witton	Midland	20/8/03
11343	Paul Foreman	Booker	27/12/02
11344	Keith Arkley	Borders	30/8/03
11345	Joan Wrightson	Cambridge	5/9/03
11346	Nouri Samsatli	Imperial College	19/7/03
11347	Tarrant Hocking	Bannerdown	28/9/03
11348	Tom Smith	Norfolk	16/8/03
11349	Peter Ballard	Shalbourne	28/6/03
11350	Stephen Skinner	South London	23/8/03
11351	Steven Myall	Nene Valley	21/6/03
11352	Jack Stockford	Kent	15/8/03
11353	Roger Barber	Lasham	25/8/03
11354	Roy Garden	Deeside	16/10/03

No	Pilot	Club (place of flight)	Date
11355	Stephen Baker	Lasham	30/8/03
11356	Michael Taylor	Welland	4/8/03
11357	Jamie Denton	Lasham	30/8/03

BGA 100KM DIPLOMA

Pt1	Roger Barber	Lasham	26/8/03
Pts 1&2	Robert Gooden	Essex & Suffolk	15/8/03
Pt1	Barry Woodman	Aquila	31/8/03
Pts 1&2	Alisdair Steart	Scottish	20/8/03
Pt1	Bryden Mossop	Wolds	2/8/03
Pts 1&2	Paul Haliday	Lasham	2/8/03
Pts 1&2	Chris Redrup	Lasham	30/8/03
Pts 1&2	Robert Richards	Four Counties	30/8/03

AEROBATIC BADGES

JB Maddison	Standard Known	3/8/03
Brian Griffin	Standard Known	25/10/03

CAN YOU HELP?

I AM trying to locate the following issues of *The Sailplane and Glider*, *S&G*'s predecessor, to complete the editorial archive and my own personal set of the magazine. If you are able to help us find any of them (for donation or sale) please contact *editor@sailplaneandgliding.co.uk* or call me on 01453 889580.

Volume 1 (1930-31): issues 1, 2, 3, 4, 5, 6, 8, 9, 10, 16, 17, 18, 20, 22, 23, 26, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42.

Volume 2 (1931): issues 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

Volume 3 (1932): issues 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

Volume 4 (1933): issue 18.

Volume 5 (1934): issues 2 (Feb); 3 (Mar); 4 (Apr); 7(Jul); 9 (Sept); 10 (Oct).

Volume 12 (1944): issues 1 (Feb); 7 (Aug); 11 (Dec).

Many thanks to all who have already helped. **Helen Evans**

Accident/incident summaries by Dave Wright

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
110	Astir CS	4471	Substantial	25-Aug-03 1550	Bicester	25	None	12

The early solo pilot had flown a check flight prior to conversion on to a new type. After a short soaring flight he set up the same circuit as he had flown earlier and failed to notice a slightly stronger wind and the undershoot that developed. The glider hit the boundary hedge, which swung it sideways into the ground, causing substantial damage.

111	Astir CS	2985	Minor	27-Aug-03 1545	Crowland	38	None	21

The pilot returned to the airfield after a short soaring flight and checked that the undercarriage was down and locked before joining the circuit. After a normal landing the undercarriage collapsed despite the lever being in the down and locked position. The front and rear undercarriage swing arms had broken.

112	Discus	4360	Minor	25-Jun-03 1651	Pocklington	29	None	21

This pilot was fairly new to the type, his first high -performance single-seater. While his previous flights had been without problem, on this occasion he appears to have over-controlled the roundout, hitting the tailwheel on the ground. He closed the brakes and lowered the nose, resulting in a heavy landing, which damaged the u/c supports.

113	SZD Puchacz	2520	Minor	21-Aug-03 1945	Hus Bos	47 –	None None	231 0

The pre-solo student had made several satisfactory landings prior to this flight and carried out the launch and circuit with verbal assistance from P1. At about the correct height he started to flare but did not round out sufficiently. P1 failed to take control in time to prevent a heavy landing on the front wheel, which burst the tyre.

114	SZD Junior	4144	Write off	01-Aug-03 1456	Pocklington	75	Serious	–

The glider was seen to be low and flying erratically as it returned to the airfield from local soaring. Rather than turn towards the airfield to land the pilot turned away and appears to have entered a spin from which he did not recover. He was very seriously injured and the glider written-off.

115	ASW 20		Minor	30-Jul-03	Aston Down	66	None	3700

After a short flight the experienced pilot returned to land and flew a normal circuit until the glider was seen not to descend on the approach. It appears he forgot to extend the undercarriage then used the u/c lever in error for the airbrakes. The glider landed long then ran into long grass before swinging sideways into a hedge.

116	ASW 27	4817	Substantial	25-Aug-03 1700	Booker	45	Minor	1800

During a marginal final glide in a competition the pilot, relying on his glide computer, encountered sinking air and mistakenly thought he could clear the boundary hedge. Rather than land in a small undershoot field he pressed on and crashed, probably after stalling, as he tried to clear the hedge. The glider rolled and finally stopped inverted.

117	Puchacz	–	None	Aug-03	Incident Rpt	26 –	None None	106 0

At about 1,800ft on the aerotow the tug end of the rope detached. After making sure that they were over open countryside, the glider pilot released the rope and flew back to the site. When the tug returned the pilot was unaware that the rope had been lost. Checks of the release mechanism found no fault and it later functioned normally.

118	Janus B	2359	Write off	17-Aug-03 –	Near Sutton Bank	36 44	Serious Serious	548 24

During a competition flight the pilots found themselves low while ridge soaring near the airfield and had to make a hurried decision to land in a field. The glider stalled and dived into the ground seriously injuring both pilots. The reason for this is uncertain but may involve flying too slow downwind near the ground and use of airbrakes.

119	ASW 27 & Discus	4338	Write off x 2	04-Sep-03 1500	Near Lasham	57 –	None None	491 2996

The two gliders were on a cross-country task from the same club when the leading glider turned to join a circling gaggle of other gliders. The second pilot, flying close behind, turned inside the first and lost sight of the other glider. In the resulting collision both gliders were substantially damaged and both pilots had to parachute to safety.

120	DG-200	3794	Minor	05-Sep-03 1430	Aboyne	49	None	544

After returning to the airfield after a cross-country wave soaring flight the pilot failed to complete his pre-landing checks. As a result the glider was landed with the wheel up on the tarmac runway, causing minor damage.

121	K-6CR	–	None	Sep-03	Incident Rpt	–	None	130

After rigging, the controls were carefully checked – including 'positives'. Despite this, at 500ft in the circuit the pilot lost aileron control. He was able to make a safe landing on the nearest runway by using rudder to turn. Inspection showed that a safety pin had contacted a bulkhead, forcing it out and allowing the connection to work loose.

122	LS6 & Ventus	–	Write off	11-Jun-03 1545	St Auban France	52	Minor None	2400

This mid-air collision occurred to a UK pilot flying a foreign-registered glider in France. After running along a ridge with another, slower glider, the pilot flew ahead then entered a thermal. After becoming established there was a collision as the other glider joined. The UK pilot successfully baled out and the other pilot landed safely.

123	Bergfalke 4	3551	Substantial	30-Aug-03 1352	Llandegla	69 –	None None	2000 0

After a normal launch P1 turned right then allowed his pupil to fly the downwind leg. It soon became apparent that the glider was passing through very heavy sink so he took control. He had no choice but to make a very hurried landing in a small field containing cattle. Unable to manoeuvre, he hit two of them breaking one wing and the tailplane.

124	K-18	2150	Minor	08-Sep-03 1820	Booker	67	None	–

After a normal touchdown there was a bang as if the glider had hit something. Retracing the wheel tracks back, the pilot found a deep hole and it was this that had damaged the glider. The poor area was later marked out prior to repair.

125	K-13	2944	Minor	06-Sep-03 1900	Haddenham	40	None None	– –

At the beginning of the launch the winch driver opened the throttle rather sharply, which resulted in the glider's tail striking the ground as it accelerated. The impact disconnected the elevator and the pilot quickly landed ahead with no damage or injury. Engineering investigation revealed anomalies, which are being investigated further.

Classifieds

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Please remember that, if you are emailing text, your advert may not appear unless we have received payment by the deadline

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British Gliding Association

THE 1000 CLUB MONTHLY LOTTERY

A great chance to win substantial cash prizes and at the same time enable the Philip Wills Memorial Fund to make loans to clubs for site purchase and development.

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Barry Rolfe, *Promoter*

To: Barry Rolfe, British Gliding Association, Kimberley House, Vaughan Way, Leicester LE1 4SE

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