Sailplane & Gliding

The wind in your hair

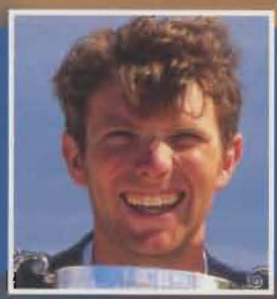
Tall tales of T-21s

Oct – Nov 2001
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World champions: three more Britons win Gold medals









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Willy Wilson (left) and Nan Worrell in T-21 993 near Lasham. Willy was one of two pilots who once took it to Salisbury and back, making an impromptu guest appearance at a village fete along the way. Nan's article about this much-loved glider type starts on p18 (the ***White Planes*** picture co.)

Sailplane & Gliding

18 The wind in your hair



Nan Worrell researches one of the UK's best-loved gliders, the Slingsby Sedbergh, or T-21 – its history, and all those apocryphal tales

22 More UK champions



British racing pilots have now taken five out of possible eight Gold medals in 2001's worlds. On p22 **Jay Rebbeck** describes the Junior team's win, while the women's victories are on p42

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Five pages about wave soaring start with **Al Eddie** outlining the basics of oxygen use. Then **Phil King** explains how to maximise your wave climbs with the help of GPS

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In the first of an occasional series by leading pilots, **Justin Wills** describes some of his early gliding experiences

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Royal Aero Club
and the
Fédération Aéronautique Internationale

From the BGA Chairman

WHO WOULD have thought that at the beginning of this year we would have had both such good news as well as bad for gliding? On the downside we had to restrict our activities for a few months because of foot-and-mouth. Some clubs are still subject to restriction as the foot-and-mouth crisis continues in the North.

We hope that the farming community will recover and we should do our utmost to avoid any associated risks in our activities.

But to cheer us up the good news is that for the third time this year we congratulate British world champions. First in January it was Pete Masson (Club Class, Australia) with Richard Hood a close second, then in June Steve Jones (18-Metre, Spain), and now in the space of two weeks in August we secured *three* new world champions in Gill Spreckley (Women's 15-Metre), Sarah Steinberg (Women's Standard Class), and Jay Rebbeck (Junior World Champion in Standard Class). Jeremy ("Jez") Hood, Richard's brother, was only 13 points behind Jay in 2nd place. Added to which, the British Junior team including Leigh Wells, John Tanner, Owain Walters and Luke Rebbeck took the World Juniors team Gold. This was a stunning performance, which I was able to witness for a few days when I travelled in August to Issoudun in France. Team flying again paid dividends. Maybe by the end of the year we shall add to this tally of Golds, with Worlds in South Africa. Who knows?

The junior end of our sport is in good shape, as I saw again at the Junior Championships at the end of August at Aston Down. These young people, and others who take part in gliding at a less competitive level, are the future of our sport and we should do everything we can to encourage and support them. I was about to say "and impart our skills and knowledge" but it seems that some of the junior competitors can already teach some of us older pilots how we can enjoy gliding and breathe greater enthusiasm and a sense of adventure into some clubs. I'll say one thing, though: they can certainly drink a bar dry at an end-of-comps party!

On a completely different theme, this year is the 100th anniversary of the founding of the Royal Aero Club, of which the BGA is a key member, and in many respects the continuing force in keeping it alive.

Plans are afoot for a celebration dinner, but the RAeC needs to re-define its role as the over-arching body for air sports in the UK. After its effective role for many years it seems to have lost its way in recent years. It can perform a much more useful function in the battles that lie ahead in Europe and closer to home to ensure the survival of non-commercial aviation. Part of my agenda is to bring that about.

David Roberts, BGA Chairman
September 3, 2001
d.g.roberts@lineone.net

STOP PRESS

One-day closure of UK airspace

GLIDING was grounded from 19.00hrs on September 11 for just over 24 hours. The closure of UK airspace to all except public transport and emergency flights was for security reasons, announced Prime Minister Tony Blair on the day that terrorists in the USA crashed hijacked passenger jets into the World Trade Centre and the Pentagon.

Fatalities in gliding accidents

WE are sorry to report the deaths of five UK pilots. On July 15, a collision involving a glider and an aerotow combination (all from Bidford) caused Rob Mousley's death. The tug and the glider on tow, though damaged, separated and landed safely. In an unrelated accident the same day, David Brown died in a winch launch accident at South Wales GC. RAFGSA pilot Ian Bentley was killed in a winch launch accident at Four Counties GC in August. And on September 14, two pilots died in a collision between Nympsfield's Pawnee and a Cirrus, both operating out of Aston Down. The tug was flown by Malcolm Gay, a member of both clubs, and Cotswolds member Peter Teader was in the Cirrus. Investigations continue into all five fatalities.

Royal welcome for Team

MEMBERS of this year's successful British Gliding Team will meet BGA Patron The Duke of Edinburgh at Buckingham Palace on Tuesday, November 27, 2001.

Keeping a watching brief on foot-and-mouth

AS *S&G* WENT to press in early September, Britain had just declared its 2,000th case of the infectious livestock disease, foot-and-mouth. Nearly four million animals have been slaughtered in a bid to contain the outbreak, described by the BBC as the world's worst. While the epidemic appeared to have peaked at the end of March, new cases were still being identified in Northumberland during September.

Most clubs are now operational again, although Carlton Moor GC is still shut. Midland GC is back cross-country and North Wales GC has returned to its site.

The BGA Executive at its meeting on September 5 was disappointed to note the resurgence of cases in certain areas. Because of this development it was not felt possible to introduce any further relaxations to the current position.

That position, which has been publicised over the summer to clubs and on the BGA website is re-stated verbatim *(right)*. For any further updates, see *www.gliding.co.uk*

If your club has suffered because of the disease, a list of sources of help is at: *www.defra.gov.uk/footandmouth/recovery/index.htm*

Modifications to the BGA Executive ban on cross-country flying (statement first published on the BGA website, July 10, 2001):
The relaxing of the ban on cross-country flying has proved successful, and following a number of outlandings during the club class nationals without problems with the farming community the BGA Executive Committee further relaxes the ban as follows.

Further areas outside the maps of infected areas: reference – *www.defra.gov.uk/footandmouth/cases/fmdcases/map.asp* **[NB: a new URL. The page had moved – Ed]**

In these further areas pilots may fly cross-country subject to the conditions already outlined on the BGA web pages (or see August-September 2001, *Ban lifted outside infected areas*, p13), and subject to the restrictions below.

And the following is reiterated:

The maps should be checked daily to ascertain the latest areas of infection.

It should be remembered that each cross-country pilot is an ambassador to the BGA, to maintain the relationship of the farming community on which we rely so heavily.

Cross-country flying will not take place over infected areas, or through narrow corridors between infected areas.

For clarity, corridors of less than 15 miles to be considered 'narrow'.

There could be a £5,000 fine from authorities for infringement of infected areas.

Individual clubs operating from airfields that allow access to stock or have unfenced roads giving access to airfields, which contain stock, are not covered by this relaxation.

All clubs must be diligent on their part in the prevention of any spread of the disease and effective 'mats' must be in place at ALL airfields. Club managements are reminded that to be effective 'mats' require at least daily maintenance and should remain wet with a disinfectant product (during prolonged hot weather this may require twice daily maintenance or more).

The 'mats' can be of a carpet material or straw long enough to be effective for the whole circumference of any wheeled traffic using the airfield.

Retrieve traffic must carry out an effective disinfectant procedure.

Any questions or concerns of the location and operation of individual clubs can be directed to:
harryandmarjorie@middleton700.fsnet.co.uk



JEZ Hood (left), Silver Medallist in the Junior Worlds, gives the end-of-competition speech in the Junior Nationals at Aston Down, which he won. Al Kay won the 15-Metre Nationals at Booker, which was moved to the end of August because of foot-and-mouth. The winner of the Midland Regionals was Paul Crabb. First in the Inter-Services Open Class was T Mitchell while A Jelden won the Sport Class. Gransden winners were Norman Parry (Club Class) and Chris Starkey (Sport Class). Dunstable Regionals Blue Class was won by John Jeffries (P1) and Red Class by Paul Rackham. The Mountain Soaring Competition at Deeside was won by Phil King. The winner of the rescheduled Tibenham Regionals was John Wilton. Results tables and further reports in the December-January issue

Time to own up on airspace

IF YOU'VE ever infringed controlled airspace in the UK, the Civil Aviation Authority is asking you to own up – in confidence.

It has just launched an 18-month project, *On Track*, in a bid to understand why airspace infringements happen. Run by three independent pilots with previous experience of confidential projects, it aims to tackle the problem by asking the people at the sharp end: pilots and air traffic controllers.

Infringements, when an aircraft enters airspace without permission, can delay commercial flights and even threaten safety, but the reasons why they occur are not well understood.

The three pilots, David Esson, Mike Nash and Chris Gould, hope to gather enough new information to form conclusions about the reasons for infringements, and make recommendations on how to reduce them. They hope the project will help to enhance safety, increase awareness and even improve GA access to controlled airspace.

Only disidentified data will be made available to the CAA and, if you want, you can contribute anonymously via CHIRP.

"The whole object of the scheme is to prevent future incidents, not to apportion blame for infringements that have already occurred," says Rod Dean, Head of the CAA's General Aviation Department.

During 2000, there were 343 reported airspace infringements in the UK. Of these, 27 were Airproxes (11 of which were assessed as being risk bearing) and 178 resulted in class A or D Control Zone or Area being infringed – 60 of which were near Stansted.

The team's website can be accessed at *www.flyontrack.co.uk* It gives background information and lets visitors – whether or not you've infringed airspace – discuss the topic and put forward your own proposals.

Reports and suggestions can also be forwarded to the group through e-mail at ontrack@cwcom.net Freephone or fax on 0800 328 0792 and Freepost to: 'Freepost Fly On Track' (no stamp required).

End of an era

WE ARE sorry to report the deaths of two international figures in gliding.

Norman Ellison, for many years resident in the USA, died in August at the Seattle Air Museum. He was the author of the standard textbook: British Gliders and Sailplanes: 1922-1970. Originally a worker at Slingsby's factory in Kirkbymoorside, he left the UK as part of the brain drain.

Kakuichiro Harada, who died in July, was a leading instructor; author of manuals on glider operations and maintenance; and airworthiness inspector to the Japan Civil Aviation Board. In 1986 he was awarded the FAI Tissandier Diploma and in 1996, aged 83, he fulfilled a life's ambition by flying a Minimoa, a type he first saw when Wolf Hirth took it to Japan 60 years earlier.

(Thanks to Chris Wills and Geoff Moore)

Missing trophies

THE BGA Competitions Committee would be delighted if you could help to locate one and a half BGA Trophies, which have gone missing in the last couple of years. The Pan Am Trophy and the base of the Eon Trophy, both normally awarded as prizes in the Standard Class Nationals, were last seen at Husbands Bosworth a couple of years ago and extensive enquiries since have not revealed their whereabouts. Would all competitors and competition officials please take time out to see if either of these items is hiding away in a cupboard somewhere at your club or house? Please contact Barry at the BGA office (*Barry@gliding.co.uk*) if you can help.

In brief

THE FAI International Young Artists Contest has been won twice in five years by UK entrants. It aims to promote interest in air sports, and next year's theme is "Silent Flight". For details, contact Sheelagh Bailey, c/o Royal Aero Club at the BGA address. The deadline for entries is March 14, 2002. For news of the RAeC Trust's 2001 Photographic competition, which has just started, see *www.royalaeroclubtrust.org*

TWO Finnish pilots are flying a Stemme S10-VT from Helsinki to Cape Town to mark the start of the World Championships at Mafikeng in December. Airline pilot Tapio Savolainen and Stemme owner Anssi Soila hope to complete the 13,000km journey on October 6 *(www.glidingmagazine.com)*

COCKPIT cameras could be used with Black Box data equipment to analyse fatal accidents, according to the AAIB. The British Airline Pilots Association said it did not object to cameras trained on instruments but would strongly resist any attempt to film pilots *(Air and Business Travel News)*

DUXFORD, part of the Imperial War Museum, has been given £9 million by the Heritage Lottery Fund for a £19 million Air Space project telling the story of Britain's aviation/aerospace industry. BAE Systems is contributing £5 million *(www.iwm.org.uk)*

THE WORLD'S first dead-stick landing by a commercial digital fly-by-wire aircraft in actual operation was carried out by Captain Robert Piché in August. The authorities are investigating why a two-year-old Air Transat Airbus A330-200 bound for Lisbon from Toronto ran out of fuel several minutes before landing at the closest airport, Terceira in the Azores. A leak in a failed fuel line is suspected. Company officials praised the pilots and crew and promised to refund the passengers' fares *(www.transat.com)*

A PASSENGER-CARRYING commercial Zeppelin has flown for the first time since the 1937 Hindenburg disaster. The new airship, filled with inert Helium, takes 12 passengers paying up to £200 each on one-hour tourist flights *(www.zeppelin-nt.com)*

WINNER of the BGA 1000 Club Lottery's July draw was GH Chamberlain (£52.75). Runners-up (each winning £10.55) were: B Cleugh; RH Dixon; GC Cole; WM Cooper and A Thomas. The August draw's winner was R Barrett (£52.00), with runners-up (each winning £10.40): CM Greaves; P Gresham; NC Morland; A Shearer and C Robinson.

BGA AGM, Conference and Dinner 2002

Eastwood Hall Conference Centre, Nottingham

Saturday 23rd February

By Popular Demand ...

This year we are again using the Eastwood Hall Conference Centre. The facilities were found to be excellent and, as last year, the BGA will have exclusive use of the Conference Centre for the weekend.

Year 2002 Conference

The programme is presently being put together for the Conference. Speakers include ***Paul McCready, Lembit Opik,*** and ***Tilo Holighaus.***

The Conference will start about 9:30am, with a full day of informative and entertaining lectures, exhibition, and glider display. During the afternoon there will be the BGA AGM, and also time to spend looking around the exhibition stands.

As usual, the Conference is ***FREE.***

The Dinner in the evening is always a very popular event, and tickets are limited (to 250). It is strongly recommended you book early. To speak after the Dinner we have ***Brian Lecomber*** of Firebird Aerobatics Ltd, former British Freestyle Aerobatic Champion.

Conference Centre Includes Leisure Facilities

The accommodation and facilities are of a hotel standard, and the price has been held at the same price as the last 3 years - £30 per person B&B (based on two sharing). There are also leisure facilities, including swimming pool and Jacuzzi. For accommodation bookings, please contact Eastwood Hall directly - Tel: 01773 532532, Fax: 01773 532533.

For more information on the venue, check their web pages:
www.cceonline.co.uk/Pages/eastwood.html .

Book Early to Avoid Disappointment

Lunch will be available at £13 for a hot and cold buffet, or £5 for rolls/sandwiches (pre-bookings required). Unlimited tea/coffee/biscuits/snacks are available throughout the day for a small charge of £5. This can be ordered on the day.

Dinner in the evening is strictly by ticket only . The cost is £22.50 per person. For more information and to book your tickets for 2002, call Claire at home (01280 705741), or on her mobile (07887 548913), or email: *claire@gliderpilot.net*

BGA 2002 AGM, Dinner & Conference

Your letters

Beware of wires – after landing

HAVING read the article in the April-May issue of *S&G* (*Why you should beware of wires*, p29), it occurred to me that there would be a cruel irony if a glider pilot survived such a field landing only to be injured, or worse, by electrocution.

Particularly as on the day in question I had my finger on the button, about to try to re-energise the overhead line damaged by the glider.

So I thought it might be useful to let pilots know about the inherent danger that still exists from electricity overhead lines even after such an incident.

Throughout the United Kingdom there will be variations from one company to another but, bearing in mind that we are focused on getting the lights back on, it is normal practice to attempt to re-energise overhead circuits after a delay of 15 minutes.

This 15-minute delay gives time for any damage reports to be phoned through to the electricity company.

Electricity companies will always advise that, following an incident involving damage to overhead lines, a safe distance of around 15 metres should be maintained from the conductors until such time as they have been isolated and proven dead.

So please do not be tempted to return to your glider to check that your logger is still working!

In some parts of the country, where the high voltage network is earthed by a Petersen coil, it is possible to have one HV conductor on the ground, which is potentially live at full system volts!

Again, it is important to maintain the safe distance from these conductors until it is declared safe to approach them.

During the last couple of years I am aware of a number of dangerous occurrences, where tow ropes or winch cables have made contact with live electricity lines.

In one case, club members pulled the winch cable off the overhead lines before the system had been made safe. This is definitely not the route to old age!

Club safety officers should take time to consider the possible sources of danger in the area around the club airfield and, where there is a possible danger, then consult with the local electricity company. They can help you make a risk assessment and will give advice on actions to avoid danger from the electricity network.

Where any risk is identified, it should be part of the club's emergency procedures to know what actions to take, who to contact, and what information to pass.

The day that this incident occurred had to be at least reasonable for soaring – after all, I was sitting in the electricity company control centre on a 12-hour day shift, so that was a guarantee of good conditions!

Safe landings.

Paul Butcher, MELTON MOWBRAY, Leicestershire



S&G *readers have tracked down* Wild Goose. *Peter Scott's old Oly 419, to Staffordshire GC. Here she is pictured at Nympsfield in 1960. Where was she post Sir Peter Scott and pre-Pat Ladd?*

Wild Goose caught

WITH reference to Pat Ladd's letter headed *Wild Goose Chase* (August-September 2001, p9), his Oly 419 has been based at Staffordshire GC for some 25 years, firstly at Morridge and now at Seighford.

Its original syndicate comprised Frank Davies, Bill Ferguson, Peter Foster and Cedric Meir. Information is from Cedric who is the only one still with SGC, so presumably it was bought from Pat Ladd and has been with us ever since.

An incident that occurred soon after the arrival of the 419 at Morridge was a practice outlanding by Frank Davies in the valley close to a prominent peak called Hen Cloud. This was a very brave action, since the valley has few landable fields. The only possibilities were two adjacent fields: one full of cows and one empty. Frank landed in the empty field. Unfortunately it was really only one field – what appeared to be a hedge was just a few bushes alongside a shallow ditch which the cows breached at a rate of knots. The CFI (Charles Webb) overflew the 419 to recce the situation and on his return reported that Frank was running round and round the glider waving his arms like a maniac to keep 16 curious cows at bay. This story is still recounted at the club by elderly ex-Morridge pilots like me.

Over the years *Wild Goose* has had a number of owners and has given them many Badge flights. The current owners are John Abbott and Graham Bowes, who are enjoying some good soaring flights. The glider is allegedly in as good a condition as it has ever been due to some excellent fettling by John Abbott over some years. In fact, John was awarded a citation and cup by Chris Wills of the Vintage GC in about 1995 for the restoration of the 419, its trailer and for devising much-needed handling aids. According to John's long-suffering wife, he is either at the club or in the garage fettling.

We recently received an interesting letter from an 80-year-old temporary member (ex RN), which gave a clue as to how the Oly 419 came to be called *Wild Goose*. This gentleman had a 22-minute flight in a K-13 and when he landed fell over a big blue glider inscribed *Wild Goose*. He enquired about it and was told that it had once belonged to Sir Peter Scott. He wrote to the club thanking us for the flight and asking for a photograph of the glider as a sentimental memento. He was on board an RN cruiser off Anzio in 1944 when it was torpedoed and sunk in February of that year. After the order to abandon ship he was rescued by a small warship skippered by a certain Peter Scott whose ship was named *Wild Goose*. Small world!

Further research indicated that this Oly 419 was built for Peter Scott in 1959 and was flown by him to circa 1964. In this time Peter Scott achieved Diamond height in the 419. He also became British Gliding Champion in 1963 by winning what are now known as The Nationals flying at Lasham in *Wild Goose*.

Pat Ladd acquired the 419 in 1971 – does any one know what it was doing post Peter Scott (1964) and pre Pat Ladd (1971)?

Roy Goodwin (Staffordshire GC), STOKE-ON-TRENT, Staffordshire

More on the Oly 419

I READ with interest Pat Ladd's letter in the last *S&G*. That morning – June 3, 1974 – I was towed from Inkpen (now Rivar Hill) to South Marston and, releasing at 1,500ft, I flew to Lasham for my Silver C cross-country. This was, incidentally, my 99th glider flight.

After getting my landing certificate signed, I was aerotowed to 2,000ft much against my better judgment (I was very inexperienced, with only about 50hrs P1) and flew with some difficulty against a headwind back to Inkpen. I just managed to get over the trees at the north-east of the site, and landed on the short runway to see another Oly 419 coming towards me. My recollection is that we fortunately stopped before meeting.

This must surely be the event that Pat refers to, as it was the first time I had ever seen another 419. I owned mine, with ➢

Your letters

➢ a partner, from December 1973 to May 1975, and his comments regarding heavy wings are well remembered – especially by my back!

Tony Mattin, HOLYBOURNE, Hants

Cockpit drills go OTT

A FURTHER addition to the cockpit drills from Roy Ferguson-Dalling (Hi, Roy!) and Mike Sesemann. It has come from my theatrical past (luvvy, dahling) as a stage manager: "OTT". Backstage it was reserved for an actor who was overdoing the acting (a regular occurrence): they were said to be going a bit "Over The Top". Now I use OTT to check three things that I can't see or get to once I'm strapped in:

O-xygen bottle (filled and turned ON)

T-apes (removed from static vents, total energy probe, etc)

T-ail dolly (removed) and Tailplane (fastened on).

Phil Swallow, LYDBROOK, Glos

Soaring Australia

IT WAS great to see such an excellent article on flying gliders in Australia (*Wizard Soaring in Oz*, August-September 2001, p34). There are just a couple of minor points, though, which I thought worth commenting on.

Dehydration is a very real problem for pilots in Oz. Apart from the high temperatures, the air is typically very dry and at the higher altitudes you often attain here, the loss of moisture through the lungs and sweating can be very high. We have been weighing pilots before and after cross country flights and weight losses of up to 6 kilos have been recorded, with 3-4 kilos being typical. We recommend carrying at least four litres of water with you in the cockpit (in more than one container) and a further six litres stored on board in case of landout.

Another matter that could be considered is carrying a personal emergency beacon (EPIRB) with you in case of a landout in inhospitable terrain. It's highly unlikely that you will ever need it but if you were to get lost and land out, it's nice to know that your whereabouts will quickly be noted and prompt recovery action taken. EPIRBs are relatively cheap here and can sometimes be rented by the week.

Finally, just to make your mouth water, my club (Canberra GC) has thermals year round, shear line and shear wave lift, as well as lee wave to 35,000ft and limited slope soaring. There are many other clubs with excellent soaring conditions but also limited to weekend operations. Come and try it!

John White (Chief Coach, NSW South), DEAKIN, Australia

Thanks from an enthusiast

I FELT compelled to write to the BGA following 45 years as an aircraft enthusiast, travelling around the country noting down registrations and BGA numbers. Slightly eccentric? Maybe – but then I consider this to be a healthy, educational and interesting hobby – one of my many activities – and to those people who express surprise I always quote the example of a friend who tours the country on Saturdays for much of the year following the fortunes of a particular football team!

I have now visited every civil gliding club in England, Wales, and Scotland, and, by appointment, the majority of RAFGSA clubs and RAF Volunteer Gliding Schools. The main point of my letter is to say a big thank you to all these clubs and members for their hospitality and support. All gliding establishments, large and small, civil and military, have been brilliant – hangars and trailers have been opened especially for me, and pilots and owners have gone out of their way to show me gliders of particular vintage or other interest.

I have also put the tent up at a number of sites, and gliding club breakfasts, where available, are greatly to be recommended.

Julian Woody, HEADINGTON, Oxford

Gliding reaches Clacton

SINCE retiring from instructing I have been trying to raise money for the prostate cancer scanner for use at Clacton hospital.

I'd like to thank Cambridge GC and all the members who helped us fly a doctor and two nurses. They raised about £2,500 by flying 118 loops with Mike Woollard – particular thanks to him, to chairman John Rogers and treasurer Eddie Baker.

I thought the postcard (see right), purchased on Clacton's sunny sea front, would show that gliding has arrived at Clacton! I can only imagine that the speech bubble refers to her husband having two flights in the open cockpit T-21.

John Wood, CLACTON-ON-SEA, Essex

Get your maths up to speed

I READ with great interest Jay Rebbeck's article on cross-country basics (*Get your soaring up to speed*, June-July 2001, p30) and his recommendation to fly about 10kt less than MacCready theory suggests in order to improve the probability of completing the flight. This concept was published in *S&G* in February 1963 by Dr Anthony Edwards of the CUGC under the title *Festina Lente* (Vol XIV, No 1, p12) and so was somewhat before Jay's time.

I recently reworked the calculations for sailplanes more modern than the Doctor's Swallow and indeed the increase in probability of arrival (poa) for a modest decrease in cruise speed is remarkable. For an ASW 20 in 3kt lift, a cruise speed of 80kt gives an average speed of 42.8kt for a poa of 60.7%. Reducing the cruise speed to 70kt reduces the average speed to 41.8kt but raises the poa to 72.9%. Small loss and big gain. Increasing the cruise speed to 90kt reduces the average speed to 41.8kt, the same as at 70kt but the poa falls to only 42.6%. The advantages of flying slowly should be obvious.



Gliding meets the seaside postcard, bought on the seafront at Clacton (see Gliding reaches Clacton, *left)*

Even a rather old-fashioned K-6CR can improve its poa from 37.6% to 53.3% by reducing cruise speed from 55kt to 45kt with a reduction in average speed from 31.7kt to 29.5kt. Again small loss, big gain.

In a similar but more complex vein, Technical Soaring (Vol 23, No 3, July 1999) published an article by John Cochrane who used Stochastic Theory to extend MacCready theory to handle uncertain lift and limited altitude. This is considerably more complex than Dr Edwards' paper but the author does provide a set of simple rules for the pilot to follow.

Myles Lemon, BALLWIN, USA

Instead of tyres...

DAVID Williams wants a replacement for the ubiquitous car tyre? (*Eradicate this outdated crop*, August-September 2001, p8). It was the reference to the car bonnet that provided the answer: "waterproof, easily cleaned, and fairly mobile with a scratch-proof surface".

Tried the wife or girlfriend, mate?

Leigh Youdale, ELDERSLIE, NSW, Australia

Assigned Area Tasks

MIKE Young's article (*About Assigned Area Tasks*, June-July 2000, p33) made useful reading. In July this year I flew a number of AATs during a competition in Germany where the local rules included a 5% distance bonus for landing at an airfield (this struck me as an excellent reason to avoid racing towards a field landing) or a 15% bonus for landing back at the competition site. Covering as many kilometres as possible in the briefed task time is, of course, the aim of an AAT, but an incentive to get home certainly adds to the experience and in my

view encourages pilots to fly an AAT as it was possibly first envisaged – a way to give pilots the opportunity and responsibility to expand the basic set task as they feel the weather and their experience allows, but at the same time significantly limiting the benefit of a "lucky break" free distance leg and resulting outlanding.

Pete Stratten, BRACKLEY, Northants

Memories of World War Two

I HATE to disabuse the splendid flights of fancy in Barry Furness' description (August-September 2001, p5) of D Day, but History demands – and the editor has insisted – that I offer a few minor corrections:

1. Since "early morning dew" is mentioned, we are clearly talking of the first lift in the early hours of June 6. This lift was entirely at night, completed well before dawn.
2. No "dew on the wings" either. As G/C Stagg's Forecast for Overlord records and, as we marshalled our Halifaxes and Horsas along the Tarrant Rushton runway on the afternoon of June 5 (no picketing around the airfields, either) a vigorous cold front had gone through the previous night and it was windy and overcast. A little ridge ahead of the expected next warm front arrived just in time for D Day, the wind abating and the cloud slowly clearing.
3. I only flew as a passenger on Horsa and Hamilcar training circuits but I will swear that our marvellous glider pilots did not wear parachutes. How could they?

To end this note with a little vignette from that summer: I well recall my Halifax skipper, Taffy Davies, telling me that his great glider pilot friend, whom we later towed to Arnhem, got himself grounded in July or August 1944 for thermalling a fully-loaded Hamilcar, with tank inside, up to cloudbase when he was meant to be doing circuits and bumps.

David Carrow (sometime Navigation Leader, 298 Squadron), Hampshire

Please send letters – marked "for publication" – to the editor at the address on the contents page or to: helen@sandg.dircon.co.uk *Please include your telephone number and full postal address. The deadline for the next issue is October 16*

Dates for your diary

Event	Location	Dates
27th Worlds	South Africa	Dec 18–31
2nd Club Class Worlds	Germany	August 2002
Europeans	Hungary	2002
3rd Junior Worlds	Slovakia	2003
2nd Women's Worlds	Czech Republic	2003
4th World Class Worlds	New Zealand	2003

BGA AGM and Conference

On February 23, 2002, this will, following recent successes, host many famous aviation names, including speakers such as Paul MacCready and Brian Lecomber. See p6 for details.

Weather, maps and navigation for pilots

This GASCo seminar on Nov 24 at the Met Office, Bracknell, will focus on services that help pilots better understand forecasting and maps. It aims to prevent over-reliance on GPS. The £55 cost includes lunch. Contact 01634 200203 or email *john.campbell@gen-av-safety.demon.co.uk* for more details.

Winston Churchill Travelling Fellowships

If you're British and think overseas travel could benefit your job, gliding club or community, why not investigate one these fellowships? The applications deadline is **Oct 24**. Tel 020 7584 9315 for details or apply on-line at *www.wcmt.org.uk*

WIN a flying suit from Ozee

WHEN *S&G* reviewed the Ozee Exeat flying suit last year (December 2000-January 2001, p14), our guinea pig, Cairngorm GC's Ray Lambert *(seen right in the suit)*, concluded: "I can recommend this multi-purpose flying suit for practicality and comfort in cold conditions".

Now Ozee has teamed up with *S&G* to offer one lucky reader the chance of winning an Ozee Exeat in your choice of available sizes and colours. The first correct answer to be drawn out of the bag on November 5 will win the flying suit plus an Ozee fleece balaclava. Two runners-up, the next to be drawn out, will each get a fleece balaclava.

To enter, just answer the following questions correctly (all relate to times when warm clothing could be required, and the answers are all in this issue):

1. Name three of the symptoms of hypoxia, as described by Al Eddie
2. Name the three wave soaring techniques recommended by Phil King
3. What is the correct identification for oxygen cylinders?



Send your answer on a postcard to: Ozee Competition/*Sailplane & Gliding* c/o BGA, Kimberley House, Vaughan Way, LEICESTER LE1 4SE, and include your name, address and phone number. Your entry should reach us by Nov 2.

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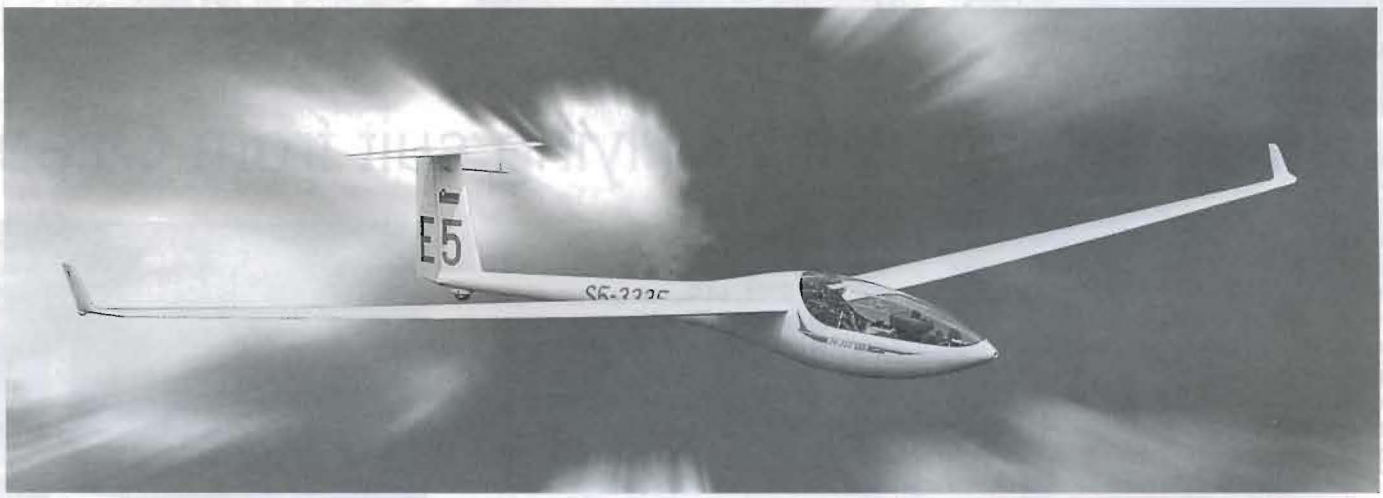
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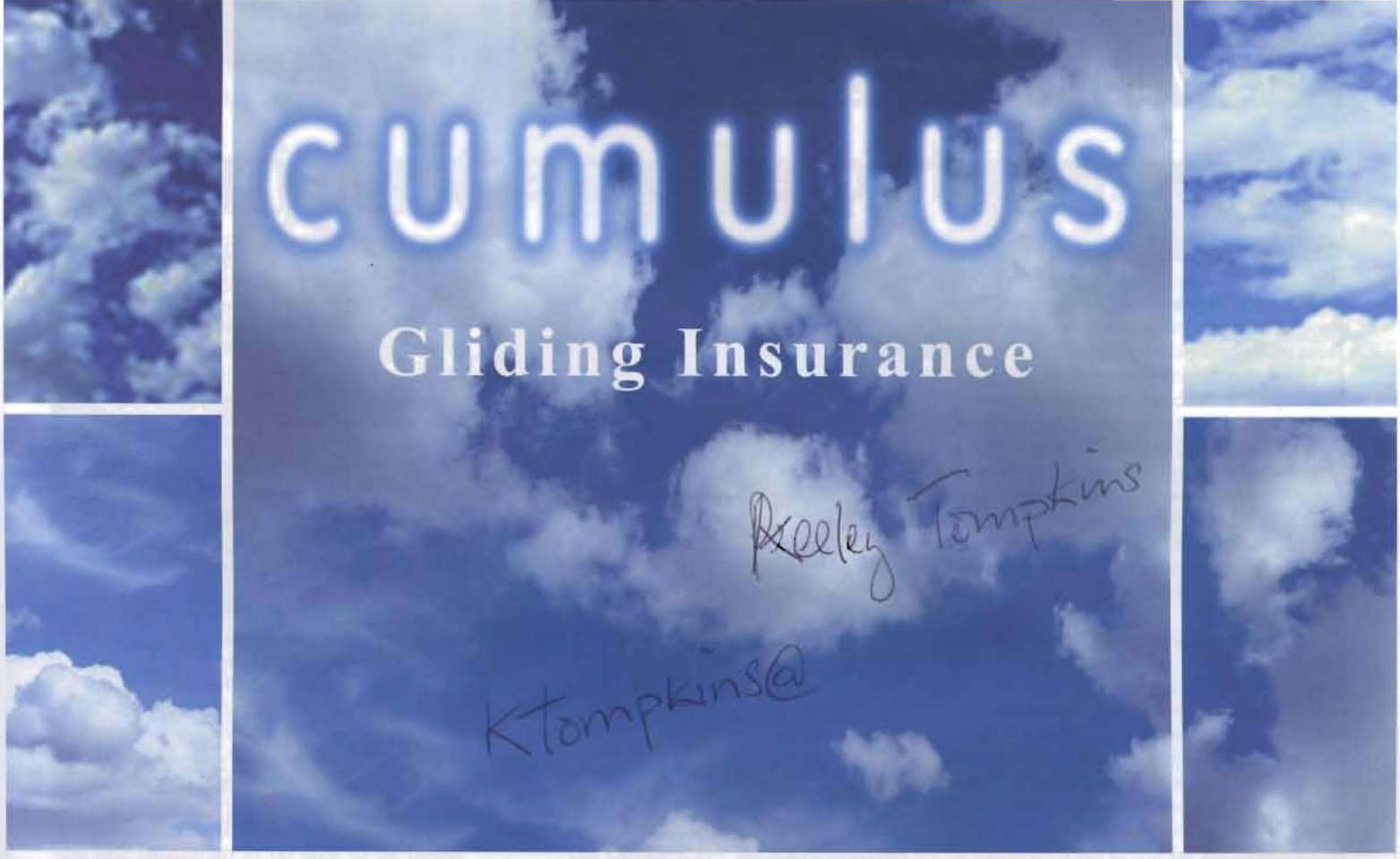
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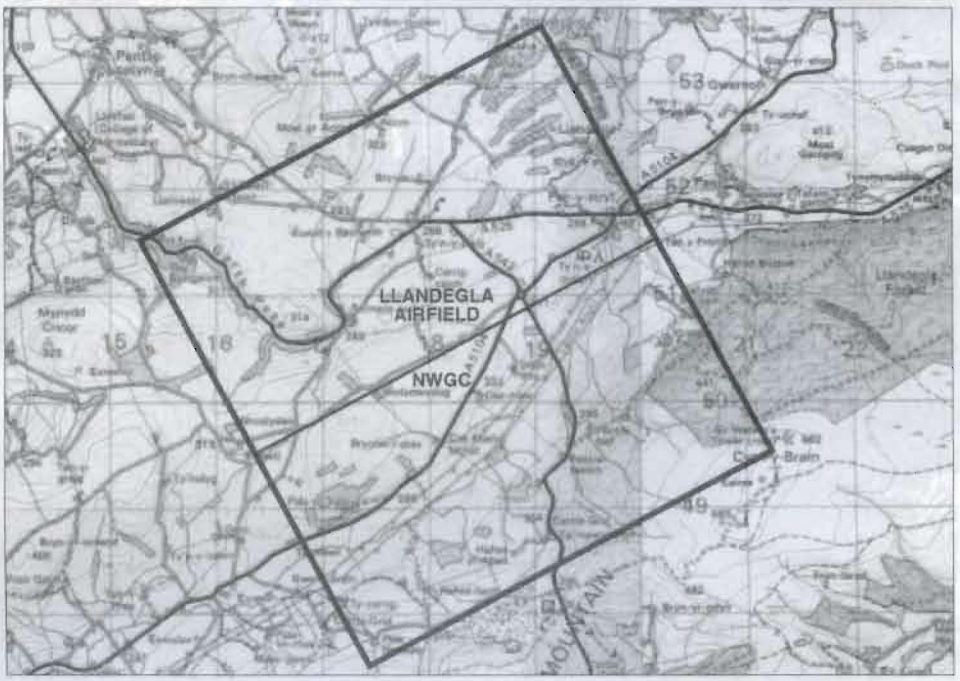
Protecting children, protecting airspace

Child protection in sport

RESPONSE to my piece (August-September 2001, p12) about the need for a Child Protection Policy has been magnificent! At least one gliding club has had such a policy in place for over a year and Sport England has produced an advisory booklet *Safeguarding the Welfare of Children in Sport*. Governing bodies for sport are not only required to have a policy in place but also an Action Plan showing how that policy will be turned into practice.

Accordingly, an Executive Committee working group is now working on guidelines to be made available in due course to all member clubs.

Although recommendations have been advisory and not compulsory so far, Sport England is now applying further pressure and already one club has been told that it must have a satisfactory Child Protection Policy in place before any grant offer can be made. This has now become an important issue and if your club needs further advice, please contact the BGA office.



Above and below: glider pilots should avoid Llandegla airfield's airspace, recently agreed with North Wales GC

North Wales GC, Llantisilio

In spite of having its planning appeal upheld in January, the North Wales GC has only just recommenced flying at Llantisilio. Exceptionally wet weather followed by Foot-and-Mouth Disease restrictions effectively closed the field from November 2000 until August 2001.

The club has now signed Letters of Agreement (LoA) with its neighbouring airfield, Llandegla and has agreed to the establishment of an Air Traffic Zone (ATZ) of 2nm x 1nm x 2000ft above airfield level over both Llandegla and Llantisilio.

Separation of powered aircraft and gliders is maintained and mutual safety of operations is facilitated by the LoA. Club gliders are all winch launched and conduct their circuits to the south while Llandegla traffic flies all its circuits to the north.

Gliders wishing to land at Llantisilio are required to avoid entering the Llandegla airspace, as indicated on the plan *(above right and, enlarged, right)*. Gliders soaring the Clwydian Hills, please note.

For further information, contact CFI David Holt on 0151 356 3720.

Doncaster Finningley Airport

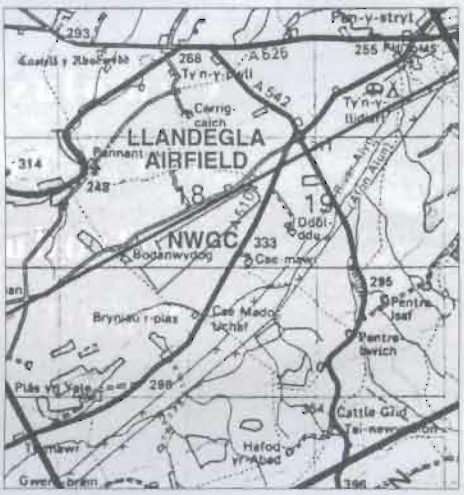
Peel Holdings' application for planning permission for a commercial airport on the former RAF base at Finningley has been "called in" by the Secretary of State and a public inquiry has been arranged for September.

The BGA Airspace Committee has obtained satisfactory assurances and commitments from the developers, Peel Holdings, that consultation will take place on all airspace issues and that BGA's requirements and those of its member clubs will be protected by Letters of Agreement. These assurances provide a much more optimistic outlook for gliding than had previously been the case.

A local public inquiry can only deal with planning issues and it soon became apparent that by attending the Public Inquiry for Finningley and incurring considerable expenses in the process, the BGA could not expect to satisfy all its objectives out of the planning system, since all the objections registered to date have been based upon the Airspace implications of the proposed development.

The assurances given by Peel Holdings commit them to consulting both with the BGA Airspace Committee and any gliding clubs likely to be affected in the event of planned routings of commercial aircraft through Class G airspace and of any future applications by the developers for Class D airspace. There is also an undertaking to accommodate the special requirements of gliding competitions to transit any controlled airspace granted for Finningley.

The Airspace Committee is satisfied that the developers' undertakings, together with their obligations under the CAA Airspace Charter, will enable gliding to continue in that area with minimum restrictions.



Laws and Rules for Glider Pilots

The latest revision, Edition 13, was printed in July 2001. It has a black stripe on the cover and is the last update in the old format. Future editions will be in a format to be decided at the 2001 Chairmen's Conference to be held at The Soaring Centre, Husbands Bosworth on Saturday, October 27, 2001. Any new Operational Regulations will require the approval of the AGM in February 2002.

To date, your suggestions as to how the next edition should be changed are limited to:

(i) re-establish the section on trailer law

(ii) confine all operational regulations to one section

(iii) make things easier to find with an improved indexing and reference system

(iv) create a new section on BGA Codes of Practice

(v) introduce a section of dummy Bronze Badge questions with answers.

If you have more suggestions or criticisms of the present booklet, please let us know.

Roger Coote, BGA Development Officer

Bungying again...

CAMPHILL'S vintage week started with an air raid warning and explosions – one producing a sheet of flame that singed the top of the trees and an even higher column of black smoke. All this on a day when the local fire officer had paid a visit, to be greeted by signs marking "unexploded bombs".

For those of you who missed it, but won't next year, the week had a 1940s theme with some of the best parties held here in living memory. Spitfire – the special beer – ran out.

The statistics (what would *S&G* be without them?) showed 30-odd aircraft plus more than 55 (even odder) pilots. Flying came into it as well: over 185 hours and 220 launches. The highlight of the week? Well, bungying at Camphill for the first time since an accident caused by someone calling out "Let go, Peter!" (when Peter was the name of the pilot, of the wingtip man and of the tail holder-downer). Mike Armstrong risked his rating, a lot of paperwork and a committee meeting by taking the first launch in the club K-7/13 and Bert Strykes in his K-4 became the first Dutchman to be able to fly below



Bungy-launching at Camphill *(Peter Teagle)*

his take off. When Chris Hughes tried to amputate a finger whilst holding a tailskid the triple was complete. Blood, sweat and tears: no wonder we claim that "Vintage and Classic Gliding is More Fun".

Finally, if you doubt that Camphill rallies are truly international, overseas pilots have attended for the last three years. The log sheets showed two unexpected Spanish aircraft: the "El Spatz" and the "Ole 2b" both appearing at a British site for the first time.

Ian Dunkley, *Ian_dunkley@pgen.net*

Round-the-world Ximango pilot reaches Britain

MONSOON storms, "airport arrest," interception by Japanese F15s and a five-hour flight at 500ft over the Bering Sea were some of the obstacles Gérard Moss overcame to get to the UK on his round-the-world flight in a motorglider. His 100-day flight is due to take him through 33 countries. Next, he flies to Africa for the longest leg, 1,300nm (2,400km) over the South Atlantic to Brazil.

His flight began in Rio de Janeiro in June. After cold and poor visibility in Russia, Gérard was intercepted near Hokkaido Island by two Japanese F-15s, which circled him for 20 minutes before allowing him to proceed to Japan. Later, a bad storm prevented a landing at Ho Chi Minh, Vietnam and his arrival at Nha Trang instead needed some fast talking to prevent a spell in jail. Monsoon storms also defeated his first attempt to fly to Bangladesh.

The arrival at Denham airport of Gérard's long-winged Super Ximango meant he had achieved more than three-quarters of the planned 30,000nm (55,000km).

For the pilot's diary, log on to his website at *www.wingsofworld.com*

Use pylons to support your Ladder

THE partial relaxation of foot-and-mouth restrictions, along with some good weather in the second half of July, yielded some very respectable cross-country scores.

Pilots are reminded that the National Ladder rules were modified this season to allow the scoring of pylon tasks, so allowing clubs within restricted areas to continue to take part in the Ladder.

Please see *www.bgaladder.co.uk* for full details of the modified rules and for the very latest scores. Club stewards who are not yet on-line should send me their club's final scores for the season as soon as possible after September 30, 2001.

The top scores in each Ladder as on August 3, 2001 were as follows:

OPEN LADDER

	Pilot	Club	Score	Flights
1	John Bridge	Cambridge	10752	4
2	Dave Caunt	Booker	8201	4
3	Hugh Kindell	Lasham	6514	4
4	Dick Dixon	Southdown	5425	4

WEEKEND LADDER

1	John Bridge	Cambridge	6168	4
2	Dave Caunt	London	5366	2
3	Patrick Naegeli	Lasham	4993	3
4	Ian Smith	BGGC	4705	4

JUNIOR LADDER

1	Will Harris	Cambridge	4373	4
2	Jonathan Meyer	BGGC	2952	2
3	Sam Morecraft	BGGC	1340	1
4	Paul Browne	Cambridge	720	1

John Bridge, National Ladder Steward

In brief

NOTTINGHAM glider pilot Angus Watson returned to the field near Staverton, Glos, where he'd landed his LS7 – to find thieves had stolen his flight computer. Angus, who was competing in the Standard Class Nationals at Nympsfield, left the glider for an hour to arrange a retrieve. On his return he found that a Compaq IPAQ had been taken from the cockpit *(Nottingham Evening Post)*

THE DRA (Farnborough) Gliding Club has changed its name to the Crown Service Gliding Club.

FOUR Derbyshire students have been awarded bursaries to learn to glide at Derbyshire and Lancashire GC, which are jointly funded by the club and the Caroline Trust. The trust was set up to help young people, especially girls, into the sport. This is the first year of the scheme.

COMPETITION Enterprise was forced by foot-and-mouth to change venue to Sutton Bank, Yorkshire, from North Hill, Devon – and then still had to cancel due to further nearby outbreaks. Instead, five gliders held a "Meet" and after wave on Tuesday enjoyed a warm welcome at Rufforth, near York. John Fielden's immense contribution to Competition Enterprise over the years was recognised by a presentation of a painting of him and Val flying his Bergfalke from Exeter to East Anglia (421.5km) in 1970 to achieve the British record for straight distance. Many past Enterprisers came and some flew in, including John Bally in his new Stemme in which he intends to fly round the world – very enterprising. *www.comp-enterprise.com*

MEMBERS of the Midland GC chose their traditional end-of-task-week Saturday night to mark the 65th birthday of the club's longest-serving employee, Peter Salisbury. The celebration was delayed because of the club's foot-and-mouth shutdown. Peter, who was presented with a pair of binoculars and a tankard, began working for the club in 1968, becoming full-time in 1977.

The British Aviation Preservation Council (BAPC) has issued the second edition of its National Aviation Heritage Register (NAHR) listing all 'airframes' held by organisations regularly open to the public. These are listed alphabetically by manufacturers and by type, from AES Lone Ranger, Airspeed Oxford and Airspeed Horsa (the World War Two troop-carrying Allied glider) through to the Zurowski ZP1 (a 2-seat helicopter). It also refers to other aircraft, including gliders, not on the register.

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If you don't get every issue of *S&G*, perhaps you've missed:

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Some back issues can be bought from the BGA office. **But there's no need to rely ever again on someone leaving their copy on the clubhouse table.** Ask your newsagent or club to order enough copies, or subscribe at the 2001 rate via the BGA (contact details on p3). **After all, you don't want to miss what we've got planned for next year...**



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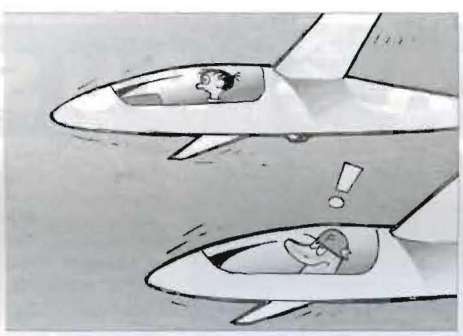
Way out west, where men are men, and lift is lift

AT MINDEN this July I thought that for a change I would get away from the popular milk-run down south to the White Mountains of California, spectacular though they are both to look at and to fly over. I decided instead to fly roughly 250km due east of Minden in the Janus C. There I should get used to the idea of being over terrain that offered no airfields, no pasture, nothing.

This was a form of psychological conditioning for future trips east. Any area that you have not visited before, and which is a mahogany colour on the map, seems scary, but once you've traversed it you feel much more confident the next time. (Wales had the same daunting effect on me, until I followed John Jeffries out there a few years ago.) It did help to have Carl Herold's new spreadsheet of Nevada landout spots, which in those vast spaces between airports consist of dry lakes. It also helped to have landed on a tiny (500 yards) dry lake and to have aerotowed out, back in the Hilton Week of 1994. Carl's team had inspected all these landout spots by touring around in a light plane. I thought it would be handy to go out and identify these bleak, white patches for myself, but from a safe height.

I found Carl's dry lakes, which have many virtues, such as an absence of runway lights, bushes and berms to snag glider wings, not to mention airport managers hostile to sailplanes. Then, still keen to press further east, I ran into rain, lots of it. You might ask, if there is so much rain, why is the desert not green? Well, it is a carpet of many colours, including a lush variety of greens – in spring. But in summer most of the rain never reaches the ground, but evaporates. It takes a pretty robust raindrop to make it all the way down through two miles of dry air. The stuff hanging down is called virga.

So at 3pm I turned in the curtain of virga at 15,500ft, and made for home. Out of curiosity I decided to see how much of the 200km I could cover if I just kept the wings level. The wind was absolutely across the track; the Cambridge computer even suggested a slight headwind component, but then this gadget is a bit conservative, which I like. At ten past four I crossed Minden Airport (elevation 4,720ft) at 7,500ft. Height lost 8,000ft; time 70 minutes. I leave you to calculate the speed and the glide angle. This was no great achievement, however. A child could have done it. I am not even sure Platypus's frantic dolphining (lucky he had no passenger that day) really contributed much. Despite the crosswind and absence of any obvious west-east streeting, the lift seemed almost continuous. Any pilot with a modern glider and a full load of water could probably have arrived with no loss of height whatever in well under an hour.



A child could have done it

(But if it requires no skill or merit on the pilot's part, where's the pleasure? Ed.)

You are quite right, madam – if you have a puritanical streak. But to the rest of us, especially after two of the most dreary British summers on record for cross-country pilots, thoroughly unearned pleasures can be, well, thoroughly enjoyable.

Water, water, almost everywhere...

In a Nationals some years ago I landed, after 15 minutes of grovelling, in a smoothly-cropped meadow. The sheep had done a neat job, but had departed to serve either the wool or meat industry – I hope the former. The ASW 22 felt OK, apart from an irritating failure to climb away – something at which I am normally pretty good, he says modestly – and everything was indeed OK, if you ignore the loss of 20 placings in the contest. However when I clambered out of the cockpit I noticed that the wing that was on the ground looked odd. Instead of the starboard wing tip resting gently on the greensward as I might expect, the whole outer panel was pressed almost flat on the deck. When I tried to lift the tip, I could barely manage it. It weighed 100lb at least. Even to a slow-witted monotreme (NOT a marsupial, please) it dawned that this wing was full, and the other empty. The switches showed that the correct signal had been transmitted to the servos controlling the dump-valves on both sides. But the starboard servo, or the valve, had not been taking orders.

Subsequently it was found that the valve had been incorrectly adjusted by one of my partners. Being myself hopeless at things mechanical or electrical, I had appealed to him to fix it in a hurry before I filled up with ballast that morning.

This may seem like yet another whinge at Schleicher's sophisticated electrical ballast-operating system. But this incident was not their fault, and besides, that is not the thrust of my discussion today.

Just a couple of weeks ago I was flying the Janus C back into Minden Airport, Nevada after yet another booming cross-country. I had a perfectly smooth arrival on one of their long runways, except that at the very end of the taxying run – it being a point of pride to put the starboard wing down next to the wing and tail dollies or even into the waiting hand of one of the Soar Minden line boys – the port wing insisted on dropping, despite all efforts to the contrary. This time I had intended to land with water, as is permitted when using hard runways, to save filling up again the next day. Yes, you've guessed it: this time the starboard wing had emptied itself totally without my permission, sometime during the previous five hours. So far I am concerned the score in the Schleicher *v* Schempp ballast-battle is now even. The



unless the damn thing spirals in off the towline

problem was soon fixed – the dump-valve needed to be sealed with something greasy like lip-balm and seated more firmly – and did not recur.

Again I had noticed nothing till after the flight was over. Which you may say just shows what a ham-fisted pilot I am. An aviator with more finesse would surely have noticed. Maybe so – but I'd like to hear from those who have had similar experiences. I should mention that in each case I had taken off with about two-thirds of the maximum water-carrying capacity allowed in the manual. I'm not a fan of super-heavy gliders.

The questions I would like to raise are:

1. Under what circumstances can it be dangerous to fly with one wing empty and the other full?

2. Safety apart, what does this asymmetry do to the performance? If you knew you had one wing empty and the other full, and if you were able to jettison all ballast, should you do so if your aim is to complete the task in the shortest time?

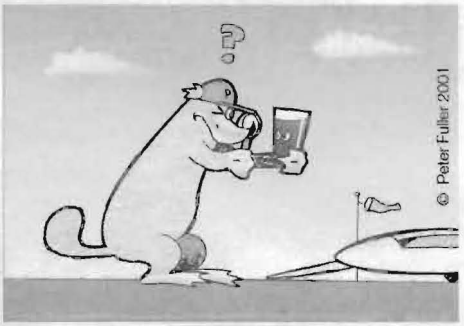
As to question 1, George Moffat writes that on one day in the first World Championships that he won (in Marfa, Texas, 1970) the 22-metre Nimbus 1 lost one wing's ballast. It took George a major effort to bring the monstrous – as it seemed then – prototype glider out of a steep turn, which happened to be initiated in the direction of the full wing. However the Nimbus 1 was a beast to handle even when properly loaded, and the amounts of water George used were, shall we say, appropriate to Texas thermals. And he did eventually get it to fly straight and finished the course.

Still on question 1, and to keep honours even between Schleicher and Schempp, I have to mention the day that Martin Heide had to bale out of an ASW 22 which he put into a spin with an aft centre of gravity and one outer wing empty, the other full. All done deliberately, I should add. The glider kept spinning despite all attempts to correct, so he left.

As to question 2, the performance, I thought of doing a test on one of the model gliders in my loft, but then remembered I had given them all away in a fit of tidiness. Maybe I could borrow one, or build a simple one from sheet balsa.

The idea is that a one wing would be ballasted with (say) 20 per cent of the airframe weight, then I would see what deflections of trim tabs, equivalent to applying rudder and aileron in a proper glider, are needed to keep it flying straight. Its sink rate and l/d might also be measured and compared with its normal performance. There's a winter project for me: cheaper than heading for Tocumwal or Omarama, and unless the damn thing spirals in off the towline and whacks me on the head, probably a lot safer.

A complicating factor is that even if the glide angle is spoiled by the asymmetrical distribution of ballast, in strong conditions it might still pay to keep the water. A moderately heavy glider flying slightly crooked might still go better in a straight line at 90 knots than a light glider. As to circling flight, all bets are currently off, since with big gliders the whole set-up is



all ballast tanks are infested with deadly algae

grossly asymmetrical anyway, with one wingtip travelling a very different speed from the other, and at a different angle of attack. So, in our unbalanced ship, should we circle with heavy wing up or heavy wing down?

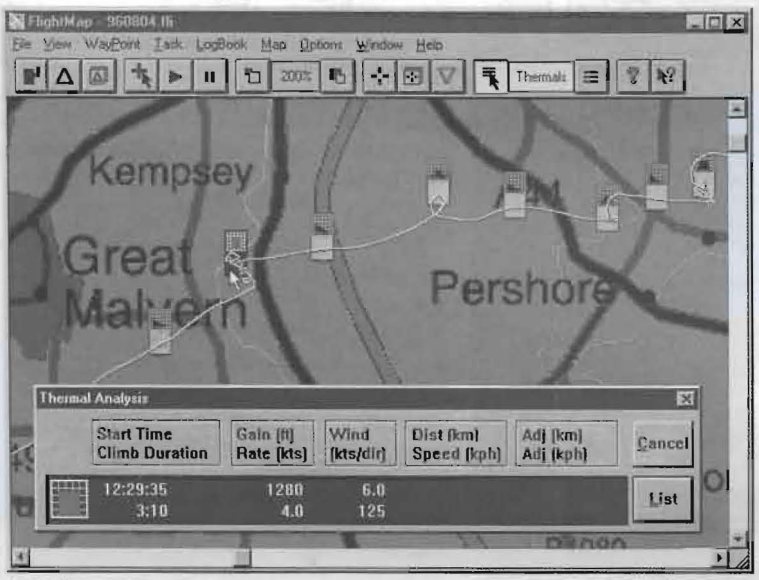
I have a theory that in the future gliders might be optimised to circle one way only (like race-cars at the Indianapolis Speedway) and that asymmetry, both of flying surfaces and ballast, will be actively encouraged.

...nor any drop to drink

One last thought: I said to one of my Janus C partners that I would keep water on board in the desert, in case I needed it to drink over the days that it might take for rescuers to find me – assuming anybody tried. "Rubbish!" he says. "The dark, wet insides of all ballast tanks are infested with deadly algae that would do you in before they found you." Dear me. Is he right?

mdbird@dircon.co.uk

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



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With the wind in your hair

Nan Worrell researches one of the UK's best-loved gliders: the history and the apocryphal tales

Photography this page and opposite: the ***White Planes*** picture co.



Top: Nan (right) and Willy Wilson, near Lasham. *Above: old and new, open cockpit and closed*

THE SLINGSBY T-21, otherwise known as a Sedbergh, is perhaps the best-known and most recognisable British glider in the world. With its huge high wings, massive rudder and barge-like cockpit there really isn't anything else quite like it.

The T-21 was designed by Fred Slingsby at his factory in Kirbymoorside, Yorkshire, and was, in practice, the first British production training two-seater glider. The first prototype was built in 1944 and by 1947 the model was put into production. Two hundred and eighteen T-21Bs were built in the 1940s and 1950s.

One hundred and twenty three T-21s for civilian use and an additional 73 for the Air Training Corps were built at the Slingsby factory, a further 19 were built under sub-contract by Martin Hearne Ltd while three were built privately; one by Midland GC, one by the boys of Leighton Park School in Reading under the direction of John Simpson, a distinguished pre-war glider pilot, and one by John Hulme of Cambridge GC.

These machines were subsequently used for many decades both by civilian clubs for *ab initio* training and by the RAF as the standard training aircraft for scores of schoolboy and latterly schoolgirl air cadets.

However, between 1978 and 1982, with the introduction of the Viking (Grob Acro) and Venture motorglider, the ATC finally decided to grant their instructors the luxury of an enclosed cockpit for instruction and the ATC T-21 fleet was gradually auctioned off.

993 syndicate

For the past eight years, I have had a share in a syndicate-owned T-21 (993, originally WB990), based at Lasham. I'm very fond of the old girl (T-21s are definitely female – look at those hips) and there is nothing I enjoy better than a little canter around the skies over Lasham on a hot sunny day. There is no more relaxing way to spend an hour or two than sitting peacefully with good company, sharing the flying and a bit of gossip, whilst taking the time to admire the view and see which car is parked outside whose caravan! There is something uniquely different about flying with an open cockpit. I'm not sure that I can put it into words but somehow the world seems more vivid and real.



Above: You can fly a T-21 very slowly – just look at 993's air speed indicator. The upright rectangular instrument is the COSIM variometer



Right: Nan and Willy Wilson (left) in 993, the T-21 which Willy and Jill Burry once flew to Salisbury. "We didn't really plan to go that far," they say, "but when we got out of gliding range of Lasham we just kept going. We had hats and scarves, but only one pair of gloves, so we had to share, with the person flying wearing them. At one point we got very low over a summer fete: the crowd thought we were one of the attractions and began shouting at us! We also met a hang-glider pilot who got quite a surprise when we leaned over the side and called down to him. On the way back we both had a nasty fright when we heard a very loud noise – only our straps kept us from jumping out of our seats. It turned out to be the hooter of the steam train on the Watercress line. We were in sight of Lasham for almost and hour and a half before we eventually reached it due to a breezy headwind. When we finally landed we were very cold but soon thawed out with some Lasham tea and buns. Would we do it again? Definitely!"

The syndicate is similar to a number of other T-21 syndicates elsewhere in that we have ten members and no flying rota. Whilst this would never work for any other glider it is the perfect arrangement for a T-21. It is the sort of glider that you usually only want to fly for an hour or two (it's either the cold or the sore bottom that gets you – either way it depends on your level of padding) so, with two seats available, on a reasonable soaring day it's usually possible for more than half of the syndicate members to fly.

Slingsby design

T-21s are of conventional wood-and-fabric construction, with a single-spar pylon-mounted braced wing with a leading edge torsion box and a light secondary spar to carry the ailerons. With a massive wingspan of 54ft and an aspect ratio of 11.2, the T-21 has a best glide ratio of 21:1 at a speed of 37kt. The empty weight of a T-21 is usually around 600lb with a max all-up weight of 1,050lb allowing plenty of margin for those beefy ATC instructors. Indeed, on a number of occasions, our T-21 has proved the only glider capable of accommodating some of Lasham's larger visitors.

Each T-21 was originally equipped with a basic instrument panel, which consisted of an ASI, altimeter and a COSIM variometer. The COSIM, made by Cobb-Slater, was one of the very earliest varios and consisted of two tapered bore tubes connected in parallel to a vacuum flask with a tightly sealed bung through which the tube passed. Each tube contained a small pith ball, one famously coloured green and the other red. (Later models were made with a piston instead of the ball). Since the tubes were connected in parallel, as the glider entered rising or sinking air the change in pressure caused one ball to rise and the other to fall. The fact that many T-21s are still equipped with working COSIM varios bears witness to the instrument's simple but effective design.

The 1948 price of a new T-21 was £780, which must have been a small fortune at the time, but considering that many are still in service today it undoubtedly represented amazing value for money.

Classic trainer

If I had a pound for every time someone has come across and said: "I learned to fly in one of those" I'd be rich (well, I could afford a good few aerotows, anyway). And, of course, many pilots did indeed learn to fly in a T-21 as it was the classic trainer of the 1950s, 1960s and early 1970s, and not only for air cadets. T-21s were a mainstay at civilian clubs until first the Slingsby Capstan (T-49) and later the Schleicher K-13 took over.

The T-21 was known as the Sedbergh (after the famous Yorkshire public school) in Service use, and generations of air cadets took the standard ATC training course.

Each T-21 has a unique history. Ours was a classic air cadet trainer, constructed under licence by Martin Hearne Ltd. Between 1952, when she was built, and 1985, when she entered civilian life, 993 did some 3,839 hours and a staggering 33,714 launches. This is a tribute to the amazing durability of these gliders: even today the machine is as solid as a brick (and flies like one, too!). The syndicate ➢



Nan in 993 with photographer Neil Lawson



Nan is one of ten owners of Lasham-based T-21 993



Above: Hearne-built T-21 at the VGC Rally (Jochen Ewald). Below: ATC T-21 at Inverness in 1968 (Rolf Schöllkopf)

It's amazing what's been done in T-21s

IT IS always difficult, *writes Nan Worrell*, to know which T-21 stories are true, which are mild elaborations of the truth and which are wild fabrications – but there is an endless supply. Please take these with a pinch of salt.

ONE wicked trick entails depriving some innocent young lady of her clothing. On the pretext of 'T-shirt swapping' the victim is encouraged to remove the garment, whereupon it is thrown over the side. The T-21 returns to the airfield with a scarlet-faced occupant. Girls: you have been warned!

IN A particularly heavy landing at the RAF base on Cyprus the instructor, clad only in lightweight shorts, went through the bottom of a T-21 and was dragged along the ground run with his nether regions on concrete – a sore point for quite some time afterwards.

ALSO in Cyprus a T-21 did a go-around from finals – allegedly the lift was so strong that it was impossible to stop the glider climbing back to circuit height. In Singapore, a T-21 managed to get carried up into a cu-nim despite being in a spin. Other RAF stories tell of T-21 hangar flights (flying into the hangar at the end of the day) and of a pilot who began launches from *inside* the hangar.

THERE are many tales of T-21s being flown three up and one alleging two people in the cockpit and one sitting on each strut. I don't know if Fred Slingsby would be horrified or pleased at his glider's amazing resilience.

SEAT-SWAPPING tales are common. One tells of a pilot who left his seat and was facing backwards straddling the section between the seats when the pilot accidentally pushed the stick forward, leaving him clutching the leading edge for dear life. Fortunately, the glider was pulled out of the dive before anything drastic happened.

THERE are many anecdotes about things being ejected from T-21s, deliberately or by accident: water bombing (including gliders launched with buckets full of water); flour bombing; and even snowballing. The poor old winch driver is often on the receiving end of this 'ballast dumping'. There was even one individual who had to stop flying T-21s as he always had the urge to throw *himself* out of the cockpit!

THEN there is balloon popping: a T-21 is launched with a cockpit full of inflated balloons. They are thrown out during the winch launch and an attempt made to 'pop' them on the way down. using a knitting needle previously taped to the pitot tube with which to do the – er – 'popping'!

MY personal favourite is the story of a T-21 instructor who, having been forced off tow during the climb-out, had no choice but to 'land' the glider on some trees straight ahead. However, just before the contact of wood on wood he told his student to 'sit back and enjoy himself as it's rare to be involved in a crash'. True or not, I love it!



➢ always had high hopes that 993 was the T-21 in which Prince Andrew first soloed: we were convinced that we could sell it for a fortune to a royalist American. However, a glance at the cover of the December 1976-January 1977 *S&G* confirms that T-21 WB922 had this dubious honour.

Civilian life

Following the RAF sale, 993 was bought by Dave Bullock (now one of our BGA National Coaches, but then an instructor at the Ouse GC at Rufforth) and was pressed into service as a training glider and a general source of entertainment. Dave and various other club members (who shall remain nameless, but you know who you are) devised numerous outrageous activities (which I can't go into in print) to which the poor old girl was subjected. However, 993, with her customary patience and docile behaviour, took it all in her stride. In 1992 Dave put the glider up for sale and the Lasham 993 syndicate was born. Since arriving at Lasham, 993 has, I promise you, had a much more sedate lifestyle but has still provided the syndicate with many hours of enjoyment.

A joy to fly

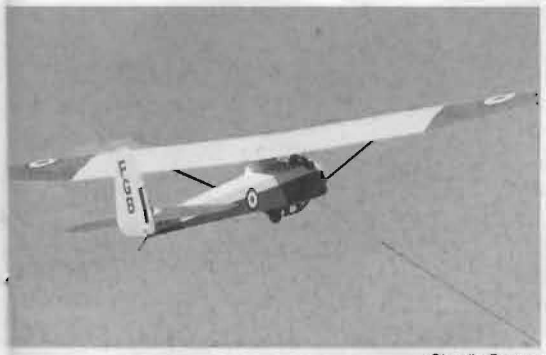
Without a doubt the T-21 is a joy to fly. The glider handles well and the side-by-side seating makes communication very easy. Despite the open cockpit, it is surprisingly quiet and it is perfectly possible to have a conversation without having to shout.

However, for the inexperienced, it is wise to be aware of the T-21's limitations. Whilst the glider will winch launch without a problem, on aerotow a T-21 can be quite a handful. Above about 60kt the ailerons become somewhat ineffective and considerable forward force on the stick is required to keep the glider from getting too high. It is therefore always advisable to make sure that the tug pilot is briefed to tow as slowly as possible.

The landing speed of a T-21 is amazingly slow; 40kt is plenty of speed, any higher than this and the spoilers tend to become relatively ineffective. Bear this in mind if you are trying to land short. It is also very easy to get out of reach of the airfield, particularly if you wander downwind, as the T-21 has very poor into-wind penetration (the only compensation being that it can be landed in quite a small field if you get the approach right!).

A T-21 is best left in the hangar on windy days: not only is ground-handling tricky but it can sometimes be difficult to deal with turbulence near the ground. I vividly recall once having great problems levelling the wings after turning on to finals in gusty cross-wind conditions at Lasham and finding myself heading for the Vintage Gliding Club's workshop.

Although this would have been an appropriate place to end up, I'm glad to say I had enough time and height to sort the situation out. Once on the ground the



Claudia Bungen

A bright July morning at Bicester, writes Mark Minary *(right, near Northampton): time to take our new barge, BZA, to liberate Gransden's bar bell. This, painted blue in honour of their T-21, Bluebell, awaits collection from Hus Bos (who nicked it five years ago). Ian Smith – in welding goggles – and I get the usual jibes: "What? In that?" We ignore them, take 5kts to 5,000ft and roar off – at 40kt. We reach Hus Bos 90 minutes later as their grid launches into a just-soarable sky. Our two-hour return trip includes a low scrape or two before an almighty ring of the bell in Bicester's overhead. But in August The Soaring Centre's Ron Bridges and Ken Payne reclaimed it in T-21 FJD – flying in the blue, too...*



glider was hastily returned to the hangar.

Warming to it

Whenever I take friends flying in the T-21 for the first time I always advise them to choose their clothes and then double everything. It's certainly the case that an otherwise beautiful flight can be well and truly marred by the sight of goose-pimpled flesh and a dripping nose (ugh!). So if it's your first flight in a T-21 (even in the height of summer) make sure you wear warm socks and boots, a decent jacket, hat, gloves and a scarf and take a clean hankie along – just as your mum always told you.

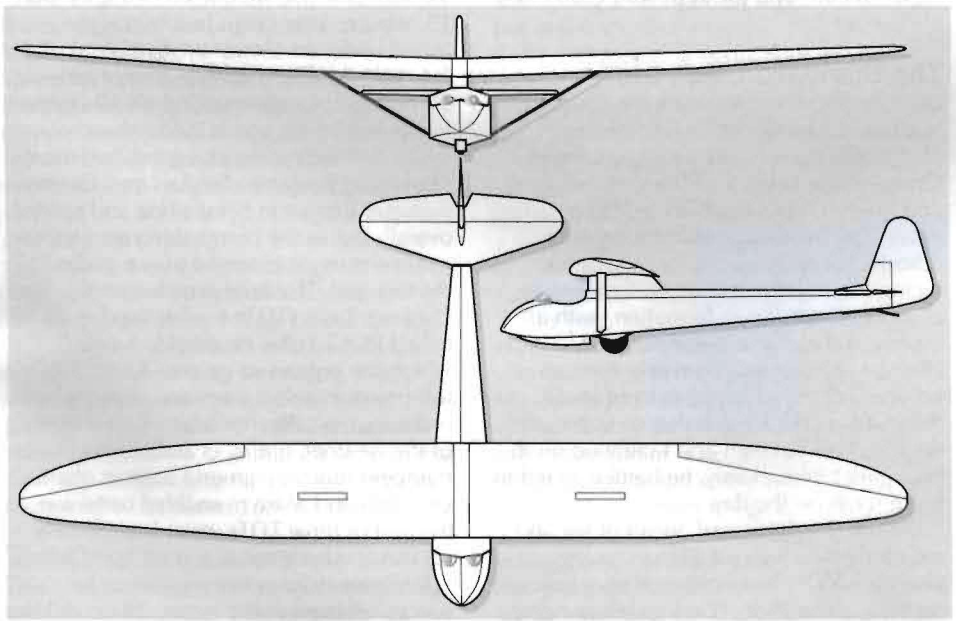
Cross-country performer

Despite anything you might hear to the contrary, it is perfectly possible to make significant cross-county flights in a T-21. This was amply demonstrated during the early years of T-21 service by a number of record-breaking tasks.

In May 1952, a T-21 was flown 146km from Detling to Chilbolton by Meddings and Reilly to win the Seager Cup for two-seater distance flying. One of the most famous early cross-country flights in a T-21 was by none other than Derek Piggott, flying with an air cadet named Brian Whatley. Derek and Brian flew from Camphill in Derbyshire to Grimsby on the North Sea coast, setting a 100km speed record for flight to goal. During the flight they also climbed to 17,000ft asl, setting a new altitude record for two-seater gliders which remained unbroken until 1964.

During the 1980s a Hus Bos-based syndicate made a number of incredible flights in their machine, reaching a peak of achievement in 1984 with a 317km flight from Hus Bos to land in Central Park, Plymouth. In 1986 these same pilots (Lou Frank and Norman James) flew their T-21 from Hus Bos across the Solent to the Isle of Wight, eventually landing at Sandown.

Lasham has an annual award for the most meritorious flight in a two-seater glider and the more hardy and adventurous members of our syndicate have won this twice in the last few years. In 1993 the cup was awarded to Jim Lyell and Julian Richardson for a 100km out-and-return flight to Didcot in a time of 3hrs 30 mins for an impressive 30km/h. I well remember Jim arriving back from the trip with ice crystals encrusting his beard. Two years later, in May 1995, the all-female crew of Willy Wilson and Jill Burry took 993 around Salisbury cathedral and back to Lasham for another 100km out-and-return in a time of just over four hours (see p19).



The familiar shape of the T-21 Sedbergh *(Steve Longland)*

Famous names

Over the years there seems to have been a tradition of naming T-21s. At one time, Lasham had Daisy, Fanny, Rudolph and Min. Min (apparently a cartoon character of the 50s) was the one built by the boys of Leighton Park School. Other famously-christened T-21s flying today are Bluebell, Snoopy, Lucy and Daisy (not the original Lasham one, however). Snoopy, owned by a massive Talgarth syndicate, regularly spends winter hours ridge-soaring among the Black Mountains whilst Cambridge-based Bluebell, who celebrated her 50th birthday with a party last year, is often to be seen over the flatter East Anglian countryside. Lucy has been syndicate-owned at Lasham for more than 20 years now. Visitors to Oxford GC at Weston-on-the-Green can fly Daisy (seen above left photographed by Claudia Bungen) for a very modest 20p/minute – a bargain if you haven't experienced the hairdo-wrecking effects of a flight in a T-21!

There are in the UK 41 T-21s with current Certificates of Airworthiness (31 more without) and many others still flying, dotted around the world. Most recently, a T-21 (the one and the same that was flown to the Isle of Wight by Norman James) was shipped out to the Blenheim GC of Jamaica, where it has been pressed into service as an air experience machine for locals and visitors to the island.

There are T-21s still in Australia, New Zealand, the US and various European countries.

Indeed, I am constantly amazed that whenever I visit gliding clubs at home and abroad so often I see a T-21 nestling amongst the more modern gliders. I have concluded that the T-21 has something in common with the biblical five loaves and two fishes; short of a miracle how on earth else could there still be so many around when only 218 were originally built?

I hope you have enjoyed the stories of days gone by and, more importantly, have been inspired to continue the traditions of T-21 flying. The T-21 may be an oldie now but it still is and always will be a goodie.

Slingsby Sailplanes by Martin Simons has excellent technical detail as well as lots of history. For ATC history try *www.southandwestyorkshirewing-atc.co.uk*

Why not send your T-21 tales or photos to S&G? We'll give a BGA T-shirt (what else?) for the best one



This year's fifth British world champion, Jay Rebbeck, describes team victory at Issoudun

the ***White Planes*** picture co.

Juniors set the Gold standard

AT THIS year's Junior Worlds the Brits were the boys to watch. Even the French and Germans had to admit that we were better-organised and worked more effectively as a team. This teamwork secured us Standard Class Gold and Silver and enabled all of us to finish in the top eight of the two classes, easily winning the Yves du Manoir team trophy.

What were the ingredients of this success? The single most important factor has been the ongoing British team training hosted by the European Soaring Club in Ontur. In addition, Owain, Jez, Luke and I had all benefited from international experience gained at the last Junior Worlds in Holland. Similar exposure at the Overseas Nationals stood Leigh Wells and John Tanner in good stead. This, plus a superb Coach and Captain combination of Martyn Wells and Reb Rebbeck, made for a balance of training, talent and experience unsurpassed by any of our rivals.

The competition atmosphere

Despite a somewhat lukewarm welcome from the organisation, the atmosphere in the British camp was second to none, and we had a great laugh whatever was thrown at us. We chose to live off the airfield in the same accommodation as the American dudes who became our fiercest table-tennis rivals. On the airfield, the French, Danes and Americans joined us for some crunching football games whilst the Germans watched from the sidelines, eager to avoid broken ankles. The Danes were notable both for the skimpiness of their crews' bikinis and for their wild Club Class pilot, Peter Toft.

The Standard Class story

Our one-two-three finish in the 18-Metre National Championships *(see picture, above)* had built on our team training in Ontur, where Brian Spreckley, Mike Young and Martyn Wells urged us to: "Stop calling each other 'mate' and start racing each other!". The foundations for a great fun racing trio had been laid: we flew nearly all the competition in formation, with a quality of flying that deserved three medals. Disaster was narrowly averted, however, on day 1 after Jez used up all three of his contest launches to eventually start the task as Leigh and I climbed on to final glide! Remarkably, he battled round to finish tenth on the day.

On day 2 Leigh raced ahead of Jez and me on the first leg of a 510km racing triangle only to be confronted by a hole on track and a tricky "Do I go left or right?" decision. By the time Jez and I came to decide, Leigh was struggling 20km down the left-hand track. His information let us avoid his low point by cutting right. By the top turn, Jez and I had caught the front-runners but Leigh, now behind, hit the bad luck that cost him his medal. While Jez and I managed to tiptoe in and out before the turn was overshadowed by high cloud, 15 minutes later Leigh had to stagger round under an almost-unsoarable sky. Jez and I fumbled home as two of only 11 finishers; Leigh struggled till 20.00hrs, finally hitting the spuds 90km short.

The first three days saw gung-ho French newcomer Benjamin Néglais and German nice guy Benjamin Schulz first and second overall, but as the competition progressed, a fierce struggle emerged as we pushed for the top spot. The Brits excelled on the Time Distance Tasks (TDTs – what used to be called POST tasks) on days 3, 5 and 6, where the organisers gave us around 30 turnpoints to select from and round in any order in, typically, three hours. Our reading of the weather, timing of stubble fires and number-crunching ground support (thank you, Reb and Martyn) enabled us to win two out of three TDTs, most impressively on Day 3 where we all scored 1000 points.

Unfortunately, as our reputation for successful team flying increased, so did the number of dedicated leeches. Our fan club included Slovenia's pilot, in the prototype

Left: the triumphant Standard Class team took the top three places when they practised at the 18-Metre Nationals for the Worlds. From left: Jez, Jay and Leigh

Lak-19, and the entire Swiss team. They looked decidedly sheepish collecting their Day 3 prizes having followed us from start to finish. However, our Club Class team suffered worse – one pilot even tailed Luke and Owain as they airbraked down 1,000ft to join John before the start.

Day 4 proved the most dangerous and frustrating of tasks. An overset racing 300km in awful blue conditions gave us our low point of the contest, with the three of us contemplating the River Loire from 400ft only an hour into the task. Everyone was destined to finish in fields within a few kilometres of each other. On catching the gaggle, which frequently descended before anyone left, we finally climbed enough to glide to the lid of a nuclear power station. As one of the nervous first arrivals, I saw 25 gliders bearing down on the column of steam I was being uncontrollably thrown about in. The gaggle used three of these atomic thermals before final-gliding straight into fields 50km short of home, with Leigh cruising 5km further to win the day.

By Day 5, I had taken the overall lead, and by Day 6 Jez had pulled into second, narrowing our gap to a meagre 8 points. Tension mounted on the seventh day as a late weather window saw us launching at 17.00hrs on a tricky 1.5hr assigned area task – our flight was good but in the wrong area: the day winner crucified us by almost 20km/h. On a day where the score sheet looked like the overall results had been turned upside down, fourth-placed Benjamin Schulz had a similarly poor day and Benjamin Néglais, in third, landed out.

'One pilot even tailed Luke and Owain as they airbraked down 1,000ft to join John before the start...'

The weather briefing on Day 8 suggested it would be the last one. Coach Martyn Wells and telephone mentor Brian Spreckley confirmed what we knew – fly the flight like any other day and let our competitors make the mistakes. We launched into a weird wave-like skyscape, with excellent conditions forecast on track. Holding our nerve longer than the French and Germans, we started 15 minutes after them and romped around.

On task, the strength of our team shone through. Despite my losing 1,000ft on Jez and Leigh, they fed back information that let me catch them on the last leg. Neck and neck, Jez and I crossed the line to take Gold and Silver. Just 13 points separated us – the equivalent of 1 min 20 secs on that final day. Leigh came 6th overall – a determined fight back from 15th on Day 2.

The Club Class story

This was wide open throughout the contest with top three places changing right up to the last day. Our pilots put in impressive performances, all finishing within 200 points of the lead. Despite similar overall scores, their stories were quite different. John and Luke could stick together in their high-performance (if over-handicapped) LS4s, and reaped consistent results. But in his lower-performance Libelle, Owain was forced at times to fly by himself.

He dealt with this brilliantly for the first half of the competition, and under cu-filled skies kept pace with John and Luke to use his handicap advantage. Winning Day 2 and taking the overall lead on Day 4, Owain was the man to beat. Unfortunately, on subsequent TDT tasks in the blue, he was unable to keep up with the LS4s. With gliders dispersed over a wide area, he was left in the unenviable position of fending for himself in tricky blue conditions.

Meanwhile, John and Luke steadily worked their way up from their Day 2 low. Luke's conservative style helped rein in John, preventing his normal one-day disaster, but all credit to John, who pulled a few minutes on Luke two or three times, and won Day 7.

An early start on the final day gave a disappointing finish for the Brits, although the overall results were a solid 5th, 7th and 8th for John, Owain and Luke respectively. However, the real final-day drama came from the German, French and Danish pilots battling it out for Gold. Reigning Champion Robert Scheiffarth led going in the last day, with maverick Dane Peter Toft and French Sylvain Gerbaud hot on his heels. The Germans sent their lowest-placed pilot out in front, but a failure of communication within the team saw Scheiffarth and the rest of the Germans hit a hole as he cruised to day victory! Meanwhile, the French had a great flight with Sylvain Gerbaud rising to second overall, and Peter Toft, whilst attempting a sh*t-or-bust flight, accidentally put in the steady 14th place that won him Gold! Scheiffarth dropped to third overall.

A system that works

On top of our other international successes, Issoudun demonstrated again that the Brits are getting it right. Our training system – funded via the BGA by British glider pilots – is truly world class: the Junior Nationals is a fantastic talent-spotting ground and the team training helps us progress quickly.

This year, the juniors also put a lot of effort back into gliding – by raising sponsorship with the tireless help of Marilyn Hood and by picking up the URL *www.glidingteam.co.uk* to create a new site for the junior team. This was constantly updated during the comp by our busy team captain, Reb Rebbeck. The team hopes that by raising the profile of gliding, more young people will be encouraged to get into the sport and that we can start building an even stronger team for the 2003 Junior Worlds in Slovakia.

See also www.planeur.com/wgcj2001/



Jay Rebbeck

Stubble fires and atomic thermals helped power the British victory. Whilst Jay flew Lemmy Tanner's LS8, LT (above), John Tanner borrowed the Rebbecks' LS4, FVE

Overall, Standard Class	Glider	Country	Points
1. Jay Rebbeck	LS8 LT	GB	6375
2. Jez Hood	LS8 352	GB	6362
3. Benjamin Schulz	LS8 B4	Germany	6201
6. Leigh Wells	LS8 LS	GB	6028

Overall, Club Class	Glider	Country	Points
1. Peter Toft	Libelle 85	Denmark	5768
2. Sylvain Gerbaud	Pegase FU	France	5763
3. Robert Scheiffarth	LS4 DG	Germany	5739
5. John Tanner	LS4 FVE	GB	5658
7. Owain Walters	Libelle CF	GB	5562
8. Luke Rebbeck	LS4 ETG	GB	5556

Below, from left: the team at Issoudun (August 5-19):
***Reb Rebbeck** – Also captained the 1999 Junior team in Holland; sons Jay and Luke competed both times.*
***Luke Rebbeck** (22) – Flying his LS4 in the French Junior Championships prior to Issoudun, Luke was in good practice for his second Junior Worlds.*
***John Tanner** (23) – A long-standing Junior Nationals pilot, John was racing an LS4 in his first Worlds.*
***Leigh Wells** (21) – A string of top three nationals places, most recently in the 2001 Overseas Nationals, preceded Leigh's Junior Worlds debut.*
***Owain Walters** (23) – Club Class Silver Medallist in 1999's Junior Worlds, Owain flew a wingletted Libelle.*
***Jez Hood** (22) – Opening his international career with a fine fifth placing in 1999 in the Club Class, Jez was sponsored in 2001 by British Airways Flight Training.*
***Jay Rebbeck** (24) – Won the 2000 Junior Nationals for his Issoudun place. Flying an LS8 in his third Junior Worlds, Jay was keen to improve on 1999's 8th place.*
***Martyn Wells** (not in picture) – Leigh's father brought a wealth of international experience to the team, and was coach this January to the successful Club Class Worlds Team in Australia: they came 1st, 2nd and 4th*



Jen Bradley

Oxygen: the facts

Five pages about wave flying start with Al Eddie's outline of the basic information you need to know about using oxygen

THE BGA's recommended practice for UK glider pilots, *writes Al Eddie*, is that for flights above 10,000ft, a life support system supplying supplementary oxygen must be carried. It also recommends that pilots breathe supplementary oxygen above 12,000ft.

These altitudes should not be taken as definitive, however, and by the end of this article a large proportion of us should regard much lower altitudes as "extreme".

What I intend is to provide a basic understanding of the effects of altitude on the human body and what signs to look for, and an overview of the life support systems commonly available.

Respiration

All the body's organs and tissue need oxygen to function. Oxygen breathed into the lungs is diffused into the bloodstream at a microscopic level through the alveoli, the thin-walled air sacs in the lungs where air and blood are in close contact. Saturating the haemoglobin in red blood cells, the oxygen is then delivered in the arterial blood to the body tissues where it is released to produce energy. In so doing, carbon dioxide is released as a by-product and carried in the venous blood back to the lungs and expelled, thus completing the respiratory cycle. If the absorbed oxygen supply is reduced, the corresponding reduction in energy supply results in a gradual slowing down of brain activity and the body's responses.

Air is composed mainly of Nitrogen (78 per cent) and Oxygen (21 per cent), the remaining one per cent being traces of other gases. These proportions remain the same throughout the atmosphere, at least that part we fly in. At sea level the pressure is 1013mb. Partial pressure of oxygen in the atmosphere at sea level is thus about 213mb (21 per cent of 1013mb), and oxygen/haemoglobin saturation is about 97 per cent. For normal functioning, the body requires a haemoglobin saturation of 87 per cent – 97 per cent at arterial oxygen partial pressures of 80-130mb. At sea level, the partial pressure of arterial oxygen reaching the tissues is around 130mb.

At 10,000ft, the atmospheric pressure is about 690mb. At this pressure, oxygen/haemoglobin saturation is about 87 per cent and oxygen partial pressure is about 79mb. We are now becoming hypoxic.

Hypoxia is the state of oxygen deficiency that causes impairment to human performance and life support capability. There are four conditions of hypoxia:

- Hypoxic hypoxia where the oxygen partial pressure of arterial blood is reduced. Example – unpressurised high altitude flying.
- Anaemic hypoxia where the concentration of red blood cells is reduced. Example – following blood donation.
- Stagnant hypoxia where blood flow to the tissues is reduced. Example – trauma.
- Histotoxic hypoxia where metabolism of oxygen by the tissues is reduced through poisoning. Example – alcohol or drug abuse.

We are interested here in hypoxic hypoxia.

Symptoms

As air pressure continues to reduce with increasing altitude, the body tissues are able to absorb less oxygen with an exponentially detrimental effect on our ability to function. If you smoke, suffer from lung disease or are recovering from illness, onset of hypoxia will occur at a much lower altitude, or tolerance ceiling. Other factors including age, health, fitness, diet and lifestyle can dramatically reduce your hypoxia tolerance ceiling, and for a regular smoker, it has been suggested that this alone could reduce it to as low as 5,000ft. Women have an average tolerance ceiling about 2,000ft lower than men. Typical early symptoms experienced by women are tiredness and headaches (hmmm, that old chestnut – could this be why smart gliding men have an oxygen system handy by the bedside?). Early symptoms of hypoxia manifest themselves differently from person to person. We may experience any or all of the symptoms, in any order – or none of them – prior to unconsciousness. They include:

- Reduced vision
- Forced concentration
- Slow thinking
- Indifference
- Tiredness
- Headache
- Breathlessness
- Dizziness
- Loss of co-ordination
- Euphoria
- Hyperventilation
- Cyanosis (bluish pallor in the skin).

The body puts up some compensatory defences – increased breathing and pulse, blood pressure and circulation. These are, however, only temporary. Poor judgment, exacerbated by inability to comprehend your impaired performance, is perhaps the most insidious effect of hypoxia. It's a bit like being drunk – you don't recognise what is happening to you – only this time there is no feeling ill tomorrow, because there will be no tomorrow! Quite simply, if you fly at extreme altitudes without use of supplementary oxygen, you will become incapacitated.



A Diamond badge climb in New Zealand – but oxygen is needed for less ambitious flights, too, says Al Eddie. Smoking and sex (no, not that *kind of sex) are just two of the factors you need to bear in mind*

The following table is a guide (only) to periods of useful consciousness with increasing altitude where no supplementary oxygen is used:

15,000ft -	**Up to 30 mins**
18,000ft -	Up to 15 mins
22,000ft -	**Up to 10 mins**
25,000ft -	Up to 5 mins
28,000ft -	**Up to 3 mins**
30,000ft -	Up to 2 mins
35,000ft -	**less than 1 min**
40,000ft -	15-20 seconds
45,000ft -	**9-15 seconds**

If you do not use supplementary oxygen – or if you do not remain at a lower, safer altitude – symptoms develop towards loss of consciousness, and death.

It is thus vital to have at hand a means for supplementing the oxygen supply to the lungs and there are different types of oxygen systems available for this. However, they are not all the same and we need to be aware of the limitations of each in order to make an informed choice to suit our needs. Complete understanding of – and confidence in – your system cannot be over emphasised.

Equipment

In the USA, federal aviation regulations require that supplementary oxygen must be used in general aviation aircraft for any flight above 14,000ft, and prolonged flights (more than 30 mins) above 12,000ft. The

rate of delivery is prescribed as 1l/min for every 10,000ft of altitude. There is no such regulation in this country – however the Air Navigation Order might catch you out under "reckless endangerment". Oxygen systems are not complicated and consist of four primary components:

- Cylinder
- Regulator
- Flow indicator
- Breather

Cylinders

The correct identification for oxygen cylinders is a solid white band around the collar. They come in various sizes and are normally rated to 150bar (2,200psi) pressure, although higher-pressure cylinders are available and this will affect the type of regulator required. They should have test information, pressure rating and date of manufacture stamped within the white band. Steel cylinders require a hydrostatic test every five years – alloy and composite cylinders may require testing at different frequencies – and a test certificate is issued. Cylinders do not have a finite life; however, a test centre may not accept any without documentation. An authorised, competent person should carry out refilling. Although very robust, great care should be taken while handling cylinders and the following general safety points should be observed. Do not:

- Carry a cylinder by the valve handle.
- Tamper with or attempt to disguise damage to a cylinder or valve.
- Change markings or identification, or interfere with valve threads.
- Attempt to refill a cylinder.
- Attempt to repair a cylinder.
- Subject cylinders to heavy knocks that may cause damage to the valve.

Regulators

The two most common in use are the constant flow regulator and the demand regulator. Regulators reduce the cylinder pressure to 1.5bar (22psi). In a constant flow regulator, the flow is graduated through a small orifice to provide the breathing gas at, typically, 2litres/min. A common type of constant flow regulator available in the UK adjusts from 2l/min to 4 l/min. This results in a huge waste of unused oxygen at lower altitudes. These systems can normally be safely used up to around 23,000ft.

Demand regulators differ in that they automatically adjust the flow via a barometrically-adjustable valve arrangement. The flow is still constant, but graduated for altitude, thus reducing waste. However, they may not provide sufficient oxygen at low altitudes for pilots with a low tolerance ceiling. Demand systems can normally be safely used up to around 35,000ft. Flight above this level should not be attempted without a pressure demand regulator and specialised training is essential prior to use.

Flow meters

Any oxygen system should be fitted with an in-line flow meter and there are several types. LED flow meters light up green when a flow is detected and red when not. Mechanical types look like a doll's eye that 'winks' at you when you breathe. What they do not tell you is the actual rate of flow, but there are one or two on the market that will. These consist of a clear plastic case with a graduated scale at the back. The oxygen travels up through a taper in which a ball balances in the flow, which in turn is read from the scale. They can be combined with a constant flow regulator and manually adjusted to issue the correct flow for any given altitude.

Breathers

Cannula breathers, similar to those you might find at a hospital bed, crept on to the aviation market around 10 years ago following US Federal Aviation Authority approval. They provide a constant flow and are only approved for use up to 18,000ft in the USA. Some sources are sceptical about their effectiveness beyond 15,000ft. In that case, it would be wise to stick to the lower figure. System efficiency can be dramatically increased by use of a conservation device installed in the cannula. The FAA requires

'The pilot of an American military aircraft suffered serious burns due to spontaneous combustion of the lip balm he was wearing'

that a constant flow facemask is carried as standby in case of problems – apparently users can suffer from head colds or congestion (and maybe hypoxia). Eating, drinking and use of radio are easily accommodated with this type of breather and it is quite popular with pilots who use wave for cross-country flying and do not wish to make huge climbs.

Aviation masks come in two types: the partial rebreather and the sequential breather. The partial rebreather is made of a soft pliable plastic material with a bladder attached and is connected to the regulator by a hose made from similar material. The bag is for collection of exhaled air, which is mixed with incoming oxygen and rebreathed. This type of mask is normally used with a constant flow regulator but, in any case, should not be used above 25,000ft. Care must be taken to ensure these masks are not subjected to excessive heat as they distort easily, affecting their ability to seal against the face.

The sequential breather is made from a more robust moulded plastic that is not prone to distortion and seals better against the face; it is connected to the regulator by a reinforced plastic hose. This mask is fitted with a series of non-return valves through which oxygen and outside air mix when inhaling and allow expelled air to be exhaled through ports on the sides. It can be safely used up to 35,000ft.

Medical-type, clear plastic face masks should not be used as they are not designed for use at the low temperatures encountered at altitude: they will simply freeze up.

Pilots with beards should be aware that the mask will not seal fully and should lower their safety ceiling accordingly. Masks should be stored in a suitable dust-free container, large enough to not cause distortion.

General safety

Oxygen is in itself a non-flammable gas. However, it assists combustion and reacts violently in contact with oils and greases. In an oxygen-rich environment, the smallest ignition source can cause sudden and violent combustion. Connections, tools and hands should be kept clean and dry. Petroleum-jelly-based lipsticks and moisturising lip balms should not be used – there is at least one known incident in which the pilot of an American military aircraft suffered serious burns to his face due to spontaneous combustion of the lip balm he was wearing.

Choosing a system

As can be seen, the choice of system is entirely dependent upon the needs of the user. Suppliers in the UK can provide any of the components to suit your needs and can give expert advice. Cost ought to be irrelevant given that this is an essential life support system but it won't break the bank to have the very best of equipment installed. It makes sense too, to have the system installed by the supplier – usually at very little extra expense. If you prefer independent advice prior to purchase, feel free to contact me.

Training and references

The Aeromedical and Survival Training Centre at QinetiQ (formerly DERA), Boscombe Down, can, by arrangement, provide training for pilots. The £200 course lasts about half a day and includes lectures on equipment and physiology, and an ascent to 25,000ft in their decompression chamber. They can be contacted on 01980 662688. Having been treated to similar training whilst serving with the RAF, I can thoroughly recommend it. You may also find the following references helpful:

http://edie.cprost.sfu.ca/~rhlogan/dalton.html details Dalton's Law of partial pressures of gases and dabbles with the arithmetic.

www.booty.demon.co.uk/metinfo/isa.htm is a handy reference on the International Standard Atmosphere.

www.mountainflying.com is a must-read site for all pilots.

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Al Eddie is BGA Regional Safety Officer for Scotland and a former CFI of Deeside GC
Overleaf: tips on wave soaring techniques

Right place, right time





Phil King (left), of Herefordshire GC, explains how and why to maximise your wave climbs using GPS and three recommended soaring techniques

IS CLIMBING to Gold or Diamond height in wave just a matter of being in the right place at the right time? I want to show why maximising your climb rate in wave can help your achieve your goals – and then explain some techniques for getting the best rate of climb using GPS.

When you fly into wave lift you need to find a rate of climb that is stronger than your glider's rate of sink through the airmass. If you can stay within the area of stronger lift you can climb, but if you leave the area of stronger lift, even for a moment, your climb rate reduces and your average rate of climb is less than it could be. So success in wave flying depends on finding an area where the wave lift is stronger than your glider's rate of sink and staying in that area – or finding a better area. You will know when you are doing well because you will achieve an average climb rate nearly as good as your best instantaneous reading. Success can give you hours of fun exploring the wave system, whereas failure means descending to thermal or ridge lift, or even landing back.

Suppose you take an aerotow into wave lift and you want to make a gain of height for a badge flight or to go cross-country. If you release too low the lift may be so weak that you fail to climb. But if you manage to climb very slowly you will often be rewarded with an increasing rate of climb that is soon 5kts or more. The difference between slowly sinking back to earth or achieving your FAI badge may be as little as a tenth of a knot. One way to achieve a higher initial climb rate may be to take a higher aerotow and release in stronger lift, but that reduces the potential gain of height and increases the cost. The solution I suggest is to improve your wave soaring technique so that you can climb from a height where the wave lift is very weak.

A good rate of climb may be important at the top of your climb too. After reaching a maximum, the strength of the wave lift will decrease with height. As the lift decreases you will stop climbing when the glider's rate of sink through the airmass is greater than the wave lift. But, if you can find and stay in stronger lift, you can continue to climb higher. Your highest point will be the point at which your short-term average climb rate drops to zero. By achieving and maintaining the best possible rate of climb you also have the potential to continue the climb to a greater height. *By maximising your rate of climb you can have a lower low point, a higher high point and therefore a greater gain of height.*

Even if you don't need every last foot of height, climbing quickly means you spend less time at altitude and avoid getting too cold. It reduces the risk of other factors such as the cloud gaps closing, or running out of daylight or oxygen, forcing you to descend before you get to the top of the wave system. And it makes sense to fully exploit the strong lift while it is available, in case it does not last.

In fact, the objective is the same for wave, hill, and thermal soaring – to find and use the strongest lift. With thermals you locate the core and then turn tightly to stay in it. With wave soaring the "core" will generally remain above a fixed point on the ground while you will tend to drift with the wind unless you compensate for it.

Where to find the lift

You can vastly improve your chances of climbing if you release from tow directly

Calculating wind speed and direction

If you want to determine wind speed and direction without a final glide computer here's how to do it with a GPS, magnetic compass, and ASI. If you do not have GPS you can use the same procedure with rather less accuracy by observing your movement over the ground – provided, of course, that you can see the ground!

1. Make sure that your airspeed is greater than the wind speed.

2. Compare your magnetic track on the GPS with your compass heading.

3. If your track is to the left of your heading, turn right until your track is the same as your heading.

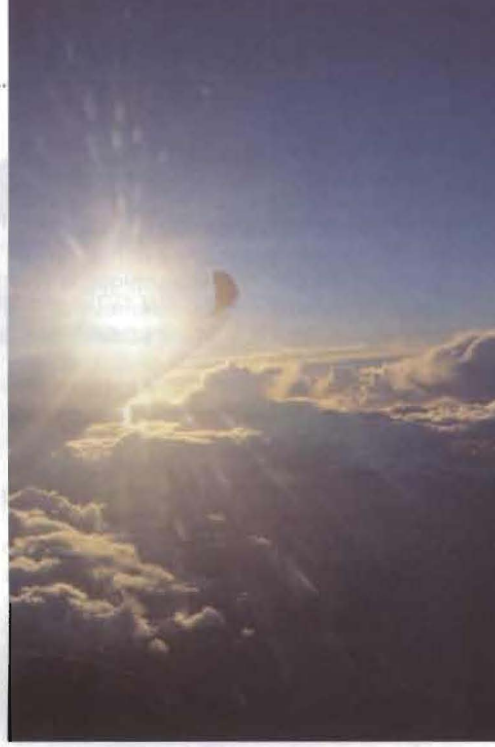
4. If your track is to the right of your heading, then turn left until your track is the same as your heading.

5. When track and heading are identical, you are heading directly into wind (or downwind!), so your track and heading are the same as the wind direction. Knowing this direction to an accuracy of ±5° is a great help in wave soaring.

The difference between your ground speed shown by your GPS and your true airspeed (TAS) is the wind speed. However, as you get higher, the speed that is shown on your ASI (the Indicated Air Speed or IAS) will be considerably less than your TAS, so this calculation is difficult to do. Don't worry about doing the calculation precisely, it's sufficient to know the wind speed roughly for most purposes.







Page 26: Mike Fox took this shot of Juniors pilots in weak wave over Portmoak. "The difference between slowly sinking back to earth or achieving your FAI badge may be as little as a tenth of a knot," says Phil
Far left: high-level lenticular blocking the sun in southerly wave near Hay-on-Wye (Phil King)
Right: wave over Shobdon, where Diana King – who took the photo – and husband Phil share a glider
Above: fantastic cloud formations in wave (Terry Joint)

into lift. Some tug pilots will know where the lift is and take you there as a matter of course, but it isn't always that simple. It pays to discuss the possibilities with the tug pilot before the launch and agree a radio frequency that you can use during the launch to direct the tug to the lift. Consider using any or all of the following sources of information to help you find lift:

- Position reports from pilots in the wave
- Stationary clouds/gaps in the cloud cover
- Known hotspots for wave in the current wind direction (downwind of a lee slope)
- Upwind end of a persistent cloud street
- High points/lee slopes (mark your map)
- A two-seater flight with a local pilot
- Pair-flying with a local pilot.

Unless the wind is very light, it is best to release well upwind of the airfield so that if it all goes wrong you don't find yourself drifted downwind of the airfield facing a field landing. If the wind is strong and your chosen release point is well upwind of the airfield it may save time and money to ask the tug pilot to fly 10-20kt faster than usual so as to make way against the headwind.

Determining the wind vector

To keep the glider in the best wave lift you must compensate exactly for the wind drift by knowing the wind speed and direction at your current height all the time (I use the term "wind vector" to mean "wind speed and direction"). A useful starter before you take off is to look at a forecast such as the Met Office *F124 UK Spot Wind Chart*, available at wave sites such as Shobdon or by fax or on the internet (see end of story for details). This gives the expected wind vector at various heights and positions.

Once launched you need a more precise value. Most modern GPS-linked final glide computers have some sort of facility to calculate/display the wind vector. Treat such calculations with caution because they are usually intended for use in thermal conditions and can be very inaccurate when used in wave. (See left, *Calculating wind speed and direction* for how to find it without a final glide computer.)

Techniques for climbing

One traditional wave soaring technique is based on hill soaring principles and uses alternating beats crosswind as if soaring a ridge. This may work adequately, but even for hill soaring you can improve your rate of climb by identifying the point on the beat where the lift is strongest and making S-turns at that point. The same technique can be used with wave lift and depends on doing the S-turns accurately at the right point. I recommend three basic techniques for climbing:

Knitting – in light winds use a technique that I believe Philip Wills was the first to describe and for which he coined the term *knitting*. When you have found the general area of best lift fly directly into wind until the rate of climb starts to reduce, then start circling with maybe 20° of bank. As you circle you will drift downwind. Initially the rate of climb should increase to a maximum. As soon as the rate of climb reduces it has passed its maximum: you should straighten out immediately and fly directly into ➢



Above: wave clouds over Llyn Efyrnwy (Lake Vyrnwy) show how much the lift differs from place to place – flying alternating crosswind beats would not be the best way of exploiting this system, says Phil (Phil King)

Using GPS waypoints

In preparation for flight make sure you know how to create new waypoints and navigate to them on your GPS. My Garmin allocates a sequential three-digit name to the new waypoint such as 004. Make a note on your knee pad of the waypoint name, and your height and rate of climb. If you lose the lift you can use GPS to find the spot again; if conditions have not changed significantly you should be able to climb. Each time before you launch, make sure that the GPS has sufficient spare slots to store new waypoints. On a long flight you might need 20 or more. If the weather conditions are similar on consecutive flights, waypoints created on the first flight may be useful on the second.

➢ wind again – this is where you need to know wind direction accurately. If the wave is marked by cloud you may need to straighten out before the rate of climb reduces so as to avoid being drifted downwind into the cloud. This technique is very similar to thermalling and requires the same discipline: circle in the same direction as other gliders in the same area, keep a good lookout all the time – and look particularly carefully before you start each turn and before you straighten out.

If you are in the turbulent layer below the proper wave lift you can sometimes use a combination of knitting and thermalling. The difference is that with thermalling you typically use more bank and do more turns before the rate of climb drops off and then you will need to fly straight upwind for rather longer to regain your original point over the ground.

If the wind is very light, knitting is almost the same as thermalling; you may even be able to use some of the same techniques for centring. In thermals you generally feel a surge of lift as you hit the core, however in true wave lift (as opposed to rotor or wave-enhanced thermals) the main or only indication of the changing rate of climb is a responsive vario, so it is worth setting your electric variometer to its greatest sensitivity and reducing the damping to its minimum.

S-turns – if the wind is stronger, avoid turning downwind. The most common mistake that beginners make is to drift downwind out of the wave lift into the sink. So, if in doubt, do not circle! Do S-turns. If you do it right, describing an S in the air will describe a figure-of-eight over a fixed point on the ground so that you remain in the best lift. The challenge with this technique is to avoid drifting away from the fixed point. If the wind is light you need to fly alternately left and right roughly at right angles to the wind direction. As the wind gets stronger your angle to the wind direction should be progressively less.

Hovering – as the wind speed approaches your glider's speed for minimum sink, the angle of turn reduces until the glider is flying directly into wind and hovering. The simplest technique to describe, it is difficult to fly accurately. You need to exactly match the glider's speed/direction to the wind vector so they cancel each other out.

Centring

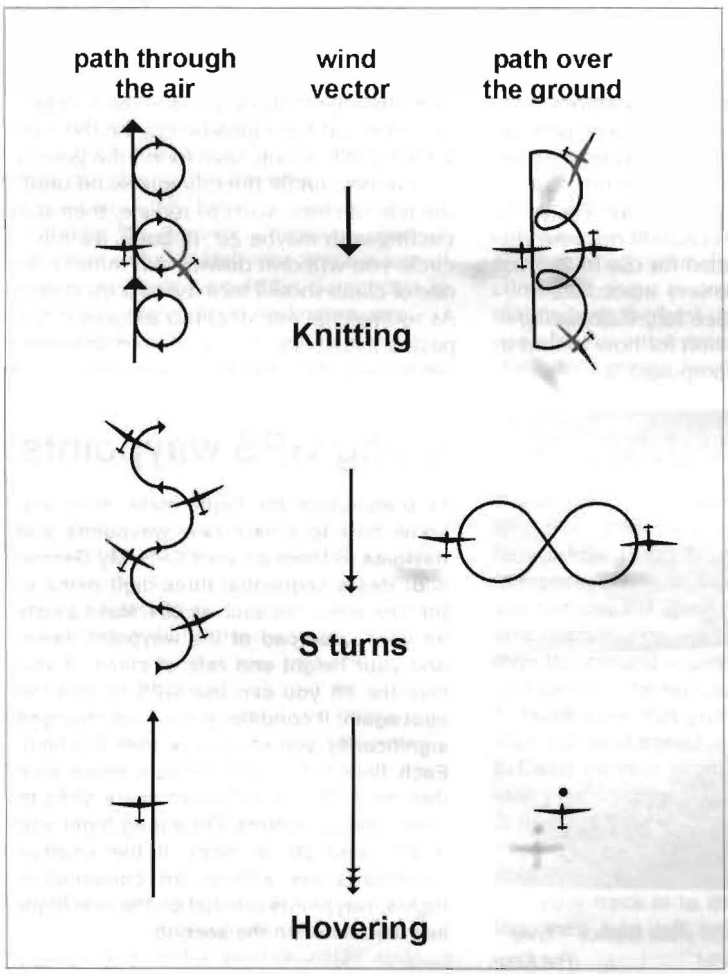
Before you start centring make sure you can identify your current position accurately, either by ground features, or preferably with a GPS. I strongly recommend creating a new waypoint each time you encounter stronger lift, so that you can use the GOTO function to return to that lift if you should lose it. (See also box on p27). Don't rely on cloud features to identify your position. Although wave clouds may appear to keep station over the ground and in theory relate exactly to the wave lift, they are essentially ephemeral and can come, go and move around without warning.

Keep a good lookout all the time, and if you are close to other gliders forget the GPS and use them as indicators. If you are in radio contact you can help each other leapfrog into the area of strongest lift.

Centring can be considered in two axes: crosswind and upwind/downwind. The objective is to find the best lift then stay in it. However there is no point in losing the lift completely in a failed attempt to find the best lift, so in practice it makes sense to use any lift that you find then cautiously search for stronger lift. Always search upwind first – it is easy to drift downwind, but difficult to go upwind.

Search upwind by over-compensating for the headwind until you are 100m or 200m directly upwind of your previous position. Do this slowly and deliberately so that you can observe whether the climb rate increases or decreases, and so that your manoeuvring does not cause extra sink which would mask any change in lift. If the lift decreases reverse the process and return to your previously noted position by using GOTO on the GPS. Re-establish your climb then search downwind, left, and right until you find stronger lift.

If you find weaker lift in every direction then you are centred. If you find stronger lift immediately identify your new position then continue the search by going further in the same direction. Once centred, make a permanent note of the position because you may want to return to that point later in the flight, or you may want to inform other pilots of the exact position of the lift so that they can also use it.



Left: the three methods of wave soaring that Phil King recommends (from top to bottom): knitting, S-turns and hovering

Jon Hall, HRA

After you are centred

As you climb higher keep repeating the centring process because the best lift may not remain in exactly the same place. It can move because of changes to the wind vector with time and height.

As well as centring on the best lift in your local area, it's worth looking out for indications that another area may give stronger lift. These include clouds and other gliders. Imagine the cloud as a ridge and look downwind for the best into-wind slope, then look at the cloud upwind and look for the steepest lee slope – the area of best lift will usually be on the direct line between these two points. Alternatively, a jump up or downwind by one wavelength may (or may not) allow you to climb higher.

So, successfully climbing to Gold or Diamond height in wave *is* about being in the right place at the right time. Using a GPS and the techniques I have described can help you find the right place and stay there while you climb into the magical world of wave.

To get a wind forecast (by fax): 09060 700 403 75p/min (3 mins = £2.15) or 09063 666 099 or (internet) www.weatherweb.net/214215.htm or www.arl.noaa.gov/readybin/profsrc.pl?metdata=





Above: Justin's FAI certificate. The Diamond is signed by Gillian Howe, then Assistant Secretary to the BGA, now Justin's wife

Past, present...

In the first of an occasional series by leading pilots, Justin Wills describes some of his early gliding experiences

The past is a foreign country: they do things differently there – LP Hartley

I CAN JUST recall isolated moments of my first flight. My father, Philip Wills, took me up in a de Havilland Hornet Moth from White Waltham, where he had been in the Air Transport Auxiliary during the war. I can remember flying over Maidenhead, then a small market town, and demanding vociferously to be taken down as I didn't like the 'bumps'. It was to prove prophetic.

Some time later, on my sixth birthday, I had my first flight in a glider. We were staying in a caravan on the edge of the ridge at Sutton Bank overlooking the Vale of Thirsk. It was a fine day with a westerly breeze; I sat on my mother's lap in a T-21 whilst my father, who was then world champion, flew us along the hill towards Gormire Lake. I recall the sun glinting off the water and the purple heather below. As we turned back my father said: "Look, there's a thermal". I stared and stared, but all I could see was another glider circling ahead. I vowed that when I grew up I, too, would learn to see thermals. That evening, as a final treat, I was allowed out of the caravan in my dressing gown and slippers to watch 'my' T-21 being shoulder launched off the escarpment into the rising westerly wind. Unfortunately, the glider was not kept straight so that it crabbed over the edge; the leading wing was caught in the updraught and the whole aircraft rolled over on to its back in the heather, to my total consternation. My brother Chris photographed it all with his Brownie Box camera.

For the next ten years I did no further gliding as I was too young to fly solo and in those days the numbers wanting to learn to glide far exceeded the two-seaters available. The one exception was during a summer half-term when I was thirteen; I went up in a Slingsby Eagle on a good soaring day but after half an hour I was wretchedly sick and we had to land. However, I was more than happy being a member of my father's crew and sharing in his successes. One of my roles was to collect the droppable wheels he always specified on his gliders in the interest of performance.

I also joined the aeromodellers club at school and built all the Keil Kraft model gliders, which I then flew at the gliding sites. Most pilots brought their families to the club for a day out (very few had more than one car) so there were lots of other children around with whom to play. We used to roller skate along the perimeter track at Lasham, which is how I know it slopes down from east to west.

There is an art, or rather a knack, to flying. The knack lies in learning how to throw yourself at the ground and miss. Pick a nice day and try it – Douglas Adams

As my sixteenth birthday approached I joined Lasham and queued for instruction on the T-21. My efforts to learn were hampered by having numerous different instructors, my fellow pupils being at different stages and changing daily, and the absence of any ground school. But I suspect the real problem was that I had always imagined flying would be natural and instinctive. For years I had gazed at the scale models of all my father's gliders and imagined soaring across country, even across the Channel (which shows how some childhood dreams can be fulfilled), but had never realised flying involved manipulating levers and pedals. I totally failed to get the hang of it until the following year when I joined a members' course with only four others: an Imperial College student, a Polish girl with a remarkable beehive hair style, and my two cousins Gill and Lesley Wills. We were allocated a new T-49 Capstan and Derek Piggott. We were able to operate on our own, including the autotowing, and with Derek's skill and enthusiasm four of us went solo by the end of the week. My own first solo was early in the morning of a perfect day; I ➢



The T-21 in which Justin had his first glider flight. Later that day, as the wingtip holder hung on, a shoulder launch went wrong. Photograph by Justin's brother Chris Wills, current President of the Vintage Glider Club





the *White Planes* picture co.

Above: a T-49 Capstan, the type Justin first soloed
Right: an ASW 17, a sailplane type Justin later owned

➢ can remember being able to see the Isle of Wight from the top of the launch, and then being photographed as the first pupil to be soloed in a T-49.

There followed a rather frustrating period, during which I endeavoured to complete the further check flights required to convert to the single-seat Swallow.

When I finally achieved this I found it a particularly difficult glider to fly. The cockpit was claustrophobic, the flying attitude was completely different to the T-49, its performance seemed worse, and its controls, especially the airbrakes, alarmingly direct.

I was, of course, desperately keen to achieve a soaring flight, but all my training had been aimed at basic handling skills and standard circuit planning, thus I had no success at all. A further discouragement was being frequently berated in front of the entire launchpoint for various flying misdemeanours, which led me to suspect that some instructors were more interested in the exercise of power and superiority than in a genuine desire to teach. However, after three weeks I was cleared for solo aerotowing, and with the extra time to sort out flying the Swallow I managed to keep it up for 46 minutes and got my 'C' badge. During this time I was fortunate, having become reluctant to seek advice from instructors in case it was construed as evidence of incompetence, in having my father as mentor. He suggested putting a piece of wool on the canopy and keeping it central by following the tip of it with the stick. I also found a foreign journal at home recommending thermal centring based on the inner wing pointing at the core when the variometer was at its lowest reading. As a result, my soaring time increased rapidly, and by the time I returned to school for my final term I was cleared to fly the Skylark II.

But overhanging all my efforts to become a more proficient pilot was my continuing battle with airsickness, which lasted a further five years. My endurance seemed to vary between 45 minutes and two hours. With hindsight I suspect it may have been exacerbated by a Centre of Gravity problem. I have always been fairly light (around 10 stone) and, for some reason, my weight distribution seems to defy manufacturers' calculations of minimum cockpit loads. This was illustrated years later when I bought an ASW-17. Empty weighing indicated I should be well within the CG range, yet reweighing with me in the cockpit resulted in my adding 6kg of lead in the nose to reach the aft limit. One of the effects of the C of G being too far aft is that the glider tends to pitch nose up in turbulence; the pilot instinctively corrects this but is consequently exposed to frequent reduced 'g' forces which, in my case, exacerbates airsickness. I underwent extensive medical tests, which showed there were no physical causes, and these findings convinced me that the problem had to be overcome by psychological means. I set about eating and drinking normally before each flight, carrying numerous plastic bags, and ensuring I had a specific objective for every flight and landing as soon as it was achieved or became unrealistic. I finally cured myself completely at my first competition at Rieti in 1971, where I was so absorbed and fascinated by the flying that I simply forgot all about being airsick. However, to this day I remain a poor passenger in a two-seater, and dislike high 'g' manoeuvres.

'Overhanging all my efforts to become more proficient was my battle with airsickness'



The RAFGSA's legendary Andy Gough

In the meantime, my five hours duration flight proved quite a hurdle, several attempts having to be terminated despite my enthusiasm, and it was finally achieved in a Skylark 2 at Lasham just over a year from my first solo. I now felt reasonably proficient at soaring but flying cross-country appeared rather daunting in terms of getting the necessary clearance, carrying out the flight itself, and organising and financing the necessary retrieve as I had no car. The breakthrough occurred when I joined the Oxford University Air Squadron during my first year as an undergraduate and gained access to the facilities at the RAFGSA Bicester, where the Air Squadron based its Chipmunks and provided regular transport to and from Oxford. My power instructors soon became accustomed to the sight of my back disappearing towards the gliding hangar – it was full of marvellous gliders available at very reasonable cost under the control of the legendary Andy Gough, who radiated enthusiasm, drive and charisma.

Within two months I had completed my Silver 'C' flying a Scheibe SF-26 to Lasham twice (on the first occasion I forgot the barograph). There was a Statute which prohibited members of the University from keeping an aircraft within five miles of central Oxford, so I parked the SF-26 on its trailer behind the air force blue Bedford van outside my college gates overnight following the retrieve, and nobody noticed. Nine weeks later, with Andy's continuing help and encouragement, I achieved my 300km Diamond goal, and quite soon thereafter my father asked whether I would like to share his brand new Dart 17R with him...





Above: Justin in the Dart shared with his father, Philip
Right: a Hornet Moth: Justin's first flight was in this type

the ***White Planes*** picture co.

Praise they that will times past, I joy to see
My self now live: this age best pleaseth me
– Robert Herrick

Nostalgia is generally rose tinted, not sepia. The smell of new-mown grass mixed with aero-engine exhaust provokes innumerable sunlit memories, as does the sound of laughter filtering down a concrete stairwell, and the song of a skylark. Every time I take off I am still entranced by the sudden transition that occurs at about 60 feet when one's view of the world becomes three dimensional. Though the events described above occurred over 35 years ago, many observations remain just as relevant today.

By far the most valuable asset of the gliding movement is its membership, which provides the greatest source of new members: over 60 per cent of the pilots at the Junior Championships have a family connection with gliding. Clubs could benefit from devoting one Saturday per month to families and friends, providing cheap two-seater flying followed by a suitable social event. It is important that gliding clubs think about providing facilities that are competitive in today's leisure market. It is interesting to reflect that in 1935 the London GC, with less than 200 members most of whom were under 30 (my father was 28), commissioned one of its young pilots called Kit Nicholson to design a club house which cost £3,500 to complete at a time when the best glider available cost £300; the equivalent today would be over £1 million.

When seeking new members from the general public clubs should focus on anyone who says: "I have always wanted to fly". This may be evidenced by an interest in aeromodelling or hang-gliding/paragliding, but it does seem as if certain people have an almost genetic urge to fly. I like to think this relates back to the moment when birds developed from land animals. Whatever the cause, those expressing this interest very often become long-term members.

For many people their first flight in a glider is disconcerting. It is not silent, the glider does not float effortlessly across the sky, the motion is strange and initially the process of flying seems unnatural. This applies particularly to enclosed tandem two-seaters: interestingly the very successful club at Rufforth still offers the choice of first flights in a T-21 and many opt for it. Training to solo is best done intensively with a peer group and a minimum rotation of instructors. There is a need for suitable ground school and a really good cockpit simulator. Once solo the new pilot needs to receive almost as much attention and advice, which may be best provided by a mentor system. The problem of airsickness should be fully appreciated. In the vast majority of cases it can be overcome, but the affliction may be far more widespread than we think, since most of those affected quickly disappear. If the sufferer is also of slight build great care should be taken to ensure the flight CG is sufficiently forward. In the worst cases treatment by hypnosis should not be ruled out.

'We are incredibly lucky to live in the present'

Finally, my most abiding impression of gliding in the past and the present is that it consists of the most wonderfully varied, interesting, talented people, who enjoy thinking about and debating every aspect of the sport as well as actually flying. Much of human happiness is derived from doing something one likes with people one likes. Even with the tenfold increase in private ownership that has occurred over the last 35 years, the advent of enormous gains in performance minimising the number of field landings, the use of auxiliary motors to reduce that number further, and rigging and tow out aids, gliding remains essentially a social activity. And it needs to. Gliding in Britain is dependent on a large number of voluntary enthusiasts prepared to run everything from the sandwich caravan at the launchpoint to the chairmanship of the BGA. As a result we enjoy some of the cheapest and most accessible gliding anywhere. And we have the potential to make an enormous contribution to the future of aviation: on a summer weekend there may be 1,500 gliders airborne above Britain at any one time, occupying a relatively shallow layer of uncontrolled airspace; even at peak times there are less than 100 aircraft in controlled UK airspace, spread over a very wide altitude range. Over the last 35 years the expansion of controlled airspace has been totally disproportionate to the growth of traffic, and the result is becoming increasingly absurd and unsafe, posing some very awkward questions of potential legal liability. The problem is not one of space *per se*, which is immense, but of utilisation, and gliding as a major airspace user with no commercial interests is in a strong position to contribute creative and technological solutions to the problem which clearly has to be solved. I have no doubt the next 50 years will prove as challenging and interesting as the last.

Above all, it is the love of flying that inspires us. However long it takes us individually to learn to fly we can always reflect on the first creature that looked up, saw a falling leaf, and thought: "that looks fun". Ten million years later, having grown the necessary membranes and converted scales to feathers it was poised for its first solo... We are incredibly lucky to live in the present.



Above: Justin's mother and father, Kitty and Philip Wills; Philip was world champion in 1952 and chairman of the BGA for 19 years from 1949-1968

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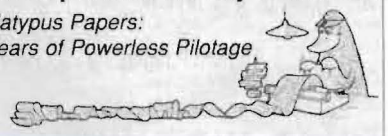
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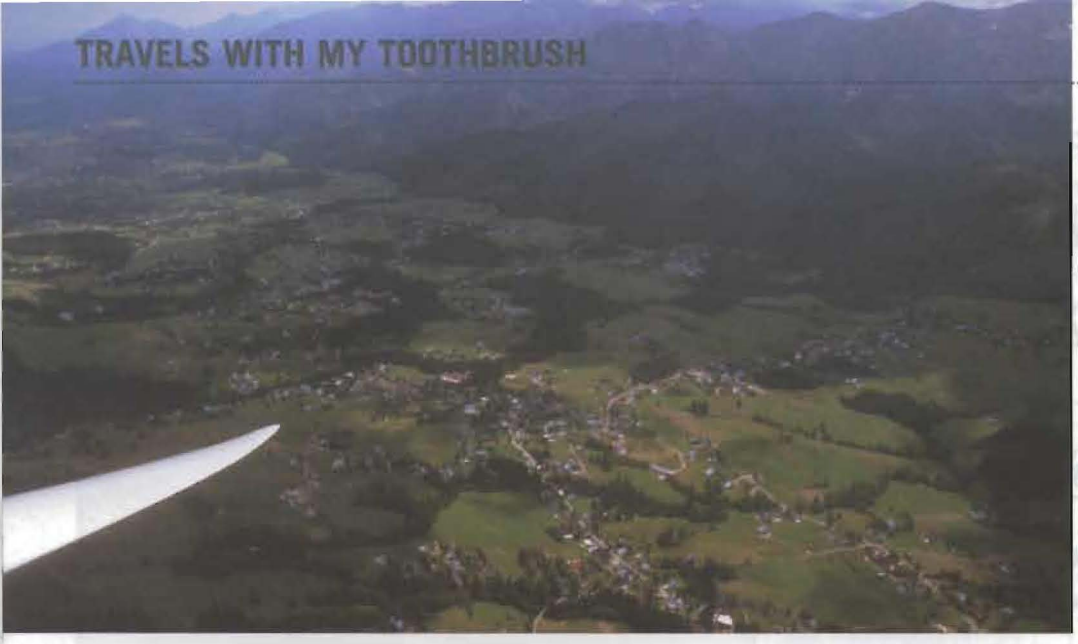
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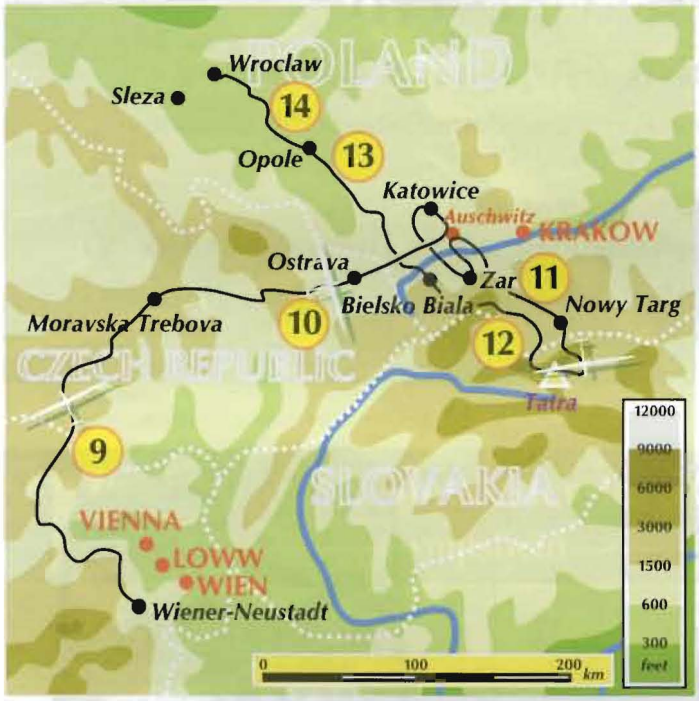
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Reach
turning

Part three of Guy Westgate's Europ and toothbrush takes him to the fa unwelcome prospect of beginning t



Above: the tourist town of Zakapone under the High Tatra mountains on the border between Poland and Slovakia

Above right: the hillside airfield of Zar in Poland: all landings uphill, all take-offs downhill...

Left: Days 9-14 of Guy's journey across Europe to the farthest point of his travels from the UK (map: Steve Longland)

Below: Bielsko Biala, known to glider pilots for its former SZD factory and now home to the MDM Fox works

MY DG-400 looked almost inadequate at the end of a very long line of new Katanas and touring motorgliders outside the Diamond Factory at Wiener Neustadt. One of the receptionists gave me a personal tour around the manufacturing plant that had closed for the weekend. There were Katana 100s and Katana Extreme motorgliders in various stages of production, and the new Diamond four-seater, the DA40.

As the day looked soarable I decided to cross the former Iron Curtain into the Czech Republic. While I hadn't been particularly conscientious with flight plans until now, I thought it prudent to file properly this time, rather than get intercepted by a MiG fighter at the border.

I struggled with the paperwork, as my Aerad data book only listed the biggest commercial airfields and my GPS database had no Czech information. Fortunately, the Jeppesen maps I had bought for the whole of Europe had a list of co-ordinates for airfields and NAV beacons and I selected an airfield around 130km north of the border for my destination, with a random selection of diversion fields *en route*. I had no idea of the

Below: Guy at Ostrava *Right: the World War Two death*





ing the g point

pean adventures with a motorglider rthest point of his travels – and the the long journey home



size of any of them and just hoped I had not committed myself to landing at the Czech Republic's Heathrow!

The other snag with the flight plan was the perpetual question of a soaring glider's predicted flight time and endurance. Using climb power, I had an engine endurance of less than two hours, but it would be reasonable to assume I could glide between climbs, so the airborne time could be four to five hours. I expected any good soaring day to last six hours: To trigger emergency services into action after two hours would be silly. I called the Austrian flight information agency for advice, but soon wished I hadn't as I became involved with some very senior air-traffic personnel and got absolutely nowhere. Eventually, I did what I should have done from the start – told a little white lie. I filed flight time six hours, the FIR boundary after three, endurance eight! After an hour's wait for this to be processed, I climbed into the haze to track north along the western boundary of Vienna's airspace. I was hoping to see Vienna, but it was lost in the murk.

I followed a rising cloudbase north-west initially, aiming for my entry point into Czech airspace 135km away. Austrian air traffic pestered me every few minutes for my height, position and estimates for various points that were not on my map. Once I had left the Wienerwald hills the visibility got much better and after a very wide blue corridor the conditions improved to match. The balance between convective boom or bust must have been on a knife-edge as I could see showers in the distance even though the cloud tops were not much above the rising base at 5,000ft. Conditions were excellent, the showers always remained on the horizon and I reached the border in less than two hours. For the first time I felt strangely limited by having a defined end point to the day's flight. A few kilometres inside the border, the thermals fell flat and I limped 17km in the same time I had done 100 the previous hour. There were still cumulus clouds but the thermals were less than half a knot and I now wished the glider was not quite so full of un-jettisonable ballast. I decided I should make my flight plan destination at all costs. As I reached final glide height the heavens opened and I was forced to use the engine.

A big grass field greeted me at the GPS co-ordinates for Moravska Trebova. I called and called on the tower frequency and finally landed by the hangar, having heard only garbled Czech on the radio. A Blanik was being launched from the far end but other than that, the airfield looked deserted. I walked around for a couple of minutes and had an uncanny feeling of déjà vu until I glanced into one of the power hangars when it all clicked into place. I had stumbled on the Czech aerobatic centre that I had visited by road briefly 10 years earlier: In the hangar was a sumptuous collection of aerobatic Extras, Zlins, Sukois and Caps.

I was introduced to one of the aerobatic instructors who spoke a little English. He informed me that I had brought trouble to the school because I had not arranged customs, which would take 24 hours by special arrangement. He contemplated calling the police but thankfully decided the best solution was for me to leave the way I had come in, illegally, if I promised to depart via Ostrava to clear customs before proceeding further! A flight plan, it appears, is only half the story.

I found the tower, which was fully ➢

n camp of Auschwitz-Birkenau, poignant symbol of the Holocaust





manned. A young girl was with the controller reading an English dictionary. When I enquired as to why nobody had answered my earlier calls, she translated that they did not know what I wanted, that is why they did not reply! We watched together as the aeroclub's engineer walked over to my unattended glider and paced out the long wingspan twice.

The rest of the afternoon was quiet. My new friend tried her English and I spent the best part of an hour learning the most useful phrase in any new language: "Two beers please – my friend will pay!"

I was embarrassed by the overwhelming generosity of the local pilots. I helped a member rig a very old ASW 15. After asking what money I had changed, he gave me enough to cover my accommodation and meals for the night and would not take a penny for it!

I teamed up with an Austrian, Gilbert, who took me out to the local hostelry then to a nightclub. Gilbert owned an exotic single-seat aerobatic aircraft, but as nobody wanted to hear him practise aerobatics in Austria, he flew it here. He told me a little of the aerobatic school's politics and of the financial problems the club faced without the cash former Soviet governments had bestowed on aviation activities. I tried out my new linguistic skills and Gilbert unwittingly paid 20 Koruna for two beers – that's 18p each!

Gilbert thought a flight in the School Extra 300 might be possible in the morning but I had to wait for my allotted instructor to take the morning air before he would even contemplate a time for aerobatics. Then, after he had taken lunch with his family, he agreed it would be soon.

I found him some hours later preparing to fly tourists locally. I packed up quickly and tore off into a fantastic-looking sky rather angry that I had wasted time on the dream of an aerobatic flight on what would be a long, difficult day.

The 105km to Ostrava was easy running. The controlled airspace started 30km from the airport, and although I made contact with the approach controller, concentrating on speaking slowly and with perfect articulation, I could not get beyond my call sign's being understood. I was instructed to call again later, which I did on final glide, but this time talking as fast as I could. He responded immediately in perfect English and told me to report airfield in sight.

I was a thousand feet above the runway in a downwind position when I was told I was number two to land, behind an ATR. I was suddenly in a Catch-22 situation: too low and too far away to start the engine safely and no lift. I watched the turbo-prop arriving from miles away and positioned myself as tight as I dared behind for a very low circuit. The controller repeatedly asked for my position, and finally gave me permission to land as I was taxi-ing off the runway. I called: "Cleared to land X-Ray Bravo" to keep him happy and flipped up the engine to taxi onto the apron. They clearly were not expecting a DG-400 as I was met by two engineers who attempted to chock, not only the main wheel, but also the wingtip, with heavy rubber chocks almost a foot high.

'All the villages were simply ribbon developments, each house with its own thin strip. For mile upon mile there was nowhere to land'

I tried to file a new flight plan with a typically brusque assistant who told me my flight plan was not valid as all VFR flights must enter Poland by the approved points and follow the approved VFR routes. She amended my route so that to travel the 80km to the nearest airfield in Poland I would have to route more than 250km via Katowice to clear customs.

The handling agent escorted me into the air-conditioned terminal where I paid the handling fee after asking for a little time to organise a second mortgage. The beer may be cheap but the landing fees are not. I returned to the glider to find it being guarded by a policewoman with a big gun, who made Rosa Klebb – the scariest female baddy in the James Bond movies – look like a kitten. I checked the glider for other SPECTRE agents and then disappeared as fast as I could.

I turned on track as soon as I was airborne, and targeted a factory chimney for my first climb. Conditions were good until the Polish border where a hazier air mass heralded weaker climbs and a lowering cloudbase against the mountains. I was surprised how suddenly the agriculture altered. The change from Austria to the Czech Republic had been imperceptible, now I was aware that all the villages were simply ribbon developments along narrow streets, each house with its own thin strip of land, leading for a mile or so until the boundary with the next ribbon village. For mile upon mile there was nowhere to land.

The controller let me cut the corner off my official routing, but I could not make him understand that I was soaring. An hour into Poland I could see the industrial haze of Katowice and glid towards the first of the many coal-fired power stations that got me in and out of the international airport on the north-east fringes of the sprawling conurbation.

The airport had a very modern feel and I could not have been treated better. I was escorted through customs, got my passport stamped and as the handling agent had no costs listed for an aircraft weighing just 480kg they did not make a charge. I only needed a flight plan to clear the airport's control zone, so I taxied away after a mere 35 minutes on the ground.

I motored just high enough to glide back to the first power station on the edge of the zone, but misjudged slightly, arriving a little too low. I found nothing but turbulence until a few hundred feet above the chimneys. The air was quite putrid: a veil of impenetrable industrial gloom hung over the city.

The day was dying quickly and the only lift I found in the murk was from the power stations. I climbed for Bielsko Biala first, but my climb over the southernmost chimney took me to almost 5,000ft above Zar, now only 45km away, and I enjoyed a long relaxed final glide to the hills.

I had been pre-warned about the short runway at Zar. It is so steep that landings are always uphill. I arrived with plenty of height to survey the area and the old funicular railway built to carry gliders to the hilltop for bungy launching. The manager came to meet me on landing and proudly showed me to the concrete hotel. I ate like a king, and was taken to the hilltop in the evening to look for glow-worms and see the lights of the Polish cities to the north twinkle through the haze.

The sloping runway was more than a match for my engine. I could not taxi uphill and eventually managed to snake my way from the hangars to take off the next morning. I realised I had already flown within a



Left: Edward Marganski (left) in his garage workshop; his is the imagination behind both the Fox aerobatic glider (prototype in the roof) and the Spark jet trainer (on the testing rig)

few kilometres of Oswiecim on my route from Katowice but had missed Auschwitz, one of the most poignant symbols of the Holocaust. I had visited it years before and was captivated with the idea of seeing it by air.

I fed in a rough GPS fix but it wasn't necessary: the vast dimensions of Birkenau were hideously obvious. Looking down, I couldn't quite believe the scale of human tragedy that must have unfolded in the extermination camp beneath me. I fell silent for some minutes, subdued; I even turned down the vario until I felt I had spent long enough wrapped in my own thoughts, descending slowly.

The route back south was hard work and as I climbed away from the plain, a significant patch of spreadout from the mountains weakened the thermals. The air felt wetter as the hills developed into mountains; sunlight became increasingly scarce. A front was approaching and I resorted to the engine after a little less than two hours airborne. I was depressed after the sights of the morning and because I was reaching the end of my journeying. From now on it would be flying home. There was one last place I wanted to see before turning round, but it would have to wait until tomorrow.

I found the grass field at Nowy Targ, where a fine mist of drizzle sealed my despondency. The airfield felt bleak. The rough accommodation block I had slept in years before, on my first aerobatic course in Poland, had been torn down because of asbestos but nobody had removed the rubble.

A group of schoolchildren visited the airfield in the late afternoon and showed more interest in my DG than the club's Puchacz and tugs. I watched their faces as they tried to come to terms with the idea that I had travelled all the way from England. Their teacher clearly did not believe me!

As the sun rose the next morning, I could see the peaks of the High Tatras to the south along the border with Slovakia, the last jewel I wanted to witness. There was a fresh south-westerly wind as I motored up to the 20-mile long mountain chain.

The Tatras reach 7,000ft, the highest peaks of the Carpathians, and even though the thermals were surprisingly rough I reached 8,000ft before entering the Podhale region to the south. The lee rotor was churning up the sky disturbingly and after an hour in the tumble-dryer I decided that I had better say goodbye to the beautiful Tatras and turn for home, now 1,500km to the west.

The first few kilometres were inauspicious as the battle between wave and thermals made me feel like piggy-in-the-middle. The sky was changing by the minute. I caught glimpses of wave bars stacked up to the heavens one second, then storm clouds and long fat cloudstreets, full of showers but little lift. The extremes of turbulence and sink combined with a relentless 30kt wind to make the first 60km feel like a Diamond distance. After clearing Zywiec, I fell on to a ridge upwind of Zar and slowly picked my way from the trees to a position where I could see Bielsko Biala nestled under the hills, and I glid out to land.

The airfield is known to glider pilots as the former SZD factory, but more recently has been base for one of Poland's most ingenious aviation entrepreneurs, Mr Edward Marganski. He showed me round the factory where the aerobatic Fox is produced and also his new project, a two-seat, carbon-fibre, military training jet, the Iskra II (it means Spark). It is an achievement made all the more remarkable when put into the context of being planned and built in what looked to me like a big garage.

The wind was going to be a recurring feature of the week, but almost worse was the moisture and weather it was drawing from the Baltic. As with most of the journey, I was limited to the occasional television forecast – what I could see was what I would get.

'The long-term forecast was not promising; I began to wonder if I would ever get home. I would need some good days ahead...'

Now four days into the former Eastern Bloc, I was beginning to develop a sense of their commitment to rules. Every flight in Poland had to be 'co-ordinated' with my destination airfield, all the clubs I would pass by and an area controller.

My flight from Bielsko was a race before the next weather front. I was 'co-ordinated' past Rybnik and the impoverished mining and industrial areas south of Katowice but soon the high cloud was shutting down thermals. I was surprised how quickly I reached rain, necessitating a 3,000ft climb with the engine to make the last 25km to Opole, an old grass Second World War airfield. A gliding course was launching a Bocian in the drizzle and there was an army of Ag plane fire-fighting crews, very bored indeed. The year had been so wet that they had had no fires to put out. This did nothing to dampen their boundless enthusiasm to help. As soon as they knew I wanted fuel they fetched some AVGAS in an old milk churn and helped me past their enormous Dromedary fire bombers into the huge hangar to watch the rain come down. By evening the locked hangar door was dutifully sealed with wax and I wondered if I would get to see my glider again. The rain was distressingly persistent and I started to worry about getting stuck. I was offered a mattress in the Ag-pilots' Portacabin but within five minutes of the television going off, the beer-assisted snoring started so I went to find a place to sleep in the kitchen.

The rain stopped early the next morning and it brightened quickly. Even with the early cumulus showing over development it looked quite soarable. Despite the hospitality of my pilot comrades, it was no place to get stuck so I took advice on the Ag strips all the way to the border and set off into the headwind before I could get 'co-ordinated'.

Predictably after the rain the cloudbase was low, rising to less than 2,500ft by mid-afternoon. The streets were largely on track and what little progress I made was by dolphining up them. The wind was around 20-25kts. After two hours of battling I had reached Wroclaw. I knew I had to clear customs again before leaving Poland and the weather was not good enough to make it to the border, so I landed at Szymanow, the gliding field on the northern edge of town.

The long-term forecast was not promising and I began to wonder if I would ever get home... I was annoyed with myself for delaying my holiday this far away. Since turning for home I had averaged less than 100km a day and I had to be back at work in 10 days with 1,200km still to go, I needed some good days ahead.

Next issue: the journey back...



Right: Guy's DG-400 was dwarfed by the PZL Dromedary fire bomber he encountered at Opole. It was "like a Piper Pawnee on steroids," he says



Geoff Moore



Jochen Ewald



Above: the Cumulus IIIf belonging to Christian Kroll, from Germany. The unusual-looking fuselage is attached to Grunau Baby wings

Right: Jochen Kruse's newly-restored Mraz-built Kranich II. Since it originally came from Czechoslovakia, it was fitting that it returned to the skies from a Czech airfield

Vintage

WHEN CHRIS Wills and friends began the Vintage GC in 1972, with the aim of keeping the last pre-war gliders airworthy, no-one imagined it would become one of the most popular international clubs. Today, about 1,000 members across the world help keep history alive. Their annual international rallies are the highlight of their activities.

This year, 75 gliders visited the Aero Club Zbraslavice, a very active club, which also operates historic aircraft, 80km east of Prague. The low living costs compensated for the long journey and despite some fronts, a lot of flying was done.

Notable among the vintage gliders were the newly-restored Mraz-built Kranich II of Jochen Kruse and the LG-130 Kmotr (or Uncle), a Czech side-by-side two seater of the early 50s, beautifully restored by the Aveko factory at Brno-Medlanky airport.

The replica scene is growing: we saw a new RRG-1 Zögling and a nacelled SG-38. The quality of the second fully aerobatic DFS Habicht, built by the Zahns, an aero-modeller family, was outstanding. Father,

Jochen Ewald



Left: Laszlo Revy from Budaörs brought this new-built RRG-1 Zögling, a 1926 German Primary, first built in Hungary in the same year
Below: Otto Grau's replica 1935 Rhönsperber
Below right: A local priest baptised the Czech nacelled SG-38 of Jiri Lenik "Erwin" to honour Erwin Primavesi of Akaflieg Prague, a Czech gliding pioneer

Geoff Moore



Jochen Ewald





Jochen Ewald



Jochen Ewald

# of 2001

son and grandson used plans from the Wasserkuppe Museum; Christoph Zahn, the grandson and the only glider pilot of the three, flew wonderful aerobatics in it.

For the first time, a Polish team took part, bringing an SZD-22c Mucha C and a Foka 4. They offered to host the 2004 rally, giving the historic fleet a new country to visit.

Sad news came from the VGC's pre-rally rendez-vous in Zwickau, Germany: Klaus Heyn had a severe launch accident in his new Wolf Hirth Musterle replica. In the hurry to get airborne before the weekend afternoon's noise-reducing "aerotow pause" the ailerons were not properly connected and no proper positive control checks were done. Klaus was seriously injured, but at the end of the rally the good news came that he will make a full recovery.

The 29th VGC Rally was a great success. The 30th rally will be held in 2002 at Achmer near Osnabrück in Germany, a former RAF base. For more details, contact: Christopher Wills, Wings, The Street, Ewelme, Oxon OX10 6HQ, UK.

Jochen Ewald

Jochen Ewald



Above centre: Govier (left) and Rhönsperber await hangar packing

Above: The LF-109 Pionyr, a Czech trainer from the 1950s

Left: a Czech side-by-side two-seater, the LG-130 Kmotr (Uncle) owned by the Czech Technical Museum, restored by Aveko/Brno and flown by Aeroklub Brno-Medlanky

Jochen Ewald



Right: the DFS Habicht has just been built to a high standard by a father, son and grandson family of modellers and was introduced to an admiring vintage gliding world at the VGC rally. The glider's distinctive colour scheme includes not only those red stripes, but also (below) a line drawing of the designer, Hans Jacob, on the rudder

Geoff Moore





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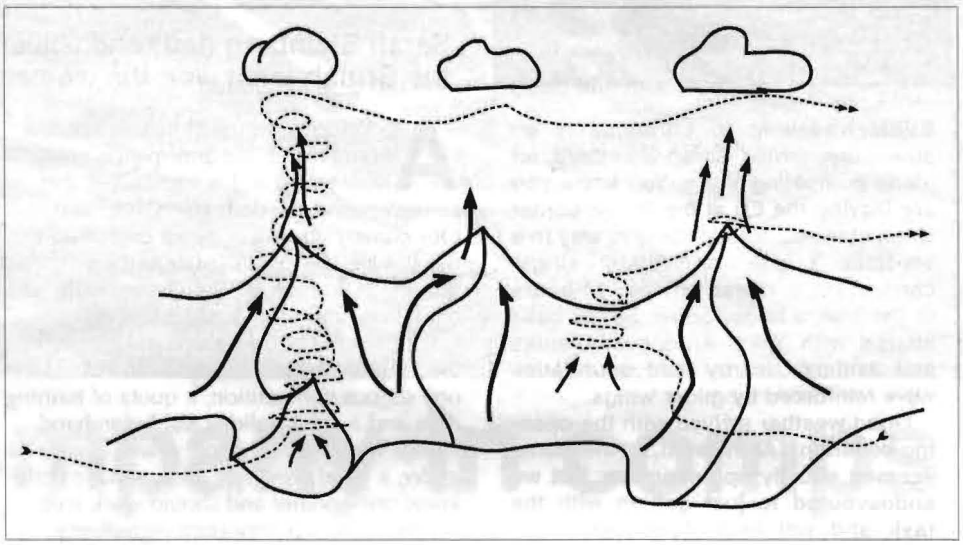
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Cloud-hugging and rock-hopping

Gavin Wills shares what he has learned in his glider, Hawkwing, about using mountain thermals



Gliders A (left) and B (right) exploit "curtains" of hot air rising up the flanks and "chimneys" streaming from the peaks

I THINK I just got my money's worth!" exclaimed Harman from the back seat. With a turbulent shot of sweet bush air Hawkwing surged off the razorback ridge and wrapped into a steep spiral climb. Jagged spires of rock dropped away as Harman exclaimed again: "I would never have looked in here for lift!"

Still low and locked between walls of rock above sapphire-blue waters the glider lifted clear of the razorback and pointed up the ridge to the black peak 1,000ft above.

"Shouldn't we circle to climb more?" But even as Harman spoke Hawkwing swept up the precipitous ridge until the peak scraped below the nose and the glaciated terrain of New Zealand's Mount Aspiring National Park sprang into view.

For my money, among the mountains is the most exhilarating and challenging place to fly gliders. Rocks, cliffs and trees flash past the canopy as one sweeps skyward in powerful narrow gutted thermals. Mountain thermals are my favourite soaring engine.

On a good day, when the winds are light, these thermals originate from hot spots in the valley floors. They rise up the sun-baked mountain flanks to crest the ridge as narrow curtains of hot air. The peaks then act as chimneys drawing these multiple-source curtains together into single exceptionally strong thermals. The strongest thermals are usually found above the highest peaks (as in the diagram).

Mountain thermal soaring requires a certain minimum experience. The pilot must be able to handle his glider accurately without conscious input, land anywhere, and have confidence in his atmospheric model of how, why and where mountain thermals work. A steely nerve and a sense of wonder also help as gorgeous panoramas, soaring eagles and spectacular views unfold and distract. A good memory for terrain and landout options is desirable so the map stays neatly folded when the GPS points at a nearby landout which happens to be located on the other side of an insurmountable mountain ridge!

"Never turn towards the hill or thermal below the ridge crest," Roger, my early instructor, told me. I often think of his words when, locked in a canyon of red rock, I turn towards the mountain wall fighting a rough, narrow thermal. What he really meant was: "Don't hit the hill, buddy!" So I add a few knots and try to maintain a medium angle of bank, which if steepened up can steer me out of trouble.

If trouble does loom and the hill gets too close for comfort on the inside of a turn, I maintain the same angle of bank as the mountainside and drop the nose a little to exit my escape route. Bear in mind that the fuselage can be a few feet off the hill if the wings are parallel to the slope. It's not a nice place to be but, along with your escape route, it's worth remembering!

Surprise, surprise! On mountain thermal days puffy cumulus form up in lines. No – they are not cloud streets. They mark the best thermals and follow the lines of the main ranges. As you climb to cloudbase and thank your thermal source (an important mountain flying technique!) you will notice the cloud is often over a beautifully-shaped mountain. Dolphin happily along your "cloud street," notice which peaks are producing clouds and wonder why. The "why" may help when the clouds disappear and/or you change from a cloud-hugger to a rock-hopper.

When cloudbase is low-ish, within a few thousand feet of the ridge tops, then rock-hopping along the ridge crest is often faster than cloud-hugging. At ridge crest you track along nearly continuous curtains of rising air and accelerate in the strong surges over the mountain peaks. However when cloudbase is 10,000ft above ridge top, as in Colorado's Rocky Mountains, cloud hugging is a comfortable way to go!

Horror of horrors, sooner or later you will find yourself below ridge top and scrabbling to climb back up. Firstly, relax! The valley floor is probably far below you. Secondly if it is a good mountain thermal day the thermals are likely to originate from the valley floor and will help you back up. But you have to quickly change down a gear or two to cope with the much weaker conditions below the ridges and their thermal focusing effects.

As soon as possible identify the stepping stones to lift you back to the main ridge crest. Then, in the absence of obvious, well-defined thermals rising from the valley floor, work "curtains" and "chimneys" to get your wing over almost any low ridge.

In the diagram, Glider A slowly and carefully flies figures of eight up the sunny face of the very low peak until he can "point his wing" at the peak and fly around it. Then with his wing pointed steeply down at the peak he thermals upwards and notices that his drift is leading him up the ridge towards the high peak. Drifting onto the high peak he gets too close to thermal. So he climbs the last few hundred feet by again circling the peak. Then, steepening his bank to point his wing at the summit, he climbs rapidly and happily towards cloudbase. He has been lifted by the strong thermal gusting from the mountain's "chimney".

Glider B, a little higher, elects to try to get a wing over the main ridge. He flies to the lowest point, a sunny saddle, and begins figures of eight. By ensuring each 180° turn is in a bubble of lift he gently climbs to the saddle, gets a wing over the ridge and begins to circle. A few hundred feet above the ridge he points at the nearest mountain "chimney" and riding the curtain of air rising off the ridge he is lifted up to the peak. Deciding to rock hop rather than take the climb, he accelerates in the strong lift and barrels on along the ridge.

On good days, mountain thermal flying is the soaring pilot's delight but on difficult days it can become a rock-scraping, gorge-following nightmare. My next article will discuss recognition of tricky situations and how to deal with them. In the meantime, enjoy a mountain thermal or two. But if you are not in such a lucky place as I am, then at least dream about them!

Gavin runs a mountain soaring school in New Zealand. See www.GlideOmarama.com



Baltic Golds

Sarah Steinberg (left) and Gillian Spreckley (below) describe how the British team won the women's worlds in Lithuania in August

EVEN travelling to Lithuania is an adventure, *writes Sarah Steinberg*, let alone competing there. You know you are leaving the EU at the Polish border when glorious autobahns give way to a six-hour queue on rutted single carriageways. It was another 14 hours to the site, a huge former Soviet base littered with Yaks, Antonovs, Blaniks and Jantars. Nearby field boundaries were reinforced by glider wings.

Good weather arrived with the opening ceremony. At the start, all the teams seemed equally apprehensive, but we endeavoured to just get on with the task and not look down! We were briefed to get a consistent result and not to try to win the day. I did as I was told and promptly came a close second. The next day was an assigned area task (my first in a contest, although we had practised them in team training). I met Gill (15-Metre Class) by accident soon after starting and we pair-flew in the tricky, showery conditions. We struggled across huge gaps to win the day in each class, with a lead of over 300 points. Rose (Club Class) was unlucky: joining a thermal a few hundred feet below me, 40km out, she missed the bubble and landed out.

I flew conservatively for the rest of the comp, in unpredictable conditions, to try to keep my lead. Cloudbases were often 5,000ft, but the high latitude meant thermal averages were rarely more than 3kts and small amounts of upper cloud would cut off convection rapidly. Sometimes a front abruptly stopped the day and no contest was declared. Other times, convection raced away, unchecked by inversions, into towering showers and squall fronts. Exciting flying, indeed; I was pleased to be in the top three each day.

Gill and I flew together twice more, and I paired up with Jan on three days, but all were declared no contest. The biggest shame was when Jan and I soared a squall then scrabbled round for another two hours to do the task. We landed, shattered, only to find that everyone had landed out before the squall. No contest. It would have given me a 1000-point lead and made Jan second overall. Still, there's always 2003.

Of course, nothing would have been possible without Ground Control. I think they all lost weight through the perpetual worry, dashing about and the odd bout of vodka poisoning!

AS WE crossed the Lithuanian border from Poland, our anticipation grew. Rose Johnson, Jan McCoshim and I were nearing our destination, Pociunai. Our convoy was silent as we examined the fields – a glider pilot's usual pastime when arriving at a new site. They were small, had high crop, few cattle and no fences.

For myself, I had repeated my recipe for the 1999 Women's Europeans in Poland: one serious competition, a quota of training days and a short holiday just beforehand. Things were looking good: a well-equipped glider, a good crew and a team that mostly knew one another and should work well together. The last important ingredients were confidence and luck. All I had to do was to relax and try to fly as I normally would; the rest would take care of itself.

Poor weather stopped cross-countries in the practice period, so all except the local pilots were more nervous than usual. I spent the day of the opening ceremony trying to boost my confidence. It must have worked – I won the first three days. These turned out to be the fastest ones, however, and my confidence waned in the second week when conditions weakened. On two days when the whole field landed out my lead was reduced by three German pilots hot on my tail. On the day when a large thunderstorm stopped me getting into sector, they all finished, taking the lead.

Part of my preparation was to imagine coping with worst case scenarios and I'd been through this one before: in one Europeans, I had crept back from 5th to 2nd. So I was almost relieved to have fallen to second: only 50 points in it and four days left. No problem! But none of my scenarios could have prepared me for the stress of the last day...

On the next day, an assigned area task, Sarah Steinberg and I flew most of the way together. I re-took the lead by about 120pts over the German trio, who lost time at a low point. But the day after, I started too late, not wanting to fly with the pack, and lost a lot of distance as the field landed out. I kept my lead but only by four points.

Three days to go and my mental stamina was starting to run low. After two non-flying days I awoke tired – the four-point lead and scrubbed tasks were taking their toll. Team training had tried to prepare us for this – but it isn't quite the same. Once airborne I settled down and just followed the advice I'd been given: stay away from the Germans and decide when to start depending on circumstances. Still on tow, I could see that the weather on track was unsoarable after the first 50km! One of the Germans was tailing me, so I flew to the gaggle where her team-mates were clearly waiting to start. When no one was looking I sneaked off. Margot, the Italian pilot, was telling me their movements, and I managed to start a little later. All these games, however, turned out to be unnecessary – after five hours in the air the day was scrubbed.

So ended in nail-biting style a contest where my worst nightmares seemed trivial on that last morning, and the best dreams were far surpassed with two Gold medals and the Team Cup for the British. Special thanks to my husband Brian for his years of encouragement, Robbie Knight for loaning his glider, Peter Wyld for crewing, Ron Bridges for keeping us all on even keel – oh, and of course Lady Luck for those four points!





From left: Rose Johnson, Jan McCoshim, Ron Bridges (and mascot), Gillian Spreckley and Sarah Steinberg

15-Metre Class	Glider	Country	Points
1. Gillian Spreckley	Ventus 2a	GB	4677
2. A Machinek	Ventus 2a	Germany	4673
3. K Senne	Ventus 2	Germany	4641
Club Class	**Glider**	**Country**	**Points**
1. T Sviridova	Std Jantar	Russia	4283
2= K Marszalek	Std Jantar	Poland	4121
2= C Luyat	Pegasus	France	4121
9. Rose Johnson	DG-100	GB	3764
Standard Class	**Glider**	**Country**	**Points**
1. Sarah Steinberg	ASW 24	GB	4275
2. A Michalak	LS8	Poland	3928
3. H Rynkiewicz	LS8	Poland	3769
6. Jan McCoshim	LS8	GB	3451

Full results at http://wwgc.lsf.cis.lt/



Wendy Durham reports on the regionals and nationals at Lasham

above and below: the ***White Planes*** picture co.

Two's company in comps

AFTER a summer of foot-and-mouth restrictions and uncertain weather, the opening briefing on July 28 took place under cloudless blue skies with a temperature climbing through 23°. Clearly, said Russell Cheetham, Director Peter Purdie and Task-setter John Taylor had sold their souls to the Devil to ensure good weather – although you can never trust the Devil to keep a bargain...

Day 1 (Open Class Nationals: Bicester-Ely-Naseby, 440.7km; A Class Regionals: Bicester-Grafham Water-Edgehill, 336.4km; B Class: Membury-Olney-Brackley.) John Gilbert, Lasham's General Manager, welcomed over 100 pilots, then Michael Mates MP formally opened the contest. It was indeed an excellent racing day (except in parts of East Anglia); more than 90 per cent of the 97 gliders got home. Nationals day winner was Lasham's CFI Graham McAndrew (108.9km/h). Flying a borrowed Nimbus 4DM, he tempered his thanks to its owners by adding: "In poor conditions, like we had around Ely today, it's a bit like driving an artic through the lanes of Cornwall!" John Gorringe and David Innes – flying each other's aircraft! – were 2nd and 3rd. A Class day victory went to Roy Pentecost and B Class, to Colin Watt.

Day 2 (Opens: Swindon-Aylesbury-Rivar Hill; Regionals: Marlborough-Didcot-Newbury). A long wait for trigger temperature (first 26°C, then 29°C) meant the grid launched at 14.15. Nationals day winner was John Gorringe (78km/h), who claimed to have simply drifted around the task overtaking everyone else. Colin Watt led the B Class home at 59.5km/h ("Every time I got down to 1,500ft, a climb materialised") while the Ted Lysakowski Trust Duo, captained by Ed Johnston, won the A Class (66.1km/h).

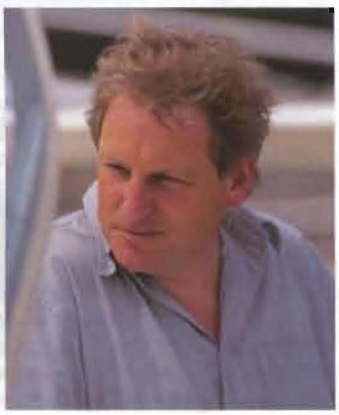
Day 3 (Opens: Chieveley-Thrapston-Bicester, 301km; A: Chieveley- Newport Pagnall-Bicester, 228km; B: Andover Oxford East 164km.) Lasham woke to bright sunshine – soon wiped out by (blessedly short-lived) fog. At a delayed briefing, met man Peter Baylis announced: "Today will be a little grovel". Conditions on task were mixed. First back and day winner was Colin Watt in the B Class (74.1km/h). In the A Class, Steve Jones/the Ted Lys Trust was first (86.4km/h). The endurance prize went to Mick Wells, whose Kestrel eventually crossed the line at 19.45 under a dead sky.

Day 4 (Opens: Pewsey-Didcot-Andover; Regionals: Ashbury-Andover). All classes were retasked as the soaring window got shorter and shorter. However, when trigger temperature was reached, the transformation was little short of miraculous. Within about half an hour, the sky sullen-looking overcast became an almost classic five-eighths of streeting cu. It meant a dramatic change to the winner's points as well – already devalued due to a short task, the Nationals was devalued further by most of the field completing in less than two hours due to storming conditions. The view up-track, with up to 30 sailplanes twinkling against the cumulus as they raced home was wonderful. Nationals winner Russell Cheetham (117.7km/h) narrowly beat Pete Harvey. As two of the earliest starters – "The optimum time was about 15 minutes before the line opened," said Russell – both had spent a nervous half an hour after landing at Lasham, waiting to be beaten by later starters. Russell was leading the contest overall, by a single point from John Gorringe, with Pete 10 points behind. Paul Davis was the A Class day winner; at 114km/h faster than all the nationals pilots except Russell and Pete! An 'interesting day' was how he described it, having taken only six climbs on task before hitting 7kt at Rivar Hill and gliding home. In the B Class, Dave Draper won the day.



Main picture: E2 (Russell Cheetham, also seen right) and N1 (Pete Harvey, also seen left) came top of four pairs battling for the Open Class title. Below: John Gorringe, 176, was third





the ***White Planes*** picture co.

Day 5 (Opens/A: four-hour AAT via Buckingham, north of Brize Norton, East Anglia and Hungerford; B: Oxford East-Grafham Water-Didcot, 300km.) The assigned area task (AAT) was a first for Lasham. Russell Cheetham won the day in the Opens, saying he finds AATs boring! Robin May likened it to a normal weekday afternoon's cross-country, with no apparent competitive element. Ken Hartley agreed: "I fly Nationals because I enjoy racing – and with its lack of feedback, an AAT is not a race!" In the A Class, Kim Tipple took first place. B Class was won by the Hitchcock and Fritche team, who narrowly beat Colin Watt into second.

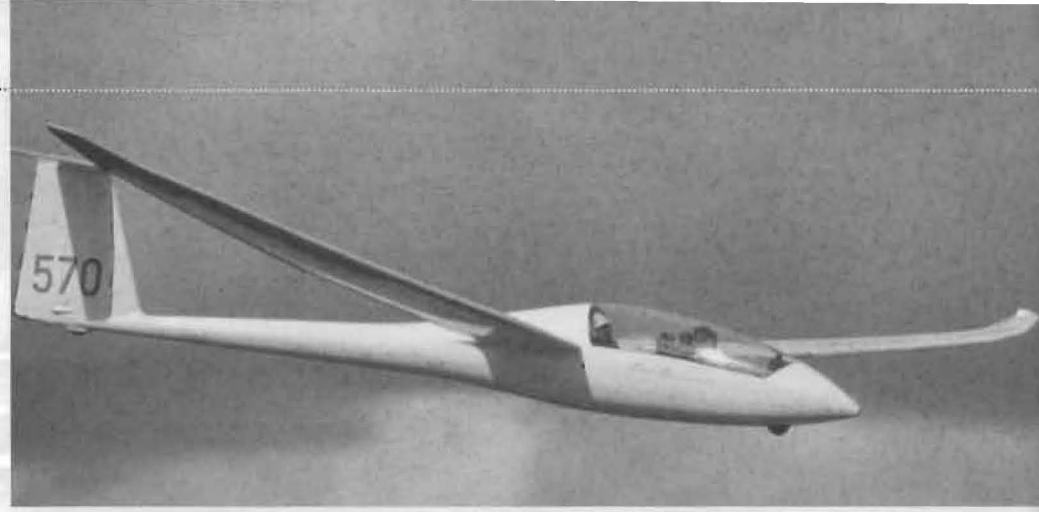
Thursday and Friday were both scrubbed.

Day 6 (Opens: Membury, either Aylesbury or Bicester, 186km; A: Thame O/R, 125km; B: Abingdon O/R 112km). A line of towering cu to the south and an upper trough approaching from the south-west were not encouraging. But high cover prevented overcooking. As the Opens launched at 10.30, it was indeed raining, but within half an hour the air was drying out, and the sky was classic... All pilots set off on task in short order. The last started at approx 12.30, and the finishers began to stream in over the line at 13.04 – precious little rest for the tower! It was 15.45 before the last glider was accounted for, split seconds before the sparks, bangs and rain started. Nationals day winner was Robin May (101km/h) with Russell Cheetham – retaining his overall lead – close behind. In the A Class, Kim Tipple won the day (91km/h) and retained his overall lead. Paul Fritche was B Class day winner (83km/h) but Colin Watt stayed ahead overall. Howidunnits praised spot-on task-setting.

Day 7 (Opens: Shaftesbury-Frome-Woburn-Enstone, 402.5km. Regionals: Devizes-Thame Airfield- Chieveley, 233.1km.) Early mist cleared rapidly, and the forecast was excellent – to quote Peter Baylis' briefing: "It looks wonderful!" By 11.00, as predicted, the sky was glorious. First launch was at 11.30. Most pilots began as soon as their lines opened, but a few intrepid Nationals pilots re-started up to 50 minutes later – and it paid off. Russell Cheetham and Pete Harvey, two of the latest, came 2nd and 6th on elapsed time, while Dave Allison won the day (107km/h).

In the A Class, Duo Discus 570, flown for the Ted Lys Trust, won the day and the comp *(see story, right)*. B Class day winners were the Fritche/Hitchcock team but, with second on the day, Colin Watt claimed overall victory. Russell secured the Open Class title, with Pete Harvey second and John Gorringe third. Russell paid tribute to his British Team partner Pete and apologised for practising their pair flying on the rest of the field! It was noteworthy, however, that of the six pilots openly flying as pairs (Russell/Pete, Graham/John and Jed/Ken), all finished in the top eight.

www.lasham.org.uk/lasham/lasham.html



This page and next: the ***White Planes*** picture co.

Tips from the top

Tim Charlesworth and Kevin Hook share what they learned from their Ted Lysakowski Trust prize – flying Lasham Regionals with the experts (they won)

Regionals A Class	Glider	Points
1 Ted Lysakowski Trust	Duo Discus 570	4810
2 K Tipple	ASW 20 930	4715
3 H Jones	Discus 2 D2	4538
Regionals B Class	**Glider**	**Points**
1 C Watt	ASW 20 CW	4791
2 D Draper	Std Cirrus JRG	4610
3 J Hitchcock/P Fritche	LS4 LS4	4529

OPEN CLASS NATIONALS

Place	Pilot	Glider	Points
1	R Cheetham	ASW 22 BL E2	5703
2	P Harvey	Nimbus 4T N1	5633
3	J Gorringe	Nimbus 4 176	5358
4	G McAndrew S Marriott	Nimbus 4DM 60	5314
5	J Edyvean	Nimbus 3 JE	5301
6	P Sheard	Nimbus 4T V1	5291
7	D Allison	ASW22 527	5080
8	K Hartley	Nimbus 3 J15	5025
9	A Nunn	Nimbus 3 376	4972
10	D Findon	Nimbus 4DT 48	4943
11	R Jones	Nimbus 4T 82	4846
12	R May	ASH 25 13	4581
13	T Parker	ASW 22 BL 461	4578
14	J Giddins	ASW 22 S22	4557
15	B Morris J Russell	Nimbus 3DT Y44	4547
16	R Kalin	Nimbus 3 345	4536
17	C Short	Nimbus 3DT 111	4531
18	D Innes	ASH 25 BB	4362
19	P Naegeli	Ventus 2CT 520	4276
20	WS Murray	Ventus 2CT 250	4236
21	M Foreman	Nimbus 3DT 954	4000
22	C Lyttelton	ASH 25 942	3978
23	D Masson	LS6-18 LS6	3872
24	B Bromwich	LS6C 855	3726
25	J Glossop B Glossop	Nimbus 3DT 29	3641
26	J Ferguson M Carruthers	ASH 25 925	3290
27	I Cook	Ventus 2CT V11	3259
28	C Emson	DG-505 Orion JSX	3147
29	M Judkins	Nimbus 3DT 754	3126
30	T Moulang	Ventus 2CT 666	2890
31	M Kirschner	Nimbus 2C EHT	2682
32	D Copeland	Nimbus 2 695	2677
33	P Pozerskis S Gilmore	ASH 25 260	2103
34	D Gardiner	Nimbus 3 727	1953

NO SMALL amount of effort had gone into the Ted Lysakowski Trust's arrangements for our week: the kind loan of Hugh Kindell's Duo Discus 570 (and his services for retrieves if required) – plus five top pilots to learn from. Ed Johnston, Steve Jones, Ken Barker and Pete Masson each gave us two days, with G Dale filling in for the ninth. The potential for improving our cross-country speed was immense. But the press was predicting a fortnight's heatwave: would we have a great time in the Lasham Regionals A Class, or a hot inverted disaster?

Day 1 (Ed/Kevin): At least today's forecast was good. British team member Ed Johnston arrived at briefing, full of optimism. On task, there was no wind and no streeting, with difficult thermals. This – apparently – was no reason to be cautious. Flying fast between thermals we stopped only for the good ones. Spending much of the flight at 2,000ft QFE made me nervous, but meant good climbs. We came 7th with 91km/h. Quite an eye-opener for a pilot who sometimes progresses to 7th from the bottom of the list at speeds approaching 70km/h.

Day 2 (Ed/Tim): We were one of the last gliders to be launched, into a blue sky. I remember gaggles circling in something that I would be proud of late on a Monday evening. This would be a survival day. However, Ed reassured me that it would be better to the north: sure enough, I could see a wisp high on the horizon. This flight demonstrated one of the week's lessons: circling in weak lift when there is stronger lift does not pay dividends. We waited and were rewarded with a stunning 7kt average to almost 5,000ft. This was enough to carry us to our first turning point (TP). Ed insisted on rounding the TP before we took a climb because of the eager south-westerly. Our final glide began at 4,000ft in another stonking thermal just north of Kingsclere. An excellent flight which taught me more than I could have learned in a week's gliding in a single-seater. We won the day.



Far left: Duo Discus 570 finishing at Lasham, captained by Pete Masson with Tim as P2

Kevin Hook (left) says: "Tim and I were both very impressed by the P1s' skill. Their powers of observation were remarkable: spotting energy lines, watching the progress of other gliders and maintaining a clear idea of where they were. Despite this workload, they found spare capacity to discuss what they were doing, why they were doing it, where they felt other pilots were making mistakes and what the weather was doing. I know I will never match their skill, but this week has lifted my understanding of cross-country soaring to a new level. I hope I won't have to wait long before experimenting with my new knowledge"

Tim Charlesworth (right) says: "the Ted Lysakowski Trust has given me opportunities that I wouldn't otherwise have had; I am indebted to those trustees, sponsors and pilots who made this week possible. I am very much looking forward to flying again to see if I can apply even a little of what I have learned"



Day 3 (Steve/Kevin): World 18-Metre champion Steve Jones flew in an hour before launch, looking very relaxed. We launched into a largely-blue sky, with cu visible 20 miles north. The start area was difficult and crowded, so we made a low early start and set off. After one climb in the blue, we began to make rapid progress – but towards spreadout. We travelled with two other Duos, gaining and losing only tens of feet relative to one another, for 100km. At Oxford, there was little sun on the ground and the lift was much weaker. To my surprise, we hardly slowed at all, following weak lines of lift without turning, and staying close to the other Duos. Before the second (downwind) TP, we tried to find a climb, but got nothing strong enough to justify stopping. "Never mind," said Steve cheerfully, "we can make Bicester from here". We pressed on along a weak energy line at 80kts without dumping water, finally stopping to take 500ft at 3kt just before Bicester (back to the dizzy heights of 2,200ft!). We could see sun on the ground at Oxford, so flew even faster before picking up 5kts from 1,700ft. We were back in the good conditions and had a 40km final glide. We waited for the other Duos' return. Amazingly (to me at least) we gained 32 minutes by pressing on through poor conditions neither taking a weak climb nor diverting. We won the day by an enormous margin and crept into the lead overall. Steve showed the talent that made him a world champion, seamlessly changing gear to match the conditions: blue thermals, cu and eight-eighths spreadout. Who could hope for a wider range in one flight?

Day 4 (Steve/Tim): A late-afternoon good weather window was promised. Steve's briefing was incredibly thorough. Choosing the best possible cloud street would make or break our position. Our final glide would begin two-thirds of the way round the task. Our first climb averaged at an astonishing 7.5kts almost to cloudbase, Steve emphasising the importance of leaving once the lift begins to diminish. We cruised no faster than we needed to between climbs. About 15-20km short of the turning point we took part of a 3kt thermal where others were still climbing and pushed on despite arriving at Ashbury on 2,000ft Lasham QFE – the good thermal we had taken moments earlier was at least 10-15km away. A successful 5kt average got us towards the next TP. Having rounded it, we joined a thermal at 1,200ft marked by another glider and dumped most of the water. A good final glide home – an education in using ground effect – finished with a straight-ahead landing. Steve kept his cool throughout the day, justifying his decisions while commenting on our competitors' mistakes.

Day 5 (G/Kevin): G Dale, former national Club Class champion, arrived long before briefing: we studied the met on the net then spent two hours marking maps and preparing the in-flight calculations needed on a four-hour assigned area task. We launched shortly before 14.00, with an improving sky to the north. We couldn't

'Reaching an overwhelming cloud street at only 1,500ft, we soared up like a crisp packet'

reach start height or cloudbase, so made a low early start, and reached the first control area at 90km at 105km/h. It looked blue to the east, so we decided to use the first sector to minimise our time in the east. Progress became more difficult – we were now working across the streets – but G steadfastly refused to stop for weak climbs. By now, I was getting used to the idea of travelling at speed with less than 2,000ft on the altimeter. As the energy lines became less obvious, we stopped travelling west near Bidford, having maintained 105km/h. We lost time looking for a climb near Northampton (even G felt the clouds ahead weren't promising) and headed home. We found ourselves in a crowded sky. Nobody appeared to be finding climbs, and it looked as though we would end up taking much longer than the four hours. Then G spotted a good line of energy the other side of Weston-on-the-Green. Carefully skirting the drop zone, we were rewarded by a 5kt climb and a good energy line. Suddenly the sky was empty. We managed 424km in 4hrs 8 mins, giving us an average speed of 102km/h (second on the day). Once again, we had made good progress relative to other gliders by moving to better conditions without struggling for a safety net first. A triumph for the power of positive thought!

Day 6 (Pete/Tim): A very unstable airmass, with isolated showers, meant today would be short and interesting. World Club Class champion Pete Masson declared a start despite being the target of what seemed to be a lead-and-follow, then actually started 20 minutes later. He refused point blank to circle in poor lift; and although we reached an overwhelming cloud street at only 1,500ft, we soared upwards like a crisp packet. Another big climb and careful flying in the large pockets of sink took us to the TP. Returning was harder than anticipated: good high climbs were needed to get through the areas of sink. Just past Aldermaston, and low, we could see gliders lower than us near Basingstoke. We joined them for a slow, weak but indispensable climb to almost 2,500ft that got us home.

Day 7 (Pete/Tim): We made a late start and picked a promising cloud street, getting beyond Andover without turning. Past Salisbury, a 7kt climb took us to cloudbase. At the second TP, gliders were struggling above and beneath us, in weak, broken 3kt thermals. Pete didn't waste time sampling these: it looked better ahead so we pushed on. But by Keevil we were uncomfortably low. With landable fields in sight, I was struck by Pete's certainty there was good lift nearby. Sure enough, at 500ft we got 2kts; perfectly centred, we climbed to 3,500ft and were on our way. Meeting other competitors, we were disheartened our water-ballast had gone. The other legs gave fantastic climbs and long glides.
We did 300km in exactly three hours.



Some of the trust's team (from left): Pete Masson, prizewinner Tim Charlesworth, Duo owner (and crew) Hugh Kindell, and the other prizewinner Kevin Hook



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Hard times in hostile skies

Above and below: the ***White Planes*** picture co.

Neil Lawson reports on the nationals where the met men scored more than the weather

FACING the very real possibility of being greeted by the dread words: "Not from around these parts, are you?" the assembled pilots gave Woody (Herr Direktor) their full attention. Whilst not exactly Deliverance country, things are definitely different in these parts (unless you happen to *be* from these parts).

CB-SIFT-CB E ***F15***... Most of the time they're around, but by the time you're aware of them, they've gone – the F15s from Lakenheath, that is. The 48th Fighter Wing has been told of the competition, traffic density, and the apparently-clueless meanderings of expensive white plastic. Gliding, to the tacticians of USAF Europe, must appear unfathomable.

Day 0 (as it turns out): Jez Hood, caught out, arrives at briefing with a five-course breakfast (sausage, egg, chips, beans, bacon, mushrooms, tomato, black pudding, fried bread, toast, fruit, cereal...). He appears unfazed by the met man's parting words: "...convection up to 30,000ft". A PA announcement recalling beer glasses reflects the widely-held conviction that this will be a no-fly day. Then it rains.

And it rains big. Andy Hall abandons tent construction in favour of an offering to the rain gods: a twisted metal pole, which might as well come with a sign saying: "Lightning, please strike here". *Lightning.*

Day 1 (Sunday): Believers in the BBC met would have stayed at home. The real met drew applause, the pattern for the rest of the week. If for nothing else, the comp ➢



From left: Andy Hall, assistant director Mike Bean, David Masson and Howard Jones played Risk while it rained. British Junior Worlds team members Leigh, Jez and Jay used the comp to practise for their own global conquest



Top: Norfolk GC. Above: met briefings by Geoff (above) and Graham were applauded – even on scrubbed days

Place	Pilot	Glider	Points
1	J Rebbeck	LAK 17	1585
2	J Hood	LS8-18	1567
3	L Wells	LS8-18	1543
4	CG Starkey	ASW 27B	1535
5	D Masson	LS6-18W	1529
6	A Clarke	Ventus 2CT	1514
7	B Morris	LS8-18	1431
8	M Jordy	LS8-18	1413
9	F Davies	LS6C	1377
10	A Hall	LS6C	1366
11	S Ell	LS8-18	1348
12	D Booth	LS8-18	1319
13	M Wells	LS8-18	1311
14	D Westwood	LS8	1304
15	T Slater	LS8-18	1153
15	L Tanner	LS8-18	1153
17	M Throssell	LS6-18W	1151
18	J Gatfield	ASW 27B	1147
19	G Metcalfe	LS6	1041
20	K Nicolson	LS8-18	1039
21	H Jones	Discus 2	1015
22	A Moulang	Ventus 2C	971
22	J Stephen	DG-400	971
24	AJ Garrity	LS7WL	942
25	A Wells	LS8-18	831
26	DS Innes	LS6-18	798
27	R Witter	Ventus 2CT	795
28	J Meyer	ASW 20F	777
29	JG Allen	Ventus CT	659
30	S Redman	LS8-18	433
31	P Coward	LS8	0

➢ will be remembered for Graham Parker's and Geoff Howarth's excellent briefings: comprehensive, concise, informative, instructive and delivered with the spontaneous wit of seasoned performers.

First launch, 11:15, 247km. Those pilots who believed the BBC weren't ready... straight to the back of the grid. As the first finishers returned, it had clearly been a pretty good run. Chris Starkey won the day, in an ASW 27, all 15 metres of it... How? Forget your Reichmann. At least, I don't think he advocates getting too airsick to turn in thermals. Working streets and lines of energy did it. Chris's basic advice was: follow your gut feelings, but take plenty of bags in which to empty the contents.

The subsequent days saw the pilots and crew enthusiastically boosting East Anglia's tourist industry and experiencing, not just some more rain, but – on one night alone – more rain than usually falls in Norfolk in the entire month of July.

Day 2 (Friday): Whilst the rest/west of the country endured a battering from a deep depression, East Anglia took advantage of its apparent meteorological autonomy. The airborne tourist trail today would take pilots to Gransden Lodge (friendly territory); Lavenham (best seen from the ground, a quite amazing village); East Dereham (where my friend Nigel used to live); and for those who were feeling up to it, back to Tibenham in time for tea.

As crews tuned in to Junior FM to hear Jay, Jez and Leigh go round the final TP, it seemed pretty unlikely that anyone would make it back. Half an hour after the bulk of the field set off, the sky looked distinctly unsoarable. But for the first time in a UK nationals, the Lak 17a appeared at the top of the stack, Jay having wrung the best out of his borrowed ship.

Ballsiest final glide of the day was easily conducted by Anna Wells (with a little help): Martyn Wells (father): *How far out are you?*
AW : *10km*
MW : *How much height have you got?*
AW : *750 feet*
MW : *Ah, 10km per 1,000ft, you'll be fine.*
Assembled company listening to radio: *????!*

Anna made it over the fence with plenty of height – to lower her wheel, and land. The audience clapped. Nice.

Day 3 (Saturday): Dawn is grim, hostile, overcast, damp, windy... Task-setting is optimistically deferred until noon. Geoff and Graham are clearly in league with some higher power. Tibenham, Six-Mile Bottom (*Quiet at the back!*), Rattlesden, Thetford, and then, 160.77 fine European kilometres later, the homely Tibenham club-house (scene of some of the fiercest contests of Risk, the world domination board game, ever witnessed).

At 13:45 the first glider launched into a rapidly-deteriorating sky (notice a pattern forming here). Even escaping from the airfield had clearly become something of a lottery. Several hours – and in some cases several launches – later, gliders were still camped over the site with tiny numbers on the altimeter.

Howard Jones (with 'little' wings and no flaps) was the first to become a ground-borne tourist, visiting Old Buckenham, 7.6km away. He arrived back via aerotow retrieve as others were attempting to get away from their second relight. But he travelled more than twice as far as Bernie Morris, whose reward was the same number of points as he has legs. The points-per-pound, relights considered, do not bear thinking about. On a 1,000-point day, it would put gliding financially on a par with space exploration.

This was, however, a Dave Masson kind of day (that's one with daylight in it). Given the conditions, 105.3km was an amazing achievement. Dave's point-o-meter ticked along at one point for just over every two hard-fought kilometres. Finishing was left to the imagination, except for the odd impromptu display by people dropping off the aerotow retrieve merry-go-round.

Definitely a day for handing in loggers despite, in some case, the distance flown being almost less than that from glider to Scoring. While no one actually scored one solitary point, several pilots were grateful for two, three or four. Indeed, not until 12th for the day did the points allocation reach unwieldy double figures. "Today was a 51-point day." You don't hear that very often.

Three days' flying – everyone would have liked more. But the difficult conditions meant excellent team-flying training for Jay Rebbeck, Jez Hood and Leigh Wells, who came 1st, 2nd and 3rd respectively at Tibenham. They were practising for August's Junior Worlds at Issoudun, France. The "If you can fly in this, you can fly in anything" rule clearly applied when they took on the world – and won.

Learning

Four lucky Britons have been flying with George Lee in Oz. They give their impressions

AS HE progressed towards retirement, triple world champion George Lee started planning how he could help up-and-coming pilots who had motivation and talent. He and his wife Maren ordered a Nimbus 4DM, bought a farm in Queensland, installed a hangar and airstrips and, last year, began inviting young cross-country pilots to join them. Each 17-day course takes one from Britain and another from Australia; flying alternates between the two.

Luke Rebbeck (Imperial College GC) was the first of the British juniors to visit Plain Soaring, George's home. "I had flown in the area in 1998," he says, "so I knew what to expect of the large, flat plains. On the first couple of flights I learned how to fly George's Nimbus 4DM – I hadn't flown an Open Class glider before."

Anthony Leech (Devon & Somerset GC) had flown just one cross-country – *hors concours* in a two-seater with Andy Davis during the 2000 Junior Nationals – before going to Australia. "During the first week when we were talking about 500km flights I was terrified by the idea!" Anthony says. "I found the thought of spending hours in a glider hundreds of kilometres away from base daunting. I had several physical and mental barriers to overcome and, in all honesty, I didn't think I would."

Pete Masson (Lasham Gliding Society) visited Plain Soaring before flying – and winning – January's Club Class Worlds. "George's status is legendary," says Pete. "He's certainly one of my heroes. So it was with an feeling of enormous anticipation that we drove up to his house. What strikes you first about him is how calm he is about everything, and how he always has time to stop and think about what he's doing."

Gavin Goudie of Cambridge GC says: "It's very easy to get a little bit envious when you arrive at Plain Soaring – or George Lee International, as the locals call the airfield George and his wife Maren have built at their home. His Nimbus 4DM 26 is in a purpose-built hanger a few hundred metres from their house, by two 800-metre Tarmac strips – I don't think paradise could be much different. I was looking forward to the prospect of having nothing to do for two weeks but fly with a triple world champion!"

Memorable flights

Anthony: "During my three weeks I did 26 hours in nine cross-countries with George, including a 305km triangle at 116km/h; a 308km O/R at 116.4km/h; a 350km triangle at 125km/h, and a 415km triangle at 124km/h. George is very laid-back, yet very precise in every aspect of

at George Lee International



Pete Masson

George, at one end of Plain Soaring's runway, prepares for a cross-country training flight with young Australian pilot David McManus. Junior Australians and Britons share the benefits of flying with the triple world champion

flying. He is a fantastic instructor and an equally good pilot. He allowed me to do virtually all the flying, but would offer suggestions or ask questions to make me think and help me out. Every flight would be downloaded into his computer and during debrief every climb and cruise would be analysed down to the average climb rate, effective glide angle, number of climbs, deviations from track, and so on. The next flight, we would work on it all until perfect. On my last flight we tried a 500km triangle but halfway round decided it wasn't possible. So we went sight-seeing! It was more of a casual mutual flight and we took it in turns to fly. After the intensive training this was a relaxing end to the course. We were up for five hours and covered 450km. It was the sort of flight that, previously, would have put me off just thinking about it."

Pete: "When I was there, the weather was pretty dire, but it gave us plenty of time to talk about flying from all sorts of angles that you probably never really consider in your day-to-day flying, including thermal selection and technique, final glides, energy management, and psychology. It was good to reason why you fly a certain way and see how you can improve."

Gavin: "At the start of the week George asked us to write down what we thought our strengths and weaknesses were and the aim was to get the former column filled with as many points from the latter by the end of the course. Each day began with a look at the met on the internet and then a discussion of what we were likely to do – although the final decision wasn't made until conditions were assessed when airborne. The weather was comparable to a good British/typical European day, with cloudbases from 5,000ft to 9,000ft. Unlike Luke, we never did a 750km but highlights for me included a 500km triangle at 134km/h and a 500km O/R at 127km/h."

Luke: "Although the 750km *(see caption, below)* was the highlight of my fortnight, other flights included five 300kms and a 500km, including several final glides of over 110km. The slowest flight was 110km/h. I would like to thank George and Maren for their incredible hospitality, and Terry Slater for his help. Also many thanks to everyone at Darling Downs Soaring Club for their help whilst I was out in Australia."

The most important lesson

Luke: "The most important things I learnt were the necessity of keeping concentrated and focused on the task for all of the flight, and – above all – the preparation required for major competitions. What George emphasised was that every aspect of flying a competition requires preparation, from organising the right crew to mentally readying yourself. This I found incredibly helpful when preparing myself for the 2001 Junior World Championships."

Anthony: "It was the best experience I'd had and I gained valuable knowledge and skills. Not only did I overcome all of my mental barriers, but by the end I had learned how to fly large tasks competitively, how to read the sky and how to make decisions in a way I didn't before."

Gavin: "George is an excellent coach and sits patiently in the back mentally noting the decisions you are making throughout the flight – but he will also push to get you to perform at your best. At the end of each day, after Maren had made sure we were suitably well-fed, we would analyse our flights over a beer and work out where time was gained and lost and what could have been done differently. It was a great confidence booster to fly with George and if I had to say there was one thing that I gained more than anything else during the course, it would have to be a greater belief in my own ability."

Pete: "I couldn't have had a better build-up to a major competition. Two weeks with George really got me focused. I found his emphasis on the psychology particularly helpful. Some people underplay it; others overplay it and get distracted. I believe that useful psychology involves working out what's important, and filtering out everything that isn't. It was imperative to be able to get in the right frame of mind at the right time. Nothing illustrated this better than my nerve-racking last day at the Club Class Worlds."

"George had said it was important to concentrate on improving flying skills rather than just trying to fly big distances, so when cu started popping at 09:00hrs on the day of my third flight, I was surprised he set a 750km triangle. Launching at 10:15 we climbed in 5kts to 6,000ft. The first leg – 220km south to Yelabon – was notable for the huge, unlandable forests: you have to pick your route carefully to stay in glide to roads and the rare fields. However, conditions were improving (cloudbase over 8,000ft and regular 6-8kt thermals). George said if we didn't round the second turn by 14:15 we would abort the task – a great incentive for me to keep the speed up. The second leg was over the huge strip-farmed fields to the north-west (cloudbase rising to 10,000ft). With nearly 100km visibility and over featureless flat ground, our sole indication of progress was the GPS slowly ticking down. We progressed steadily, accepting only 8kt climbs, and rounded the turn half an hour early, turning down-sun into a classic cu-filled sky for the final 240km. Despite pushing too hard to get on to final glide, which resulted in a low spot of 3,500ft, we finished the task at 16:15. We had done it at 130km/h"

Luke Rebbeck



Luke Rebbeck





Bernard Smyth reports on the 2001 Standard Class Nationals at Nympsfield

THIS WAS the Davis-Young show, with Worlds team members Andy Davis and Mike Young leading all the way. Andy apologised early on to the other competitors because he and Mike were team flying: they needed to get to know each other better for the Worlds. No one complained.

The 43 pilots in the comp had to wait until the Tuesday for the first contest day. Conditions were not good, so it was decided to use the nearby airfield at Aston Down as a remote start to get them into the better weather inland. The task was to Didcot, Banbury and back to Nympsfield – 197.7km. It was a similar day to the Monday but the wind had lessened and thermals of 1.5-2kt were forecast by Sid Smith, who had stepped into the role late when the met man had to go away on business. Sid got up at 5.30am each day to do the forecasting before going off to work.

All 42 pilots who flew were beaten by the poor lift and the best did about 169km, three front-runners landing together at Cirencester Park, near the polo ground. Tying for first place on this 606-point day were Andy (Discus 2a) and Peter Harvey (LS8). Third was Derek Westwood (LS8).

At times, Andy rued the day he gave a talk last year about how to get back to Nympsfield in various conditions, because he nearly landed out while others were using his local knowledge to make it back. But after his Cirencester Park landout, he always managed to get home.

On the second contest day, with 1.5-2kt forecast again, he was among the three heroes who proved the task was possible while everyone else landed out. The others who made it were Mike Young and Phil Jeffery (LS8). They had been on a 191.5km trip to a remote start at Aston Down, Heyford station, Gaydon and back. Mike won the day at 63.8km/h, Phil, only 0.7km/h slower, came second and Andy was third with 61.6. It was a 704-point day.

Ray Payne (LS8), from the host club, did next best by landing after 161.6km. Even





Leading all the way

the ***White Planes*** picture co.

the back markers for the day, Russell Cheetham and Tim Scott (in ASW 28s) and Howard Jones (Discus 2), managed 134.4km in the difficult conditions.

Thursday, with a slow-moving cold front going through, saw Task A set as an assigned area task of at least 260.55km with a three-hour limit but, as conditions became worse, Director Tim Macfadyen ordered pilots already launched to land and be rebriefed for Task B.

This was a 211.60km flight from another Aston Down remote start to Buckingham, Edgehill and back home to Nympsfield. Twenty-nine pilots completed it, with 14 landing out.

Andy Davis won the top 615 points at 92.3km/h with Mike Young second 0.1km/h slower and David Allison (LS8) third with 89.2km/h. By now Andy was leading with 1922 points and Mike was second with 1911. Third overall was Peter Coward (LS8) with 1649 points, who had managed 88.6km/h on the day.

The big day, though, was Friday, with a small high over the east of the UK and a low approaching from the South West. An assigned area task was set with a nominal max distance of 505km with areas around Didcot, Northampton West and Ely. The time limit was four hours, but much longer flights were commonplace.

Andy and Mike were again first and second with David Allison third. Andy, who did 357km, now led overall with 2922 points, Mike was second overall with 2874 and David Allison was third with 2499. Ken Barker (LS8), a former local pilot, was just behind at fourth with 2441.

Andy told Saturday's briefing that "a bit of luck at the right time" had led to his victory but he was obviously not frightened to backtrack at times and divert way off route to sunny spots to keep flying.

As he spoke though, his luck was running out in a way: because there was a low right overhead and the day was scrubbed (as was Sunday). But at prizegiving Andy paid tribute to the Director and staff for snatching four days from what often looked unpromising weather.

Place	Pilot	Glider	Points
1	A Davis	Discus 2a	2922
2	M Young	LS8	2874
3	D Allison	LS8	2499
4	KD Barker	LS8	2441
5	G Stingemore	LS8	2415
6	P Harvey	LS8	2408
7	P Coward	LS8	2397
8	R Thirkell	LS8	2388
9	P Crabb	LS8	2323
10	E Johnston	ASW 28	2249
11	B Marsh	LS8a	2179
12	P Jeffery	LS8	2162
13	P Shelton	LS8	2132
14	B Morris	LS8	2123
15	M Durham	LS7	2115
16	G Smith	LS8	2113
17	N Wall	Discus	2109
18	D Chappell	LS8	2107
18	P Masson	LS8	2107
18	D Westwood	LS8	2107
21	R Cheetham	ASW 28	2044
22	P Brice	ASW 28	2010
23	RJ Welford	LS8	1987
24	H Jones	Discus 2	1943
25	K Nicolson	LS8	1935
26	E Smith	LS4	1873
27	C Alldis	LS8	1797
28	O Ward	Discus 2B	1771
29	JG Arnold	Discus B WL	1764
30	K Tipple	LS8	1762
31	B Birlison	Discus CS	1748
32	J Langrick	LS8	1711
33	A Watson	LS7wl	1704
34	H Rebbeck	LS8	1669
35	L Withall	LS8	1657
36	J Luxton	LS8	1656
37	R Browne	LS8	1584
38	RA Johnson	Discus B	1556
39	G Goudie	LS8	1454
40	S Redman	LS8	1421
41	J Glossop	Discus BT	1312
42	T Scott	ASW 28	1167
43	R Payne	LS8	952



the ***White Planes*** picture co.

Above: Cambridge GC's Mike Young finishing at Nympsfield in the Rolex Standard Class Nationals this year. He and Andy Davis led the competition throughout

Left: Mike and Andy wait on the grid for the weather to improve. They pair-flew the nationals to prepare for the Worlds at Mafikeng this winter

Far left: David Allison, who came third overall

Phoenix



AFTER nearly 50 years of existence, the winch at Phoenix GC, RAF Bruggen, has finally been put away for good, the hangar doors shut... (blah, blah, blah). Club history is very sketchy: no written records, just dodgy photos and even dodgier personal anecdotes with people saying: "mention my name". I *will* mention the Cleggys though – the backbone of our club has bought the single ferry trip home and departed for Cosford. Cheers, Martin and Jackie.

The final party-to-end-all-parties went ahead at the start of June, a week earlier than originally planned. About 100 merry men and women – who got merrier as the evening progressed – assembled to bid a fond farewell to the club and each other. A full programme of flying was planned throughout Saturday with the visit of Jersey Aeroclub. One small hitch: a cloudbase of 1,000ft and rain to keep even the hardiest of German ducks off his pond. The following week, which we'd originally booked the good weather for, was, as promised, gorgeous flying weather, as Peter Gallagher will testify (he turned up a week late, but only because he couldn't rearrange from the original date).

The party in the evening was everything you could have expected. A bar, booze, disco, food, naked conga dancing, booze. Fun was had by all. Thanks go to all Phoenix committee members, especially Jeremy, Liz, Graham (which Graham? all of them!) the Cleggys and Dave, who helped make the weekend the success it was. The auction of much club memorabilia helped to raise lots of beer tokens – thanks to all the generous benefactors.

Phoenix wouldn't have existed as long as it did, in my humble opinion, if it hadn't been for our successful association with Aeroclub Bruggen, who have now added Phoenix to their club name in honour of our partnership of the last six years.

We hope they will be allowed to continue on Bruggen airfield, and it is with sadness that we leave the dedicated Helmar, Reiner and Thomas. Their enthusiasm will win through and the youngsters in the club reflect this – best of luck to them. The two clubs marked the end of an era with an expedition to the Wasserkuppe, *pictured above*, blessed with the best weather it had seen on consecutive days since written records began. Our German friends capitalised by flying the pants off everything. Mixed fortunes for us, with our Astir unflyable and the K-21 going u/s on the final day. At least our Discus pilots were happy! There were at least a couple of flights where the pilots learned a valuable lesson about flying from a site at 3,000ft AMSL with an altimeter that doesn't wind down to zero. One nearly ended in one of pilots' first field landing but was saved by the mother of all thermals. The final day was rounded off with a guided tour of the gliding museum by the experts' expert, Jochen Ewald. Cheers, Cassius, and all the best to you and Sandra.

So we have arrived at the end of RAF gliding in Germany and as the last service member to join Phoenix, over 18 months ago – and the last to get my Bronze Badge here – I have certainly enjoyed my short time with the club.

I'm sure there are many ex-Phoenix members reading this with their own fond memories; this short piece can't really do the club justice. I believe a secret handshake is being developed so ex-members can retire to a quiet corner of a bar once identified, and regale each other with tales of derring-do.

From conversations with former members and the aforementioned photographs, it's easy to understand why Phoenix GC has a special place in so many people's memories. To all past and present pilots, may I wish you more lift than sink.

Graham French



The 1967 clubhouse fire from which Phoenix GC arose



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Club news

Andreas (Isle of Man)

A RECENT expedition to Denbigh GC produced good soaring and a Bronze for Dave Wiseman. A visit by our senior regional examiner, Bob Pettifer, has enabled Bob Fennell to gain his Full (Manx Cat) Rating and take over as CFI. Our thanks to Peter Molloy for acting as remote CFI. Another rating renewal was by Ian Macfadyen, the Lieutenant Governor of the Isle Of Man. There can't be many clubs who can boast the Queen's representative as an instructor! We are now planning a publicity campaign in the local media and membership is starting to increase. Our tug is still unable to return due to foot-and-mouth restrictions but winching continues. Another expedition to the UK is planned later this year.
Brian Goodspeed

Anglia (Wattisham)

MEMBERS who've re-soloed after a break from flying are Claire Hart, Bob Tipper, David Levien and Martin Booth. Craig McDougall and DJ Graham have Bronze legs and Cross-country Endorsement flights – not that there is any competitiveness between them! Well done to Mark 'Robbo' Roberts on Silver duration, which brings him a step closer to flying the Cirrus he shares with father Bryan. Keith Hill in a Discus and Steve Mynott in a K-21 with Craig McDougall as P2 both completed 300km on July 21. Overall, a successful time: the club is going from strength to strength.
DJ Graham

Bannerdown (RAF Keevil)

AFTER a long stint as CFI Al Stacey has stepped down; Richie Arnall takes his place. We thank Al for the valuable contributions he has made to all aspects of the club. Chris Lear was first around a 300km task following the end of restrictions, to complete his first Diamond leg. The club fleet is changing: the Discus is being switched between clubs and the arrival of an LS8 is imminent. Andy Miller and Keith McPhee took our motorglider to Guernsey – just to avoid field landings really. At the Buckeburg contest Jon Arnold came 7th in our Janus solo and 3rd with two-up.
Derek Findlay



*Charlie Hocking (in cockpit) was sent solo by Al Stacey at **Bannerdown** and now has Silver height and duration*

Bath Wilts & North Dorset (The Park)

OUR annual three-day course organised by Nick Bowers for the pupils of John O'Gaunt School, Trowbridge, proved very successful indeed. In spite of strong winds and occasional heavy rain all the pupils got plenty of flying. Norman Hills, Mark Dexter, and Dave Isom have completed their Silvers with five-hour flights. Dick Hadlow and John Holmes have become BIs after courses at Lasham.
Joy Lynch

Bidford (Bidford)

BIDFORD has witnessed many midweek achievements by those who are lucky enough not to have to work: solos, Cross-country Endorsements, Bronze and Silver legs. Well done to you all. Unfortunately, as soon as the foot-and-mouth cross-country restrictions were relaxed, the weekend weather deteriorated in its usual fashion. It is with great sadness that we report the loss of Rob Mousley, an active member of the club – we all hope that wherever he is, he is flying high and the weather is always there. Finally, all members of the club would like to say thank you to John Watson for all his efforts over the last two years of being CFI. Good luck with your own flying, John.
Lynne Taylor



*Alec Baldy, aged 16, whose solo at **Bath, Wilts & North Dorset GC** was delayed by their foot-and-mouth closedown. He has been flying since the age of 14*

Black Mountains (Talgarth)

AUGUST 5 saw the first official packing of the new hangar as we lovingly slid in the club fleet and tug. There it is at last after superhuman efforts by our committee and especially Martin Brockington. There is even room to squeeze in the T-21 and T-49... not sure if the committee has spotted them yet! When ex-President Bill Clinton was at Hay on Wye recently, the club was used as a base for the police Augusta helicopter. On departure, it obliging fanned our barbecue. Thanks! A few weeks later we were all amazed to see a real Sopwith Triplane on finals ... it was *en route* to Bristol from the South East and very, very lost! After a cup of tea, some fuel and a new compass heading, he was on his way again. One sad piece of news is that Gerry Martin has decided to relinquish the post of CFI after 12 years of unstinting service. He is moving away from the area. We thank him for his terrific dedication. Barbecues will never be the same without his well-known: "is that anyone's red wine over there?" Thanks, Gerry, for everything.
Robbie Robertson

Booker (Wycombe Air Park)

AT THE time of writing we are finishing preparations for the unfortunately-delayed 15-Metre Nationals, which seems to have a smaller entry than expected. We are therefore planning a parallel task week. Recent results of the training schedule include first solos by Stan de Beaumont, Colin Bell, John Hibbert and Rodney Stroud. A very substantial part of the training is now bookable



*Henry Stott (left) of **Bowland Forest**, is congratulated on his first solo by instructor Bob Pettifer*

(no charge) and/or under our intensive courses. Martin Ffoulkes has completed Silver. The third replacement hangar, next to our tug maintenance hangar, is now effectively complete. Just one of the original hangars remains; this and the felling of many trees have completely changed Booker's skyline. Expeditions to Aboyne this autumn and France and Spain next year are being planned, as well as the traditional staff winter evacuation to New Zealand.
Roger Neal

Borders (Milfield)

WE HAD our usual August visit from the Popham microlight group, who are slowly converting to the pleasures of gliding. Our usual four autumn wave weeks start on September 22. We will have the Scottish ASH 25 for the first two weeks, with Andy Henderson "babysitting" it. Andy Henderson, Andy Bardgett, and Derek Robson represented us in the Scottish Inter-club League, and David Wilson and Leon Adamson took the Alliance 34 and Slingsby Eagle to the Pocklington two-seater comp. An influx of new members over the summer is keeping our instructors busy. The lack of sheep grazing meant lots of grass cutting (mainly by Andy Bardgett and Leon Adamson) and a loss of income, but it's been great not having to watch where you walk!
Bob Cassidy

Bowland Forest (Chipping)

WE HAVE offered cadetships to Amy Barsby, Anthony Keighly, David Price, James Ruddock and Lawrence Taylor. Good luck and good flying. We had a busy club week at the end of July. Congratulations to Malcolm Dean, Andy Huggon and Henry Stott on solos and to Dean Eden on re-soloing after a 12-year break. John Richardson (JR), achieved 30 minutes of TV fame on the Gloria Hunniford show. His daughter, Stephanie, nominated him for a Father's Day makeover. What a transformation from the old T-shirt, holey jeans and mucky gliding hat! Don't suppose he'll repeat that £150 haircut, though! May I belatedly apologise to Rufforth: we missed thanking them for their super hospitality during our spring closure.
Eileen Littler

Bristol & Gloucestershire (Nympsfield)

MANY thanks to James Metcalfe, who did 200 hours in our DG-505 at Gap, giving many members their first taste of some real rock polishing. We're all waiting to hear how a well-known member managed to fly more than 200km with the elevator disconnected! Thankfully, he got down safely. Andrew Turner and Alison Mulder did Silver distances in Sid Smith's Task Week, ➢

Please send your entries to *helen@sandg.dircon.co.uk* or Helen Evans, Kimberley House, Vaughan Way, Leicester LE1 4SE to arrive by **October 16** for the December-January issue (December 11 for February-March 2002). **Please note change of postal address**

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Club news

➢Alison in an Oly 2. Andy Davis is offering members use of his Discus 2a at Mafikeng, site of the 2001 World Championships, in return for help with costs. We won the foot-and-mouth-truncated Rockpolishers inter-club. Airfield status/weather reports will be available on winter weekends from 01453 860061, not Roger Targett's number (previously given in error).
Bernard Smyth

Burn (Burn)

WITH sheep on part of the field, we are still concerned about foot-and-mouth. The current restrictions limit our cross-countries to the north and we have disinfectant pads at the entrance to the airfield. Our latest winch, a gas-fired Tost, is powerful and economical and a roomy cab seems to suit our drivers. The Janus C in its first season with us is becoming more popular as pilots appreciate its better performance. Congratulations to Sarah Steinberg, who did so well in our club PW-5.
We do not seem to get those 300km flights out of it – perhaps that Spanish weather helped. Congratulations to Simon Kirkham on soloing, Alex Major on re-soloing, David Bellamy (five hours) and Alan Hopkinson (Silver).
John Stirk

Cairngorm (Feshiebridge)

AUGUST saw us at Easterton for the Scottish inter-club. Great fun was had by all, and we thank our hosts for their wonderful hospitality. Latest recruits to the Vertical Barograph Trace Club include Alistair Morrison, 22,000ft, Jim Riach, 16,900ft, Bob Forest,13,000ft, Andy Carter,13,000ft (all QFE, all in July: Feshie wave happens all year round). Little wonder then that this year's Octoberfest wave camp is drawing pilots from across the soaring spectrum including Ron Dainton from Seminole Lake, Florida. August's badge claims include Alistair Morrison (Diamond height) and Bob Forest (Gold height). For more details of Octoberfest including lower prices with no booking fee see our new website on *www.gliding.org* or call 01540 651317.
Chris Fiorentini

Clevelands (Dishforth)

SUMMER eventually arrived in July, and as well as providing us with long-awaited thermals, we again experienced the delights (and warmth) of the beautiful summer wave. Michael Desmond went solo on his 16th birthday during the Inter Services at Bicester, towed by his father Mark. He managed to soar for 42 minutes from 1,200ft, and was down on the ground before the competitors had sleepily made their way to the grid. Once they were on task, he got airborne again, and completed a Bronze leg. Well done, Michael. Congratulations also to Patrick Sim of Leeds University for Silver height. We will host our traditional Christmas Wave camp. Details will be posted on *www.dishforthairfield.freeserve.co.uk*
Polly Whitehead

Cornish (Perranporth)

CFI Gordon Hunter, our CFI, retires from the post in September. Fortunately for us, he is continuing as deputy tugmaster and club manager so we will still have the support of his wife Dorothy, who handles trial flight bookings, keeps the flight log, and is our indispensable social organiser. We wish Gordon many happy, carefree flying hours. Tugmaster Pip Phillips has been power flying without break for more than 50 years! He began as a baby-faced *(no change there, then)* RAF cadet, flew Spitfires and Typhoons over France in World War Two, and has been flying ever since. Along the way he was shot down and captured, escaped and walked back to the rapidly advancing allied force. More than 40 years ago he was one of the club's founders. Another was Bill Lewis, tug pilot and keeper of the Secret of Eternal Youth. To glider pilots everywhere – there is always a welcome on the mat.
Mike Sheedy

Cotswold (Aston Down)

THE club has been honoured to introduce several local over-90s to gliding, the oldest being Peggy Barrett , 96. Without exception, they had a wonderful time and we hope to see them back next summer. Courses continue to prove popular with first solos from Chris Huck, Jim Halliday, Neil Davis and Simaeon Harrison. Several members re-soloed and graduated to the K-8s. Robin Birch. Nigel Greenwood, Helena Brogden and Mark Verdon achieved five hours. Richard Seiry and Helena also have Cross-Country Endorsements. Nick Parkin has flown 50km and Paul Lazonby has his Bronze. Our World War Two gun butts area has been reroofed to provide weatherproof accommodation for the ground vehicles while the clubhouse has had extensive re-decoration, some generously sponsored by members. We invite clubs and individuals to visit us.
Frank Birlison

Cranwell (RAF Cranwell)

AS IT could be rapidly declining towards winter as this is published, it will be good to remember the few hot weeks of summer when those not deployed to distant competitions could be identified by the display of white

Steve Benn



This diminutive, distinctive K-3 (registration: K3) is to be seen, newly-restored, at ***Cranwell****, says Paul Skiera. It had last flown previously in 1988. Steve Benn and Frank Kennedy, with help from Neil Claughton and Lee Hudd, began the daunting but captivating restoration in 1999. Skid, tail fairing and canopy, which were missing, are based on 1953 drawings. Built in Germany in 1958, it weighs 200lb, thermals at 27kt and has an optimistic glide ratio of 18:1. Steve says the aircraft, one of three known to him in the UK, is "quite adequate, otherwise"*

knees. A lovingly-restored K-3 flew for the first time on June 9. Ged Higgins and Paul Naismith went solo (at Bicester) and Chris Franklin returned to gliding after a 16-year break to re-solo. Mike Derwent and Steve Benn took the Oly to the Vintage Rally at Camphill in June while Pete Kingwill completed a 300km during Comp Practice week and went Silver. We hosted the RAFGSA Glider Aerobatic Team for their sorties to both Waddington and RIAT 2001 as well as attempting to promote the sport via a static display.
Paul Skiera

Dartmoor Gliding Society (Brentor)

AFTER four months' closure we flew again on June 30. There was much disinfectant, no cars and very little soaring but we had a good day. The pleasure came from a renewal of the simple enjoyments – buoyancy, rotation and climb, buzzard's eye view of men and the moor, and the kiss every time (almost) of the perfect two-pointer. A club week was spoiled by the weather but we've had better days since. BI flying, now arranged by Chris Matten, has started encouragingly. Plans are in hand for an autumn course. There have been special pleasures. Eric Rodmell, now aged 84, continues solo soaring. Alan Holland, a fixture in the back seat, is there again after two very recent spells in hospital. Roger Matthews, CFI, now semi-retired, is dividing his extra free time between haute(ish) cuisine and gliding. Both membership numbers and attendance give cause for concern. We need an Indian summer then Dartmoor wave. We hope next time to report individual achievements as well continuing enjoyment.
Phil Brett

Deeside (Aboyne)

CONGRATULATIONS to Mike Whyment and Alex Maitland on Silver distance, Richard Arkle who has claimed his 750km in Spain, Jack Stephen who flew 760km around Scotland albeit round four turning points, and Dave Watts who achieved 23,500ft on his recent visit. The staff have been flaunting their Blue Peter badges since the visit of a film crew. Charlie Jordan, a junior member who wrote to the programme's presenters, was filmed receiving instruction in one of the club's Puchacz gliders from Colin Wight. This will be televised next February. There are a few slots left for the wave season so book now to avoid disappointment!
Sue Heard

Derbyshire and Lancashire (Camphill)

CONGRATULATIONS to Steve Wardle, Barry Taylor and Eric Bynon on first solos. There have also been three Silver legs and four Bronze legs in the last quarter. Members' courses have been a big success with three times as many courses as last year – all sold out! There's been plenty of flying for younger members with our first cadet week, open to all members under 21, led by Peter 'Greasy' Gray. Four young people have also been given free membership and flying for a year, under a bursary scheme jointly funded by the club and the Caroline Trust. There have been regular wave climbs over the last two months with the best to 9,500ft, 10,500ft and 12,500ft (Dave Salmon/Mike Armstrong) and plenty of cross-countries – over 2,500km flown,
the longest being Nigel Howe's at over 400km.
Diane Reid

Devon & Somerset (North Hill)

CONTINUING restrictions drove many members elsewhere in search of cross-country flying. Dave Reilly finally elected to record a Diamond distance in Spain and now has all three Diamonds. Meanwhile at home Mark Courtney has become a Basic Instructor. Otherwise life at North Hill has been quiet, and whilst we are not exactly looking forward to Christmas yet there is an atmosphere of postponed ambitions.
We need a few weekends of cracking weather to break the lethargy.
Phil Morrison

Dorset (Eyres Field)

WE HAVE been absent from *S&G* for some years, so the news is condensed to this year's events. We have had a good year for achievements: Rob Linee (Gold height in a Skylark 4); five hours duration: Dave Bamber, Carol Marshall, Gerry Cox, and Dave Piercy (to complete his Silver); Silver height Gerry Cox and Dave Bamber; Cross-Country Endorsements Gerry Cox, Gill Murning, Carol Marshall and Jon Marshall; two hour flights and Bronze by Tim Linee and Doug Every. We congratulate Guy Jarvis on completing his Assistant Rating despite the weather. Presentations of silver clocks were made to Vic Phillips for his services as CFI (retired in 2000), and to Bill Cook our outgoing chairman for their unstinting support over many years. Our new (2000) CFI is Pete Molloy, and our chairman is John Halford. All this has been done by about 45 members seven miles from the south coast. Come and see us (weekends).
Jon Marshall

Dukeries (Gamston)

ISOLATION and the Dark Ages are over at last. We have seen many visiting gliders over our site and some have landed for a chat. All are very welcome but please observe the local glider traffic landing before joining circuit – we are not allowed to cross the power ➢

Club news



*Keith Evans (right) being congratulated by instructor Brian Headon on re-soloing at **Mendip GC**'s Halesland site after a 25-year break from gliding (Keith Simmons)*

➢ runway centre-line below 1,500ft. The Dark Ages have been banished: Steve Simpson installed a power supply over the fields to the hangar and clubhouse. Now we can work on winter's nights and develop the social side of the club. Martin Vincent flew to Saltby for his 50km, completing his Silver.
Mike Terry

East Sussex (Ringmer)

THE field has recovered from six months of monsoon conditions and we are working our way through a huge backlog of trial lessons and mini-courses. We have welcomed four new scholarship winners. Congratulations to one of last year's, Debbie Stroud, who soloed soon after her sixteenth birthday; to Kathy Scott and Chris Winton, both of whom soloed; and to Graeme Bowring, who has his Bronze. More cross-country flying is taking place, with Steve Barter having completed Gold. Ian Molesworth and Randall Williams are Assistant Instructors and Tony Cutting and Tim Flude have re-qualified as BIs. An expedition to Feshiebridge was relocated to Dunstable because of foot-and-mouth. We very sadly report the death of Dave Bollard, an active club member for many years. We also say goodbye to Richard Bragg, who has moved away after many years of instructing here.
Adrian Lyth

Essex (North Weald/Ridgewell)

CONGRATULATIONS to Tony Hampshire and Terry Stone on going solo, Peter Berridge on completing his Silver – "Thirty years after giving up gliding for DIY; and in wood against the wind!" Commiserations to Paul Fournaise, who on his first flight in an ASW 15 did five hours and a Silver height – with no barograph! Our flying weeks at Ridgewell went well and Ralph Hawtree completed a 300km, well done. Tony Hampshire and team have renovated a further room at North Weald for Course Secretary Geoff Martin and assistants. Very many thanks to Peter Brown and Cathy Dellar for the computer equipment. A big thank you to Jenny Brown, Sue Martin and Lin Brennend for providing magnificent barbecues at the end of our flying evenings and weeks.
Peter Perry

Imperial College (Lasham)

OUR July expedition to Jaca, Spain, was the first foreign tour for five years. For all the students, it was their first experience of mountain flying and a great opportunity to see that there's more to gliding than thermals. We easily adjusted to the laid-back Spanish way of life of Siestas and Sangria, with flying in between the two! A big thank you to all those who organised the trip and to Tony Miles, Dave Wardrop, Dave Williams and Justin Wills for instructing. It's been a very successful summer: congratulations to Nikhil Dholakia and Alan Bamford (solos), Nouri Samsatli (Silver height), Duncan Ashley (Silver height/distance) and Hemraj Nithianandarajah (Gold distance and 10th in the Lasham Regionals). Our congratulations also to ex-member Sarah Steinberg for her victory in the Women's World Championships. The Horseshoe prize for better luck next time will probably go to Hemraj for missing Gold height by less than 1,000ft (or for missing a possible Diamond distance on a 650km day in order to spend time with his girlfriend – ahhh, must be love!) The new committee has taken over and October's Freshers' Fair is being planned.
Katie Sykes

Kent (Challock)

THE CLUB has been represented at various air shows and at a village fete. We have held a successful fundraising event with the Marie Curie Cancer care charity at which we donated money from trial lessons. The people taking the trial lessons had each raised a minimum of £50 in sponsorship, on behalf of the charity, and paid for their flights. The last couple of months have seen some good soaring weather and a spate of Bronze and Silver legs. Chris Luton has his first 300km under his belt. Unfortunately the task had four turning points so he was unable to claim Gold distance. Even more unfortunate is that the traditional slate in the bar will have to wait. We hope he will repeat the exercise soon with a qualifying flight as everybody's getting thirsty!
Caroline Whitbread

Lakes (Walney Island)

WELL, what a year! It must get better: foot-and-mouth, our tug, and now the hangar doors... Despite the above we are still managing to fly most weekends. The club decided that the summer outing should be in the UK, so a few of the members descended upon Portmoak for a time, our thanks go to the club, and also Irene and Steve for looking after us as usual. We're now preparing for the two-seater comp where the T-49 will defend her title, the K-21 will also be there this year. Stephen Johnson finally has his Silver Badge: he got his height at Hus Bos after completing the other legs in 1984! I hope I don't have to wait that long to get my distance. Other dates for your diary are the annual wave trip to Portmoak on Oct 20 and the dinner-dance on Nov 10.
Peter Seddon

Lasham Gliding Society (Lasham)

CONGRATULATIONS to Steve Jones on winning the 18-Metre Class World Championships. We have had a splendid Open Class National Championships and Lasham Regionals, with seven days flown out of nine. Our main runway will be resurfaced in September. The bar is being refurbished with new upholstery. Our replacement launchpoint vehicle is in operation. The Light Aviation Group of the Royal Aeronautical Society, chaired by Ann Welch, hold their regular summer meetings at Lasham. We are pleased to welcome the Faulkes Flying Foundation to Lasham. The foundation is a registered charity set up to encourage young people into aviation and into gliding in particular. Clive Thomas is the Flight Coordinator for Lasham. A building on the south side of the airfield has been provided for briefing, workshop and support services. A DG-505 Orion has arrived and is being fitted out for the foundation's use.
Tony Segal

Lincolnshire (Strubby)

DEREK Skerry has taken over from Steve Crozier as CFI: many thanks to Steve for all his hard work. Well done to Ron Naylor and Dave Laidlaw on soloing. Ron flew a Bronze leg on his second solo. Also congratulations to Henry Draper, who has just achieved a B Badge. Henry is well past 80. This month's star, though, is Ron Allen, who has given the winch a much-needed coat of paint. After years of operating off hard runways, the club has found that its new grass strip has proved its worth, with launch rates up and wear and tear down.
Dick Skerry

Mendip (Halesland)

WE WERE very fortunate our clubhouse did not catch fire when we suffered a lightning strike that burnt out our telephone and the alarm system and also damaged the wind generator. A very successful expedition to Camphill was mounted by members who took along a Kestrel 19 and a Dart 17R. Meanwhile some of the greybeards invaded Aston Down and experienced 1,600ft launches for the first time. Thanks to both clubs. Our K-18 has returned resplendent after getting trapped off site by foot-and-mouth. Latest arrival is a K-13 to replace the Bocian which lost its battle with the dry stone wall. To end on a cheerful note, Clive Brain has soloed on the Dimona.
Keith Simmons

Midland (The Long Mynd)

ON THE weekend the footpaths opened there was a rash of accidents at the Mynd but they were nothing to do with gliding. Walkers had forgotten how to walk and quad bikers tumbled, so we were treated to the air ambulance squeezing into narrow valleys. Meanwhile the checks went on as the club came slowly back to life. John Stuart was happy to boost the experience of



***Midland GC** chairman Julian Fack (right) accepts raffle money from one of the "hangers-and-danglers" who share the Mynd and who took up MGC's invitation to its grand re-opening party. This marked a return to activity after a long foot-and-mouth closedown. More than 200 members and guests, including Lembit Opik MP, enjoyed a buffet, drinks and dancing in the tastefully-decorated hangar, emptied of its fleet for the occasion*

members by plunging into cloud like a pigeon into a dovecot (What's new?) Our courses are fully up and running again, we're back flying cross-country, and we have three instructors now qualified for field landing and navigation training in the motorglider. Lembit Öpik, gliding's MP, has re-soloed and so becomes one of the few of his colleagues to have a real head in the clouds. Our new caterers have made an excellent start.
Roland Bailey

Needwood Forest (Cross Hayes)

CONGRATULATIONS to 16-year-old Anna Griffiths on going solo. Anna is one of four young people to have been awarded a club scholarship this year. We've had two successful club weeks and, for the first time since our move to Cross Hayes, numbers of launches have exceeded target for two consecutive months. With a growing number of early solo pilots, the club has bought a K-6CR as a second single-seater and members have undertaken a renovation project on a Sie 3 which has been donated to the club. We took two gliders to a local school community day where they occupied centre stage and provided local people, including our MP and the Mayor and Mayoress of East Staffordshire, with the opportunity to learn more about gliding.
Val Roberts

Nene Valley (Upwood)

FRIDAY evening group flying sessions have gone well

and we had very good weather for our task week (July 28 – August 5). John Young, Martin Reynolds, Mike Roberts and Peter Seymour completed 304km. Other distances were 312km (Andy Hatfield), 217km (Barry Meech), 135km (Richard Aylesbury), 100km (Roy Thompson), 65km (Roger Morrisroe and David Mercer in a K-7 accompanied by Les Walsh in a K8). Ron Sibley completed five hours. Brian Cracknell, Steve Myall and Richard Hayden each did two hours. Silver heights went to Paul Raynor and Paul Ridgill. Tracy Meech soloed. Brian Cracknell gained a Cross-Country Endorsement. Steve Flowett-Hill and Paul Daly achieved Parts one and two and Bronze. Our instructors did us proud. The weekend barbecue, by Ron Sibley, was excellent. Our thanks for their support go to Di Hubbard, Tracy Meech, Jane Richards and Janet Emms. The new clubhouse will officially open in spring 2002.

John Pike

Newark & Notts (Winthorpe)

IT'S BEEN a quiet season with only patchy spells of good weather. We hope our annual flying week will make up for the previous weather and foot-and-mouth restrictions. Recent achievements include Adam Archer's Bronze, Robin Tills' solo and Drew Evans' solo, Drew being the first of our bursary members to go solo. Don't forget our annual dinner on October 6.

Chris Dring

Norfolk (Tibenham)

FOOT-AND-MOUTH, awful weather, restricted cross-country, too few aeroplanes, little flying! A familiar litany of moans from the Tibenham camp (and, I expect many others) this autumn. Yet, surprisingly, a check of aerotows shows a 35 per cent increase in flying during the three summer months. Local flying has flourished. The Eastern Regionals were postponed until September but the 18-Metre National Championships was held: restricted, though not ruined, by the weather. Task-setting required all the collective ingenuity of Roy Woodhouse and Mike Bean. During one wet morning met man Graham Parker held a large audience in rapt attention for one hour on the mysteries of the tephigram. More recently Mike Lindsay (DG-202) landed 6km short of Tibenham after a 300km flight from an 800ft winch launch and Barry Marchant completed a 100km triangle during Ray Hart's cross-country course.

Geoffrey Haworth

North Wales (Llantisilio)

POST foot-and-mouth, flying has restarted at our site and we are catching up with all those little jobs that have accumulated during our enforced absence and we have been re-familiarising themselves with Llantisilio Although the weather has not been ideal we have had some good flying. We all need to be up to scratch for the autumn wave season. Our field stays dry in autumn and winter so we fly all year round. Recruitment of new members is off to a flying start and we have had some ex-members returning as well. Remember we are, in the short term, flying Saturdays and Sundays only. If you want to bring an aircraft to fly you should contact us beforehand, preferably via email.

Brian Portlock

Oxford (RAF Weston on the Green)

SO THINGS have improved slightly. Enough at least for Carole Shepherd to fly for five hours and Stewart Otterburn to hurl himself over 50km into the blue yonder to complete their Silver Badges. And Rob Jackson managed to keep enough balls in the air without dropping any to go solo. Unfortunately, OGC's 50th anniversary celebration had to be cancelled due to our friendly neighbourhood parachute club who refused to stop flinging themselves out of aeroplanes that weekend. Claudia Büngen took a party of overgrown kids to her old club at Dehausen. We were shown immense hospitality by the German members, who not only let



Anna Griffiths, aged 16, after her first solo flight at ***Needwood Forest****. Anna is one of four young people to be awarded scholarships this year by the club*

us play endlessly with their immaculate K-8s and K-6, but also showed us how to open a beer bottle with a cigarette lighter and how to do Stuka dive-bomber pilot impressions. Many thanks to Claudia for arranging the trip and putting up with five giggling blokes trying not to mention the war. Oh, and Dave Weekes got his Diamond height ages ago and I forgot to mention it. Well done, Dave (do I get the drink now?).

Steve McCurdy

Peterborough & Spalding (Crowland)

AFTER yet another not-so-good season we held a successful Inter-club League during our flying fortnight: well done to the task-setters and all the members who worked hard to make it happen. The club thanks Dave Crowhurst, who stood down as CFI in August, for carrying out many years of duties with a mix of common sense and good humour. We all wish new CFI Jeff Howlett, his new DCFI Kevin Fear and new tug manager Al Flintoft well. Sylvia and Bob Sharman with daughter Annie Ewer have just returned with their K6cr from a Vintage rally held in Zwickau, Germany, and Zbraslavice, Czech Republic: they enjoyed 38 hours flying. Congratulations to: Glenn Rodrigues (Silver Badge with 50km flight); Joan Pybus (Bronze and Cross-Country Endorsement; Dave Mason (five hour flight); and Laurie Clarke, who flew his Silver Badge in one out-and-return flight. Despite a wrongly-set logger he keeps a Silver height and 50km. Well done to Robert Thiel and Richard Thornley on soloing. Robert did this in one season.

Pete Goulding

Rattlesden (Rattlesden)

HIGH summer has brought its usual crop of personal achievements. Keith Goldsmith and Lorna Wilcox have both soloed, Keith for the first time and Lorna after a few short decades. Chris Reed and Tony Bartlett have both been kept busy as newly qualified BIs and Johnny Lawson has completed his Silver Badge. Our Inter-club League leg could have had better weather but our barbecue was still much enjoyed.

Pat Gold

Scottish Gliding Centre (Portmoak)

WE HAVE had a good summer – every course to date has been full. Thanks to our course instructor George Ross for doing such an excellent job. Several people soloed in July and August, including Andrew Gordon, John Forrest, Steve Robinson, Trevor Elliot (senior) and Sarah Buchan on her 16th birthday. Other achievements include Ricky Jackson getting Silver duration, Ian Meacham getting Silver height, and Scott Douglas and Robin Birch completing Bronze. Subject to the evidence being OK, Jonathon Pryce has just achieved a Gold distance/Diamond goal. We get good soaring all year round, and always welcome visiting pilots of any standard. Feel free to come and see us.

Neil Irving

Shalbourne Soaring Society (Rivar Hill)

DAVE and Kay Draper used up this year's allocation of good weather at the Lasham Regionals. Congratulations to Dave on 2nd place in the B class. Many thanks to the members who assisted crewing, especially to Peter White and Geoff and Annette Purcell, who saw the funny side of derigging Kay's Astir in torrential rain. Sadly the Shalbourne task week, which followed, did not have such good conditions. We have permission now for limited aerotowing on specified days and are negotiating routes with local residents. I'm afraid aerotow retrieves will still not be available. The loo block is having a makeover and has new windows (a big thanks to Rod Harris for his work). We are wondering about incorporating blue decking and a water feature, any ideas?

Kay Draper

Shenington (Shenington)

AT LAST we've had some good weather! Terry Turner has Bronze and Jonathan Sherman his Cross-Country Endorsement. Dave le Maistre, David Keith and Jonathan Sherman completed Silver with duration or distance flights. Tim Parker gained Silver distance while Jon Luisada, Tony Crocker and Graham Bambrook have Silver height. John Whiting completed Diamond with a distance flight from Chauvigny. Thanks go to Simon Adlard for a very successful BGA Soaring Course on site, encouraging many of the above achievements. We are hosting the annual expedition from Bowland Forest GC, and also running a task week, as well as our popular midweek intensive courses. We had social weekends with the Beagle Pup Club and an American barbecue, plus all the usual activities. Visitors welcome, or see our website on *www°.gliding-club.co.uk*

Tess Whiting

Shropshire Soaring Group (Sleap)

JUNE saw the last flight as tug pilot of Ian Hicks. Appropriately he towed the Nimbus which he shares with Arthur Lowens and Len Kirkham. Ian has flown for 43 years, of which he has tugged for 38, and now wants to spend more time at the rear end of the rope. We have enjoyed having the company of several refugees from the Mynd over the past months. I am sure that friendships formed will be to the benefit of both clubs in the future. The restrictions of the past months have led to many of us taking Simon Adlard's advice on sharpening up to increase speed round local triangles. There have been very few good wave days that we could use, but many of us are learning to use the convergent area created by the sea breeze for exciting runs of 70-80kt between Llangollen and Telford.

Keith Field

South London Gliding Centre (Kenley)

HOW fast the summer passes when you're having fun! Our club is enjoying its annual outing to Hus Bos, for the middle two weeks of August, which will we hope provide lots of entries for our achievements book. As good as the soaring there is, it is probably better where long-standing member Alan Frost is now: he and his family have emigrated to Australia, and between bouts of jealousy, we wish them well.

Alan Seear

South Wales (Usk)

SINCE the partial lifting of the cross-country flying ban our club members have made valiant attempts to fly cross-country by setting off only when having sufficient height to glide to the Cotswolds to BGA-permitted landing territory. There has been some success in this enterprise and Task Week produced Dave Jobbins and Hugh Rattray winning pundit and intermediate classes respectively. It also involved landings at Nympsfield and Aston Down, whom we would like to thank for their patience, and there were many hilarious hours of examining logger traces with many kilometres flown ➢

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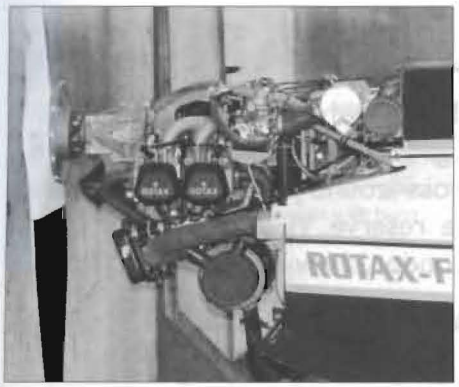
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Club news



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➢ back. Sadly, we report the tragic death of Dave Brown in a gliding accident, the death of Ron Jones (see obituaries) and the loss of our president, Dennis Bryan, after a long illness (obituary next issue).
Maureen Weaver

Southdown (Parham)

OUR longest day celebration was blessed with glorious sunshine, hundreds of visitors and a hog-roast to follow. It also concluded our July task week and sent the troops home happy. One hundred and fifty launches were logged on the final day, many of them trial lessons, and Paul Barker delighted us all with a beataway (a beatup followed by a climb into a thermal followed almost indefinitely by more of the same). Dick Dixon attempted 750km and only gave up with the sunset and more than nine hours in the cockpit. Andy Sanderson, safety officer with Essex and Suffolk, flew in to join us after a lengthy tour of the South Coast from Wormingford. Elsewhere, a group of enthusiastic mountain flyers visited Saint Auban where the flying and the hospitality were memorable. I heard a story that concerned a pilot from Lichtenstein found weeping at the roadside beside her Daimler. The French police, not noted for their sympathy, were explaining that a missing brake light was hardly a capital offence. However, it transpired that her missing trailer was the real cause of her distress. Back on home ground Jack Generowicz, Richard Dixon (no relation), and Ian Hamilton have soloed.
Peter Holloway

Staffordshire (Seighford)

CONGRATULATIONS to Brian Layt and Geoff Sutton for first solos, and to Nick Rolfe and Chris Jones for Silver durations. Brian Pearson did his 100km Diploma and Chris Johnson his 50km. Thanks to Roger Bostock, Colin Ratcliffe, Mike Abbott and others for instructing on our flying weeks. Thanks to Alice Oultram for organising the summer barbecue, attended by the Mayor and Mayoress of Stafford to present the Cadet Award to Danielle Hancock. Paul Cooper completed 100km while Sally Cooper has her first Bronze Leg. Rob Rolfe has his Cross-country Endorsement. Thanks to Neville Cooper for the new entrance; to Dave Gill for his work on (*www.staffordshiregliding.co.uk*); to Steve Brindley and Lee Featherstone for the newsletter; and to Chris Jones for his sterling work as PR Officer. Courtesy of Jeff Heard, members enjoyed a great day out at the 2001 Royal International Air Tattoo. The recent acquisition of a Rallye tug should be a great asset over the winter. Finally, will members please put dirty pots in the dishwasher – thank you!
Paul (Barney) Crump



*Dr Stewart Domoney, one of a group of **Southdown** pilots who visited St Auban in the French Alps, with his PIK 20D. Both flying and hospitality were memorable*

Surrey & Hants (Lasham)

S&H PILOTS made up a good proportion of the field in the Lasham Regionals, with seven club gliders entered. Highest placing went to Ed Foxon, seventh in the B Class. We have also seen a good crop of badge flights through June and July: Bronze Badges for Jeremy Grindle and Martin Conroy, and Silvers for Gerry English, Chris Schurr, Jonathon Cross and Peter Keutgens; Martin and Graham Maynard also logged Silver durations, while Mike Borrowdale has achieved Silver height and distance. Colin Hunt confirmed his Gold distance/Diamond goal during the Regionals.
Graham Prophet

The Soaring Centre (Hus Bos)

CONGRATULATIONS to Kevin Fisher and Graham (solo); Alan Hiley (Bronze); Stephen Johnson and Simon Tomlinson (Silver); Phil Tiller, Jim Hathaway and Rick Friend (Gold distance). The Midland Regionals were a big success, with five good flying days. Club members Paul Crabb and Brian Marsh finished first and second respectively, with Tim Milner third. Well done also to Russell Cheetham, who won the Open Class Nationals at Lasham. Richard Putt has taken over as club Safety Officer from Derek Abbey. Many thanks to Derek for all his work. The building of Phase Three, the new extension to the clubhouse, is fully under way with the help of various members.
Siobhan Hindley

Trent Valley (Kirton in Lindsey)

THE wooden cup was a raging success. Seven competitors flew 905km and logged 28 hours. The star performer and overall winner was Gordon Bowes with a 220km triangle in his K-6E. Andrew Turk secured second place by battling against a 25kt wind in his K6CR, along with Steve Wilkinson (Dart 15) and Dave Bieniasz (Pirat). Thanks to Hill Aviation, sponsors of the event. Phil Bootland and Mark Jones have soloed, Mark at age 16. The Astir is back with us once again after major repairs. CFI Paul Holland organised a very successful visit to Air Traffic Control at Waddington.
John Kitchen

Ulster (Bellarena)

WE'VE found conventional five-day Monday to Friday holiday courses hard to sell and difficult to staff with volunteers; greater success has attended two-day seasonal courses spanning Thursday and Friday or sharing normal weekend operations with members. They are limited to three students per course, to whom a two-seater and an instructor are wholly dedicated for an assured number of launches or soaring time to give a firm start for an *ab initio*. Such courses have brought us several new full members this year. It has otherwise been an unremarkable summer following the earlier three-month foot-and-mouth stand-down but the enlarged fleet is well-housed and our premises are in good shape.
Bob Rodwell

Vale of White Horse (Sandhill Farm)

IN THE last few weeks Clare Knock and Dave Bundock have flown Silver distances, and Dave also has a Silver



*Mark Jones soloed aged 16 at **Trent Valley GC***

height. Ed's week, when we opened the airfield for five weekdays, was very successful with several cross-countries in the 150-200km range, and we are now feeling more relaxed about cross-country flying again. At our awards ceremony Bill Bolton was awarded the Eric Brown Memorial Prize (for a BGA soaring course) and the Clubman's Cup for his unstinting work on our behalf. Other awards for cross-country achievements went to Eric Winning, Jon Huband and Richard Chapman, and Graeme Scott was presented with an award for his excellent post-solo progress. We are investigating the possibility of arranging for a tug to be available at Sandhill Farm more frequently than at present, so that we could offer a mixture of winch and aerotow launches.
Graham Turner

Vectis (Bembridge)

AFTER a poor start flying began seriously at the start of June: 44 launches were achieved over the Bank Holiday, the longest flight being three and a half hours by John Kenny. But poor weather severely restricted the number of launches and long flights during the rest of the month. July saw things returning to normal with the launch rate hitting the average of previous years and on one day four pilots stayed in the air for well over two hours. Clive Butt achieved his two-hour flight and John Paris his one-hour flight. Good flying weather held for the month except for the open day, which was again not as successful as hoped. Several pilots have been on summer expeditions, which we trust will prove as successful as last year's.
Peter Seago

Welland (Lyveden)

OUR flying week was blessed with relatively good weather. Recent solo Jason Hammett achieved two Bronze legs, as did Sarah Curtis. Bacon butty sales slumped as Lisa Shepherd escaped from the kitchen to achieve her Silver duration. Chairman John ➢



*The Mayor of Stafford, Douglas Davis, with the winner of **Staffordshire**'s cadet scheme, Danielle Hancock. The scheme for 16-18 year olds funds all flying to solo*

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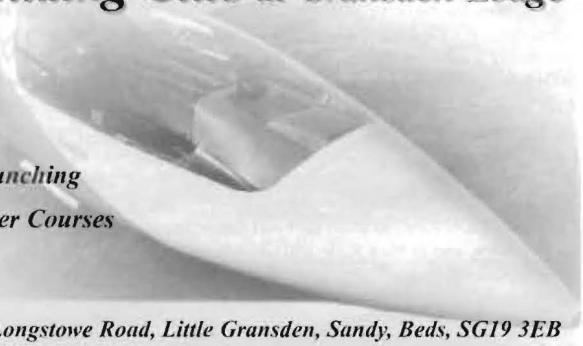
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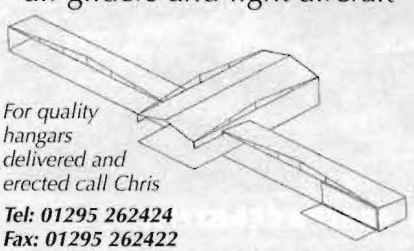


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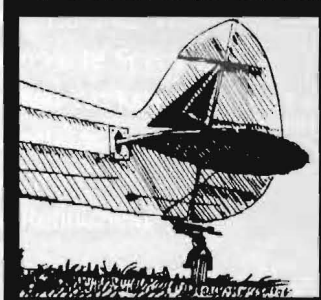
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Club news

Heath achieved Diamond goal, with Michael Neal, Werner Leutfeld, Streb and Chris Curtis all enjoying a clutch of flights in the 200-350km range. Paul Cronk responded to the challenge and flew an (undeclared) 100km. The club's SF-27 was revealed in all its sparkling glory thanks to an excellent refurbishment by Steve Algeo. The evening social events were much enjoyed, including the traditional joint barbecues with Nene Valley. New members including 'birdman' Wayne Davis, whose precision flying hawk and falcon soon made us realise our own limitations!
Jane Cooper

Wolds (Pocklington)

THE summer has reaped a quality crop of achievements with Mike Cline, Andy McCann and Paul Shaw gaining Silver height, Tony Kendal his Silver distance, and Len Thomas and Steve Ruffell going solo. Bob and Mike Fox, and Jon Smith fared well at the Club Class Nationals, whilst the motley crew of Roy Dell, Andy Melville, Andy Thornhill, Martin Fryer and Bill Young romped into 10th place in the European two-seater competition in France. John Simpson has staggered past his fourth decade, whilst we all continue to exploit, without real recognition, all of Angus Sheldon's talents.
Ged McCann

Wrekin (RAF Cosford)

IMPROVEMENTS over the past few months include a launchpoint caravan housing the computerised log system and the regraded strip of airfield offering improved launch and landing facilities particularly now that the windsock and telegraph pole have disappeared. Philip Morgan and Terry Jones have soloed. Gareth Baker has completed Bronze, Silver height and duration. Chris Kyte has his Bronze. Ian Shackleton has his cross-country diploma. Geoff Mathews is a Full Instructor and Brian MacKenzie has regained his Assistant rating.
Sheila Russon

York (Rufforth)

THE cross-country season has been considerably curtailed by foot-and-mouth, despite some excellent soaring days in between very wet spells! The 40th anniversary fly-in and barbecue were a great success, and Giant Model Show brought in valuable income. Our visitor flying is being well supported by our enthusiastic BIs, and the club continues to thrive with buoyant levels of training. Brian Pritchard has been appointed DCFI, which will certainly help ease the pressure on the CFI. The apron outside the small hangar is now properly Tarmac-covered. Thanks are due to the office staff who dutifully man (and woman!) the desk and field queries and bookings.
Mike Cohler

Yorkshire (Sutton Bank)

QUITE a mixed period for Yorkshire with some great news and unfortunately the deaths of three long-term members of the club, Jack Dent, Malcolm Silver and Mike Carter. We will miss them all. The better news is that we have been operating throughout foot-and-mouth with Frank Wilson, Andrew Hutchinson and Tom Reilly going solo. Frank managed to complete a five-hour flight only weeks later. Kelly Janski contacted wave and got Silver height during our abridged task week. Geoff Palmer went solo on August 15. He was sent solo by Dave Chaplin, who sent Stuart Heaton solo from the same site – exactly 20 years ago to the day.
Marian Stanley

Obituaries

Dave Brown – South Wales
DAVE Brown (1944-2001) was killed in a gliding accident in July at the age of 57. He learned to fly in 1997 and soon achieved Silver. In all his activities he was careful and meticulous: flying, fettling his glider or mowing our airfield.
Ever cheerful, he and his sense of humour will be missed. We offer deepest sympathies to his mother, Doris, and sister, Hazel.
Maureen Weaver

Mike Carter – Yorkshire/The Soaring Centre
MIKE Carter's tragic gliding accident in late June was a cruel blow to his family and to the sport. Mike (1936-2001) was hooked on gliding from the day he first sampled it at Sutton Bank in 1967; he learnt quickly, was soon instructing and had all three Diamonds by the early 1980s. Mike was an adventurous, intuitive pilot. His logbooks are very detailed: who he flew with, how he could get it better next time, and what he felt. The more mountainous the terrain under him, the better. As an instructor, his enthusiasm was infectious. The sons of his closest French friends say they fly because he made their first flights so interesting and exciting. We will miss Mike's enthusiastic, romantic attitude to flying, the mountains, his love of music, ball-room dancing, his friends and above all his wife, Barbara, and his family. We have all lost a super friend but one who has left us with a wealth of memories.
Nick Gaunt

Jack Dent – Yorkshire
JACK Dent (1926-2001), a club member for as long as I can remember, had been a friend of many of us since the early 1960s. His helpful, friendly and enthusiastic manner as Camp Commandant during many Northerns made him famous in the competition gliding community. Ten years ago, heart trouble led to a by-pass operation that transformed his life. He gained a fresh desire to fly and although he always enjoyed his gliding, there is no doubting his affection for the Rans, which gave him many happy hours airborne. Jack always described himself as one of life's survivors: he certainly was that and much more. He will be missed as one of those people it was good to have known.
Dave Chaplin

Kenny Jamieson – Scottish Gliding Centre
KENNY (1940-2001) was at Portmoak from the 1960s-1980s and will be well remembered by pilots from many clubs and countries who came here then. If they had a problem, he would find someone who could fix it. His exploits include his raising a fox cub in his vintage showman's caravan on the airfield (he had no sense of smell and at first couldn't understand why those invited in for a coffee would leave so quickly) and his landing a Capstan on St Serf's island in Loch Leven after an aerotow ropebreak (the retrieve by sheep barge was another Jamieson epic). On retirement he moved to Morayshire, where he continued to enjoy his other favourite sport of sparring with any bureaucrat within range!
The world is poorer for his leaving it and our sympathy goes to his wife, Karen.
Z Goudie

Ron Jones – South Wales
RON Jones (1924-2001) started gliding in his 70s in 1995 and, though he never soloed, was happy to be in two-seaters because he loved flying so much. His great regret was that he did not start flying as a younger man. His lithe figure and his energy when helping at the club belied his years. We offer our sympathies to his wife and sons.
Maureen Weaver

Malcolm Silver – Yorkshire
WE WERE all saddened when Malcolm (1935-2001) lost his battle with brain cancer after a courageous six-month fight. When he joined us in 1983 after 31 years as an ATC instructor, he had 7,677 launches and 702 hours, having sent around 300 cadets solo. He rapidly became part of the cross-country fraternity, in the SHK then in Kestrel 53. Everyone on 130.4 was kept fully informed of progress, especially from a great height in wave, and his wife/retrieve crew, Anne, is familiar up and down the country as "Teabag". His patience, stamina and energy were endless, whether tugging, instructing pupils, working on site projects or making a point (or two) at AGMs. It was done with a wicked sense of humour that remained, incredibly, right to the end. We shall miss his robust presence, and extend our deepest sympathies to Anne and his children.
John Goodall

David Thorpe – Staffordshire/Derbyshire & Lancs
DAVID Thorpe (1942-2001) was a meticulous mechanical and electrical engineer. His passion for things that flew led him to Staffordshire GC, Morridge, where he became a leading light on the technical side. When the club moved Dave came to Camphill. He convinced us to buy the Skylaunch and drove the team to rebuild one of the Tost winches – both now the backbone of our launch facilities. His was a key role in building the new workshop, for which he designed the electrical installation. A popular, enthusiastic instructor, he had a relaxed but positive teaching style. For his services, the club granted him life flying membership, of which he was immensely proud. Despite being diagnosed with cancer more than eight years ago, he was active at the club until earlier this year. In paying tribute to him we must also remember Maureen and her care for him. They were a devoted couple. Our deepest sympathy goes to her and all their family.
Dave Martin

Hamish Wotherspoon – Scottish Gliding Centre
WITH great regret we report Hamish's death in July after a nine-month illness. Hamish (1937-2001) joined the SGU in the 1970s, making enterprising flights in 54 (Oly 460) then Vega ECK (a Portmoak-Doncaster declaration ended with a landing at Catterick). An instructor since 1979, he was appointed CFI in 1984. After retiring from running the family building firm, he worked as course instructor, glider repairer and inspector. He also flew and helped maintain the tug. Eye problems ended his flying in 1990, but he stayed as winch driver until last year. He will be sadly missed. We offer our sympathy to Marion, his wife for more than 40 years.
Ian Dandie

Are you winching correctly?

RECENTLY, a number of winch launching accidents have occurred, with either fatal or serious injuries being sustained by the pilots.

Whilst the investigations into these accidents are ongoing, they appear to have a common thread, in that the glider seems to have stalled whilst attached to the launching cable.

Without pre-judging the outcome of the detailed investigations into these accidents, it is appropriate to re-emphasise the following points when wire launching. This is not intended to be a substitute for training with an instructor!

- Before you get in, check you're sitting on an energy-absorbing cushion. If you need padding behind you, make sure it is incompressible: for example, "firm grade chip foam" is good and inexpensive. Sinking back into cushions is hazardous as the stick would tend to be pulled back.
- Start the launch from stationary with the stick neutral or slightly forward, and the other hand ready for the cable release. In most gliders this is near or touching the release. However, where the stick movement blocks the release – for example, as in a Ventus – actually hold the release.
- Avoid large elevator movements on the ground; the glider should be balanced on its main wheel on the ground run.
- If a wing drops, release at once and ask questions afterwards.
- Once aileron authority is established, the hand near the release can be moved to operate flaps, etc.
- Allow the glider to lift off naturally.
- Monitor the glider as *it* rotates into the climb. Be aware that with the release hook below the c of g there will be a natural tendency for the glider to pitch up. The pilot must monitor the airspeed and angle of climb *by looking out of the cockpit at the wingtips* and control this rate of pitch up such that the attitude is always appropriate to the airspeed. Don't stare mesmerised at the ASI – look outside.
- Make precise, deliberate movements of the stick, rather than expect to position it in a certain place ("it worked here last flight"). *Fly the aircraft, not the controls.*

The loads on the glider during the wire launch are less easy to appreciate than in free flight; Understand that the wing must develop lift to balance not just the weight of the glider, *but also the pulling load of the launching cable.*

This lift generated is transmitted to the fuselage via the spar, and causes a bending action on the wing. This is an extreme design case; when in free flight the spar bending normally only supports the weight of the fuselage (plus any in-flight acceleration forces, for example, turning).

As you cannot sense these loads during the launch, you must be fully aware of the extra wing loading, and hence increase of stalling speed by up to 30 per cent. Use of the correct weak link is vital; however, even with the correct weak link a sudden gust or wind shear can cause the wing to stall before the link breaks if the angle of attack is too great.

If your glider is approaching the winch limit speed in the first half of the launch, maintain the climb angle and signal; if it occurs at the top of the third of the launch and you are using a lot of back-pressure it *may* be appropriate to reduce the back-pressure/wing loading before signalling.

In summary: climbing too steeply in the start of the launch incurs the risk of stalling on the wire – and possibly spinning, a manoeuvre from which recovery is unlikely.

Stalling speed on the wire increases by up to 30 per cent; it is therefore a good idea to adopt a minimum safety speed for the *full climb* of 50kt for most older generation (wooden) gliders; and 55kt is more appropriate for most glass Standard Class/training gliders like the Puchacz or Discus. An even higher speed should be used for gliders with higher wing loadings.

Jonathan Mills
Chairman, BGA Flight Safety Committee

Salutary Soaring: don't be caught out by the conditions

IT WAS a beautiful summer's evening at Strathaven, many years ago. The day's cumulus had gone, leaving not a cloud in the sky, and there was hardly a breath of wind. The CFI was sending first solos off in the T-21 – it was that kind of evening.

I was instructing in the Falke, and as the evening wore on, at about 21.00hrs, I noticed a thin veil of mist forming in the fields, as the ground started to cool by radiation. It looked very pretty from above, neatly filling in the spaces between the fences, and was too thin and shallow to be visible from the ground. As we were strapping in for the next flight, the CFI wandered up. "I wouldn't go too far away this time, because of this mist starting to form," he said. "No problem," I replied, "This is the last flight, and we are only going to do a circuit." He nodded and wandered off, quite happy.

We fired up the engine and took off, with the P2 doing the flying. We climbed straight ahead to 1,000ft, throttled back to idling, and set up our circuit. All was as it had been on the last flight: the sun beginning to set in the north-west, good visibility in all directions and the thin film of mist in the fields below.

At 600ft on the downwind leg, we were passing the hangar, when I noticed it disappear behind a patch of mist. I waited for it to re-appear. It didn't. Even worse, the gliders at the launchpoint were no longer visible – in fact, all we could now see was the setting sun ahead and some rather featureless fields directly below.

I took control from the P2 and rapidly considered our options should the airfield fail to reappear. We could try gliding straight ahead into the first field we came to, but there were too many fences and power lines about to make that a sensible choice. We had no serviceable blind flying instruments, but the sun gave us a reference – for the moment. We could try to climb back up out of the murk and hope to find a field clear of the fog, or we could put out a mayday on the radio, and hopefully get guided into Prestwick – if we had enough fuel left to get there. The situation was not good.

At 300ft, I turned left on to what I hoped was the base leg. Still nothing visible. At 200ft, I closed the carb heat and was just moving my hand to the throttle, when I caught sight of sunlight glinting on the wings of the gliders at the launchpoint. I rapidly turned on to the approach, cut the engine and landed well into the field, by the hangar. As we pushed the Falke off the runway, we could see headlights of cars towing gliders back from the launchpoint.

To this day, I am still amazed at the speed at which the conditions deteriorated. In less than ten minutes, the weather had changed from a clear, sunny and warm evening to a thick, cold fog. Evidently, the temperature of the saturated air had at that moment finally dropped below the dewpoint. It just goes to show that the weather can spring traps on you on even the most beautiful days!

Jonathan Mills writes on the perils of winter flying: This real-life experience reminds us of one possible hazard as the season draws in. To stop *yourself* getting caught out:

- If the canopy mists uncontrollably – don't launch
- Rain on the wings – don't launch
- Low sun may dazzle, but still look out for other aircraft, especially in the circuit
- Have an escape plan – for sudden orographic cloud descent or gaps closing
- Don't enjoy the sunset whilst high in wave – it's probably night on the ground

For more information on these hazards, chat to your local friendly instructor. Fly within your experience and capabilities.

Accident/incident summaries

by Dave Wright

AIRCRAFT Ref	Type	BGA No	Damage	DATE Time	Place	PILOT(S) Age	Injury	P1 Hours
49	Not Known 1730	8198	Substantial	16-May-01	Ocana, Spain	39	None	2260

This accident occurred in Spain during a competition final glide. After hitting heavy sink the pilot selected a long into-wind field. While landing the glider's left wing dropped and caught in the short crop and caused a groundloop that cracked the fuselage.

50	Lak-17	4703	Minor	12-May-01 1609	Husbands Bosworth	42	None	679

On his first flight on this type the experienced pilot returned to the airfield to find the circuit and landing area congested. Concentrating on the restricted landing area available he selected landing flap and opened the brakes. As he went to round out he realised his sink rate was too high and speed too low. A heavy landing followed.

51	Slingsby T-21B	1144	Minor	20-May-01 –	Connel	– –	None None	– –

Just prior to cable release on a winch launch a section of fabric, approximately 15 inches wide, was torn from the underside of the right wing.

52	SZD 30 Pirat	2141	None	06-May-01	Upwood	53	None	–

During a winch launch at about 1,000ft, in gusty conditions, the cable broke and at the same time the airbrakes shot open. The pilot caught the lever before it reached full travel but found the left brakes stayed fully open – later found to be due to the fulcrum fork shattering. The pilot made a safe landing in an adjacent field.

53	SZD 30 Pirat	1413	Substantial	06-May-01 1400	Strathallen	22	None	100

The pilot was attempting to land out in a suitable field. Late in the circuit he encountered lift and tried to soar it but ran into sink and could not reach his field. Choosing another, he did not have enough height to clear the fence, which he hit a glancing blow that pitched the glider onto its nose and left wing, breaking the fuselage and wing.

54	K-18	–	None	-May-01	Incident Rpt	40	None	2.3

After four good check flights in the crosswind conditions the early solo pilot was briefed to fly solo. He made a normal circuit and landed in a similar place to his check flights. The ground run took him too close to a copse of trees and the glider weather-cocked into wind and down a slope and rolled slowly into the trees.

55	K-18	2245	Substantial	22-May-01 1545	Camphill	33	None	1.25

After a satisfactory check flight the early solo pilot flew a normal height circuit but, mistakenly thinking he was too high, extended his circuit and turned out from the airfield. Caught in curlover he had to make a field landing in the valley. He made a hurried circuit and landed fast and long, groundlooping into the far wall.

56	K-21	3679	Substantial	13-May-01 1125	Bicester	23	Minor	0.87

This was the early solo pilot's third solo flight on a busy flying day at the large airfield. As the normal landing area was congested the pilot decided to land on the far side of the field. After turning finals at the same point and height used for previous landings, 3/4 brake was selected and the glider undershot into trees with open brakes.

57	K-13	–	Minor	-May-01	Incident Rpt	–	None	–

This ground handling incident occurred when the tow car started moving before the wing tip holder and walker by the cockpit were both ready. As the glider swung around the canopy hit the walker's side and was cracked.

58	K-13	2191	Minor	04-May-01 1215	Lasham	70	Minor	15

The inexperienced pilot made a flight in strengthening wind and using an unfamiliar runway. Despite this he did not request a briefing and, returning to the circuit after a soaring flight, misjudged the effect of the headwind. Finally realising he would not reach the runway he stalled it into a ploughed field.

59	K-21	–	Minor	-Jun-01	Incident Rpt	–	None	–

The glider was being towed back to the hangar with one person on the right wing and two on the tractor. As they approached the hangar, still under tow, one of the people on the tractor noticed that the left wing tip was about to hit an open container door. The tractor stopped but they could not stop the glider before it hit the door.

60	Stemme S-10 motorglider	G-STEN	Minor	06-Jun-01 1530	Lasham	63 76	None None	490 –

After a normal, engine-off landing the motorglider veered to the left. This was corrected with rudder and as the glider stopped the aircraft felt as if it had a flat tyre. Upon inspection it was found that the left undercarriage trailing-link carrying the stub axle had fractured near the front bracket.

61	K-13	4851	Write-off	23-May-01 1545	Parham	66 55	Minor Minor	199 0

This accident occurred when P1 found he had drifted downwind of the airfield and flew back with insufficient height to reach it. The glider hit trees some half a mile from the airfield and crashed inverted to the ground.

62	K-21	4555	Minor	23-May-01 1440	Bicester	68 28	None None	420 30

P1 pulled a practice cable brake at about 150ft expecting P2 to turn 90° left and land crosswind. However P2 did not think there was enough room and decided to land in the overshoot field ahead. P1 said he did not want to land there and P2 reacted by turning right. Committed to a very low 180° and a downwind landing, P1 made a heavy arrival.

63	K-21	–	None	-May-01	Incident Rpt	64 –	None None	1550 0

With bad weather approaching, P1 decided to terminate the hill soaring flight and return to the airfield. Noting that a number of gliders had landed long on the runway and were being retrieved, he decided to land short. However, while crossing the boundary the right wing clipped a tall bush. The glider then landed normally.

64	Astir CS77	–	None	-Apr-01	Incident Rpt	42	None	500

During the winch launch on the first of a pair of cables the second one, which had not been pulled completely clear, caught on the glider's loose, non-standard tailskid plate. After the glider reached a safe height the winch driver cut both cables. With little pitch control the pilot made an "arrival" in an oilseed rape field and stopped in 30ft.

BGA Badges

No.	Pilot	Club *(place of flight, if not at the home club)*	Date
DIAMOND BADGE			
601	Robert Woodhams	Portsmouth N *(Benalla)*	11/01/01
602	Edward Coles	London *(Omarama)*	24/02/01
603	Nick Norman	Cairngorm *(Feshie)*	07/05/01
604	David Reilly	DSGC *(Ontur)*	13/06/01
605	Peter Brown	Bicester*(Lusse)*	05/07/01
Diamond distance			
1-856	Nick Norman	Cairngorm *(Feshie)*	07/05/01
1-857	David Reilly	DSGC *(Ontur)*	13/06/01
1-858	Paul Mason	Clevelands *(Lusse)*	04/07/01
1-859	Peter Brown	Bicester*(Lusse)*	05/07/01
1-860	Richard Starey	ESC *(Ontur)*	29/06/01
Diamond goal			
2-2782	Paul Cox	– *(Tocumwal)*	06/01/01
2-2783	Phyllis Neighbour	DLGC *(Fuentemilanos)*	01/07/01
Diamond height			
3-1533	Tess Whiting	Shenington *(Cerdanya)*	10/04/01
3-1534	John Whiting	Shenington *(Cerdanya)*	10/04/01
3-1535	Fran Knowles	Deeside	03/05/01
3-1536	Charles Prosser	Clevelands *(Omarama)*	24/02/01
3-1537	Edward Coles	London *(Omarama)*	24/02/01
GOLD BADGE			
2171	Stephen Thompson	Lasham *(Vinon)*	28/04/01
2172	Charles Cooper	Booker *(Minden)*	24/02/01
2173	Edward Coles	London *(Omarama)*	24/02/01
2174	Jonathan May	Yorkshire	29/05/01
2175	Edward Foxon	Lasham *(Ontur)*	03/06/01
2176	Andrew James	South Wales	28/05/01
2177	Ronald Hale	Portsmouth N *(Bicester)*	22/06/01
2178	Nicholas Smith	Halton *(Bicester)*	22/06/01
2179	Matthew Sheahan	Lasham *(Ontur)*	22/06/01
2180	Peter Belcher	Cambridge *(Ontur)*	22/06/01
Gold height			
Roy Bickerton		Booker *(Minden)*	04/04/01
Charles Cooper		Bcoker *(Minden)*	24/02/01
Edward Coles		London *(Omarama)*	24/02/01
Edward Foxon		Lasham *(Ontur)*	03/06/01
Andrew James		South Wales	28/05/01
Matthew Sheahan		Lasham *(Ontur)*	22/06/01
Peter Belcher		Cambridge *(Ontur)*	22/06/01
Mark Stobo		Northumbria *(Cerdanya)*	30/03/01
Gold distance			
Stephen Thompson		Lasham *(Vinon)*	28/04/01
Paul Cox		– *(Tocumwal)*	06/01/01
Simon Edwards		London *(Bidford)*	13/06/01
Ronald Hale		Portsmouth N *(Bicester)*	22/06/01
Nicholas Smith		Halton *(Bicester)*	22/06/01
SILVER BADGE			
10877	Herbert Desmond	Bannerdown	05/05/01
10878	Terence Flatt	Lasham	03/06/01
10879	Gerald English	Lasham	03/06/01
10880	Christopher Schurr	Lasham	03/06/01
10881	Alex Maitland	Angus	10/06/01
10882	Pauline Morant	Lasham	31/05/01
10883	Mark Brown	Fulmar	07/05/01
10884	Andrew Smith	Norfolk	30/05/01
10885	Tracey Ward	Lasham	09/06/01
10886	Martin Hayden	London	13/04/01
10887	Peter Roberts	Lasham	03/06/01
10888	Ian Banham	Lasham	05/05/01
10889	Bruce Walker	Southdown	09/06/01
10890	Arthur Docherty	Cranwell	24/06/01
10891	Oliver Peters	Bicester	22/06/01
10892	Martin Smith	Southdown	11/06/01
10893	Michael Makin	London	24/06/01
10894	Barry Meech	Nene Valley	24/06/01
10895	Anthony Kendall	Wolds	14/07/01
10896	Simon Tomlinson	The Soaring Centre	21/06/01
10897	Graham Foster	Southdown	22/06/01
10898	Mark Courtney	Devon & Somerset	19/05/01
10899	Colin Cownden	Cambridge	15/07/01
10900	Stephen Williams	Booker	16/07/01
10901	David Piercy	Dorset	23/07/01
10902	Stephen Johnson	Lakes	16/07/01
10903	Paul Browne	Cambridge	26/07/01
UK CROSS-COUNTRY DIPLOMA			
Pts1&2	Gerald English	Surrey & Hants	22/06/00
Pt2	Tony Walhberg	Portsmouth Naval	21/06/00
Pt1	Bruce Walker	Southdown	09/06/01
Pt1	Martin Smith	Southdown	22/06/01
Pt1	Graham Foster	Southdown	22/06/01
Pt1	Simon Tomlinson	The Soaring Centre	20/06/01

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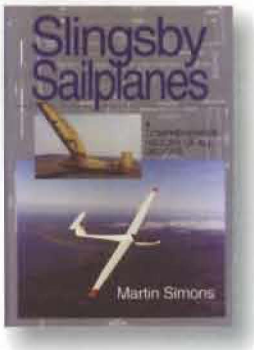
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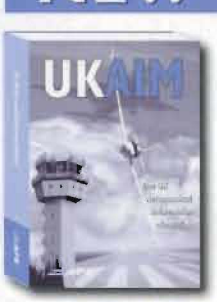


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2nd	110	**Ventus-2**	S Jones	3163
3rd	DW	**Ventus-2**	D Watt	3159
4th	721	LS6A	E Johnston	3020
5th	D2	**Discus-2**	H Jones	2925
6th	Z2	ASW27	T Scott	2871
7th	370	ASW27B	D Campbell	2865
8th	Z3	ASW27B	R Cheetham	2849
9th	B3	LS8	B Thirkell	2841
10th	SK1	LS8	K Nicholson	2831
11th	T4	ASW27B	N Tillett	2777
12th	PB	ASW28	P Brice	2630
13th	352	LS8	R Hood	2465
14th	Z8	LS8	B Morris	2441
15th	HL	LS6	D Innes	2187
16th	Z41	LS6C	A Hall	1867
17th	CL	ASW27	C Lyttleton	1860
18th	R6	ASW27B	M Pike	1829
19th	LS6	LS6	D Masson	1624
20th	301	LS8	J Rebbeck	266

UK Standard Class Nationals

Posn.	A/C	Glider	Pilot	Points
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2nd	57	LS8	M Young	2874
3rd	LS8	LS8	D Allison	2499
4th	KM	LS8	K Barker	2441
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13th	D1	LS8	P Shelton	2132
14th	Z8	LS8	B Morris	2123
15th	952	LS7	M Durham	2115
16th	42	LS8	G Smith	2113
17th	230	Discus	N Wall	2109
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