

# SAILPLANE & GLIDING

VOL. 61 NO. 1

**THE ART OF CROSS-COUNTRY GLIDING**

**HOW TO SPOT CLOUDS THAT HOLD PROMISE OF GUARANTEED LIFT**

**WORLD RECORD CLAIM FOR JOHN WILLIAMS**



## VINTAGE YEAR

VGC president Chris Wills gives an overview of the current international scene

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## COVER STORY

The Habicht of Christophe Zahn features widely in the vintage world. He won the Advanced Class (Aerobatics) of the 2009 Salzmänn Cup in it. Read Chris Wills' overview of the vintage international gliding scene on p32 (Dr Gerd Hermjacob/VGC News)

## DEADLINES

*April/May 2010*

Articles, Letters, Club News: 9 February  
Display advertisements: 23 February  
Classifieds: 5 March

*June/July 2010*

Articles, Letters, Club News: 9 April  
Display advertisements: 23 April  
Classifieds: 5 May

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› The 3rd FAI World Sailplane Grand Prix Final was held in the Chilean Andes, 2-9 January. More than 80,000 viewers watched eight races live on the internet. Poland's Sebastian Kawa maintained his dominance of the GP format racing by making it three wins in three events, following his successes in St Auban (2005) and Omarama (2007). Full details and results at [www.grandprixchile.org/](http://www.grandprixchile.org/)

› A Military & Civil Air Safety Day will be held at RAF Lyneham on 19 May, 2010. The aim is to promote closer ties between general aviation pilots and MoD aviation, focusing on shared use of lower airspace. Early registration is advised. Registration forms are available at [www.caa.co.uk/ga](http://www.caa.co.uk/ga)

› The closing date for applications to The Royal Aero Club Trust's bursary scheme for young people for the 2010 season is 31 March. Full details, rules and an application form are available on the Royal Aero Club Trust website at [www.royalaeroclubtrust.org](http://www.royalaeroclubtrust.org)

› McLean Aviation is now the LS agent for UK and Eire, which means with the backing of DG Flugzeugbau it is supporting all LS and DG types

› Sarah Kelman of Cambridge GC is temporarily leading the Airspace Subcommittee during a period of unavoidable absence by Carr Withall and Bruce Cooper.

› The BGA is actively engaged with European colleagues and the regulators with a number of EASA Comment Response Documents relating to personnel licensing and operations. The BGA will keep clubs and members advised regarding any emerging important issues, including changes to EASA flight crew licensing proposals, through the BGA website.

› The Secretary of State for Transport has appointed Gretchen Burrett as a member of the Board of the Civil Aviation Authority (CAA). She takes over as Group Director, Safety Regulation, on 1 April, 2010.

› Stéphane Desprez, former Competition Director of the 2008 Rugby World Cup in France, has been appointed as the new Secretary General of the FAI - the World Air Sports Federation.

› At the recent FAI General Conference in Incheon, the organisation of the 2011 Conference was awarded to Serbia (Belgrade). The dates of the 2011 FAI General Conference will be 11-16 October, 2011.



Among those attending a memorial service held for Tom Bradbury were (left to right) Ken Brown, Doug Jones, Mike Gee, Betty Samuels, Jean Sutcliffe, Derek Stowe and Ken Stewart

## REMEMBERING TOM BRADBURY

METEOROLOGIST and glider pilot Tom Bradbury died in January 2009, when his funeral was held in a snowstorm, writes *Betty Samuels*.

On a rare fine day in November 2009, a memorial service was held at St Michael's Parish Church in Monckton Combe, near Bath. Among those attending were his friends from Bristol and Gloucestershire Gliding Club, including 'Rhubarb & Custard' fellow syndicate member Derek Stowe (over here from Canada), Ken Brown, Doug Jones, Mrs Alf Samuels, Mrs Alwyn Sutcliffe, Nick O'Brien, Mr and Mrs Mike Gee and Ken Stewart (former National Coach).



This photograph was taken at the 1959 comps and was of the Skylark 2 'Rhubarb & Custard' syndicate from Bristol Gliding Club. Pictured left to right are: Tom Bradbury, Derek Stowe, Tony Morgan and Alf Samuels. Sadly the only survivor is Derek Stowe (now living in Canada)

## DATES

### NATIONALS, REGIONALS AND OTHERS

Competition Enterprise (not rated)	Lasham	3-10/7/10
Worlds (unflapped)	Prievidza (Slovakia)	3-18/7/10
15m Class Nationals	Nympsfield	3-11/7/10
Club Class Nationals	Hus Bos	24/7-1/8/10
Worlds (flapped)	Szeged (Hungary)	24/7-8/8/10
VGC International Rally	Tibbenham	31/7-8/8/10
Open Class Nationals	Aston Down	7-15/8/10
Standard Class Nationals	Aston Down	7-15/8/10
25th National 2-seater comp	Pocklington	22-29/8/10
18m Class Nationals	Lasham	21-29/8/10
Junior Championships	Bicester	21-29/8/10
UK Mountain Soaring comp	Aboyne	5-11/9/10

#### 2010 glider aerobatic competitions:

Dan Smith Memorial Contest	Dunstable	27-28/3/10
Bicester Open	Bicester	7-9/5/10
Nationals	Saltby	10-13/6/10
Saltby Open	Saltby	10-12/9/10

#### EASTERN REGIONALS

Tibbenham 29/5 - 6/6/10

#### BIDFORD REGIONALS

Bidford 19-27/6/10

#### HUS BOS REGIONALS

Hus Bos 19-27/6/10

#### SHENINGTON REGIONALS

Shenington 3-11/7/10

#### DUNSTABLE REGIONALS

Dunstable 24/7 - 1/8/10

#### BICESTER REGIONALS

Bicester 24/7 - 1/8/10

#### NORTHERN REGIONALS

Sutton Bank 31/7 - 8/8/10

#### LASHAM REGIONALS

Lasham 21-29/8/10

#### GRANDSEN REGIONALS

Gransden 21-29/8/10

■ **BGA Conference and AGM - 20 March, 2010 at the Barcelo Daventry Hotel**



# RAeS MEDAL RECOGNISES CONTRIBUTION TO SAFETY

TONY SEGAL has been awarded the Bronze Medal of the Royal Aeronautical Society, writes *Howard Torode*. The award recognises the 25 years of research into glider cockpit safety that Dr Tony Segal has undertaken and which has resulted in important changes to airworthiness design codes.

Since his retirement in 1985, Dr Segal has undertaken a series of studies into gliding safety and, in particular, crash-worthiness. Having gained the support of DERA Farnborough, now QinetiQ, for practical, full-scale tests, he has conducted a range of studies into practical measures for improving sailplane cockpit design.

His topics of study included:

- Pilot safety and spinal injury
- Full-size crash-worthiness impact tests
- A study of the use of energy-absorbent seating foam

- Anthropomorphy and glider cockpit design
- Four and five-point glider seat harness
- Static and dynamic tests
- Medical standards for ageing glider instructor.

These studies have made a key contribution to the setting of new sailplane design requirements through OSTIV, and have been central to a significant improvement in cockpit safety in modern sailplanes. They were carried out directly on Dr Segal's personal initiative, and have been recognised worldwide.

The sailplane community is greatly indebted to Dr Segal for his many years of dedicated research into making soaring the safe sport that it is today. He is to be congratulated that his major contribution to air safety has been recognised by the RAeS.



Dr Tony Segal (right) received an RAeS Bronze Medal from RAeS President Dr Michael Steeden at a ceremony on 10 December 'for work leading to advances or noteworthy contributions in aerospace' (Gail Pemberton)



## A WORLD FIRST FOR AEROBATICS

FOLLOWING the recent CIVA (the world aerobatic body) meeting at Oshkosh, the first World Advanced Glider Aerobatic Championships have been confirmed for 2010 in Finland.

The competition will take place from 17-24 July at Jamijarvi and a team of four UK pilots has now been selected to attend: Graham Saw, Patrick Greer, David-John Gibbs and Maz Makari, along with Mike Newman, who is selected for the Unlimited competition.

Dick Happs, the UK team manager said: "We've got a great team together and if they can reproduce the scores they achieved at last year's competitions, Great Britain has a good chance of a team medal."

Team member Patrick Greer, who flies at Nympsfield in Gloucestershire, added: "We're all really excited about having been selected, but we've got a lot of hard work to do. As well as focusing on our training, we also need to secure some sponsorship to help with the costs involved. Training is expensive, about twice as much per hour as hiring an Extra 300."

Many of the other European teams receive substantial government funding to pay for their training but, despite this, the UK team remains positive. Glider aerobatics has enjoyed a higher profile over the past few months, having been featured on BBC Radio 2's *Chris Evans Show* last year and the team hopes to build on this to help raise public awareness of glider aerobatics and gliding in general throughout 2010.

Any company interested in sponsoring the team should contact: [gbaerobaticteam@googlemail.com](mailto:gbaerobaticteam@googlemail.com)

■ See the April/May issue of *S&G* for the first of a two-part feature on aerobatics as an alternative, or addition to, soaring.

■ **APOLOGIES** to François Caffa for the extremely disappointing reproduction quality of his photograph of an ASH25 over Vanderkloof on the Orange River, South Africa, which featured on the cover of the Dec/Jan issue of *S&G* - gremlins in the print process.

## Research for book

*PIONEERS to Partners - British Aircraft since 1945* by Christopher Foyle, the owner and chairman of the famous bookshops and a Silver C glider pilot, will appeal to all aviation enthusiasts. The appendix *Gliders & Sailplanes* shows a previously unpublished list of 76 post-war British gliders, researched for the author by Wally Kahn and Frances Humblet.

## Simple rule

I FOUND Steve Longland's article on the ASI (Aug/Sept 09, *Instruments*, p40) and Ken Brown's comments very interesting, but perhaps not very practical to use when you are speeding along in wave at great height.

For many newer gliders there is a simple rule to determine the VNE for a given altitude - read the Flight Manual! For example, our LS8 has a table in section 2.2 showing the VNE at various altitudes up to 12,000m (see [www.dg-flugzeugbau.de/Data/Manuals/ls8-s-sb-flight-man.pdf](http://www.dg-flugzeugbau.de/Data/Manuals/ls8-s-sb-flight-man.pdf)). Then in section 2.12.1 it reproduces the same figures as a placard to be affixed on the instrument panel near the ASI. I have created my own placard with the heights in feet and the speeds in knots and placed it near the ASI. Simple and effective.

There aren't many benefits of EASA; however one is that every EASA transitioned glider should have an up-to-date flight manual and many of these will contain altitude-adjusted VNEs.

**Phil King, Shobdon**

## HEALTHY DISRESPECT FOR AUTHORITY BAGS A GOLD

THE PEUGEOT glider launching recalls a similar incident at Swinderby, near Lincoln, almost 50 years ago.

In charge of the RAF club was a charismatic Squadron Leader, Chaz Bowyer. He more properly belonged to the Battle of Britain era and always showed a healthy disrespect for Regulations and Authority.

We used car launching at Swinderby, an adapted massive America beast with a 5-litre engine. A tempting cumulonimbus was approaching the airfield and Chaz was strapped into the club Olympia. At the most inopportune moment, the launch car

failed. "Tie the wire to the back of my car (a Jaguar XK120 two-seat sports car) and give me a launch," said Chaz.

There was minimal health and safety in those blissful days so I did my one and only solo in a Jaguar. Less than 45 minutes later, Chaz was back on the ground with Gold height in the bag!

Chaz sadly lost his life a few years later when he was a passenger in a Boeing 707 in the infamous Mount Fuji wave turbulence accident when the aircraft broke up in the air.

**Jack Harrison, Cambridgeshire**

Please send letters (marked 'for publication') to the editor at [editor@sailplaneandgliding.co.uk](mailto:editor@sailplaneandgliding.co.uk) or the address on p3, including your full contact details. The deadline for the next issue is 9 February

## Shedding light on first glider flight

REFERENCE a letter from Hal Bowman, North Carolina describing his first flight in 1960 (Dec/Jan 10, page 7).

The aircraft is clearly a Slingsby T-21 of which at least one was at RAF Bicester at that time. Wikipedia has an entry on this aircraft.

The airfield could have been either the Windusher's RAFGSA gliding club at Bicester or the Oxford Club at Weston on the Green. At that time Bicester had several hangars and many active brick built military buildings while Weston on the Green had a single hangar with a few temporary buildings. As a military club, Bicester would have been made known to personnel at Upper Heyford. Google Earth shows both airfields which are little changed.

The only, known to me, ex-Blenheim pilot who instructed in gliders at that time was Air Commodore Chris Paul, who had retired from the RAF in 1958. He could have been at Bicester on that date but sadly he died a few years ago. There might have been other ex-Blenheim pilots as gliding instructors at that time, but this aircraft became obsolete early in the war and was only flown by few of the many war-trained pilots.

**Peter Saundby, Wales**

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# GLIDING HERITAGE

A RATHER gloomy discussion took place at Sutton Bank during Slingsby Week. The topic? What was going to happen to the UK's gliding heritage in the medium to long term.

Those present were, with few exceptions, getting on in years. Most had put a great deal into the gliding movement, especially the restoration and preservation of vintage gliders. When this generation of enthusiasts is no longer around, who will take over from them? Where will the old gliders and the abundance of documents and memorabilia that are the history of UK gliding be housed?

Unlike most leading gliding nations, the UK has no museum dedicated to the history of our sport and there appears to be little prospect of one in the foreseeable future. The worst case scenario is that old gliders quietly rot away in damp trailers or hangars. Collections of documents and records such as we have at YGC may well be dispersed and lost for ever.

Some years ago, Yorkshire Gliding Club undertook an outline feasibility study to consider whether a museum might be sited on freehold land belonging to the club, which would be made freely available for the purpose.

A draft plan was drawn up and early discussions with the National Park Authority were positive. The long relationship between Slingsby Sailplanes and Sutton Bank was thought to be a strong supporting factor.

Unsurprisingly this initiative fizzled out for the usual reasons – lack of funds, lack of time and an absence of expertise and enthusiasm to set the ball rolling. Recent discussions have tended to endorse the view that a location close to Slings might be appropriate but there is no entrenched view on this at YGC.

First and foremost is the need for somewhere to house gliders, documents and artefacts, wherever that might be. The consensus is that the facility has to be a national project. It is doubtful that any individual club has the necessary expertise and resource; that is certainly the case at Sutton Bank.

My old boss used to say “bring me solutions – not problems”. I obviously

didn't learn because I find it difficult to see how a National Gliding Museum project can get off the ground.

We all understand that BGA resources are stretched to the limit dealing with ever more regulations and legislation in addition to the everyday running of the association.

The VGC is an international organisation that cannot put resources into a UK project. It seems very unlikely that either organisation could undertake project leadership, although their support would be essential.

The purpose of this letter is to expose the problem to a wider audience. Maybe someone out there has the vision to suggest how our gliding history can be preserved for future generations. Given past and present achievements by UK pilots, it seems unthinkable that we allow our treasured past to be consigned to the scrap heap.

**Phil Lazenby, Yorkshire Gliding Club**

***Pete Stratten replies:** The BGA has accepted a kind offer of help in re-housing its historical documents and publications at some point in the near future from an experienced BGA volunteer. Thanks in a major part to people like that volunteer, people like Chris Wills and others in the VGC who continue to develop what is, in effect, the world's biggest flying museum, the BGA certainly doesn't believe our heritage will be lost any time soon. But Phil raises a number of valid and interesting points and it will good to hear others views.*

## “..SOWING THE SEEDS FOR FUTURE PILOTS”

IN HER article about ‘the young’, Alison Randle wrote that “... many pilots had their first flying experience as an Air Cadet..” (Dec/Jan 10, *Development News*, p12). That may be true but my research suggests that only a very few become competitive soaring pilots.

During the 2009 Junior Nationals, I asked all competing pilots to complete a simple questionnaire – where, when and at what age did you start gliding and also were any family members active in the sport. I am indebted to Kevin Millar, who did the vital legwork which produced the following fascinating statistics.

Of the 37 replies, only two came from Air Cadets. Thirteen had glider pilot family members; seven came through a University Club; six decided to go gliding as ‘it looked fun’; five as the result of a Club Cadet scheme and four others had other reasons.

The age of their first flight is also illuminating – from 3 to 10 years of age – nine; 11 to 16 – 19 and 17 to 20 – nine.

It does look as if clubs should sponsor, subsidise and generally encourage the children of their own members and their local universities and increase their spending and advertising on cadet schemes.

**Wally Kahn**

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## FOCUS IS ON SAFETY AND STRATEGY

BGA Chairman **Patrick Naegeli** reflects on a year that has provided a strong base from which we can continue to move our sport on, with a continued focus on safety in addition to a new set of development initiatives for UK gliding



# M

Y LAST

column finished on a serious note and in an intentionally challenging manner. The seven questions I posed are directly related to some of the main safety-related issues that we seem to continue to struggle with as a movement. Accident reports clearly record what happens when we forget to keep the main flight risks front of mind; but we all know that for every accident there are several times as many incidents, and that many of these could have ended as equally badly.

For as long as there is a possibility that we can reduce the number of genuinely avoidable accidents, improving safety will remain one of the BGA's principal priorities.

The safety theme was, therefore, one of the central items in two of the BGA's main winter meetings.

The BGA Chairmen's Conference has been running for more than a decade and has become a complementary companion to the Annual Conference and AGM. It provides an extremely useful forum where club representatives and BGA staff and volunteers can meet and discuss the latest developments and their implications for the safe operation and evolution of the sport. In recent years, the main agenda has been supplemented with a parallel programme specifically for club treasurers.

The 2009 meeting was expertly organised by Diana King, Alison Randle and BGA "central"; the treasurers' programme was led by John Birch and Les Kaye. The overall event was well attended with more than half of all clubs participating.

Phil King and Hugh Browning provided the safety brief. They brought club chairmen up to date on UK gliding's accident record in 2009 and highlighted the areas where we remain most vulnerable. Particular emphasis was placed on the need to reduce accidents that occur during instruction and trial flights and to maintain the momentum behind the safe winch launching campaign. The contents of the 2009 safety brief will be shared

with different cross-sections of the movement over the coming months. If you get the opportunity to sit in on a presentation, I strongly urge you to take it. It may make you think about something and, in so doing, make a positive difference to you or even, through you, someone else.

As always, Hugh Browning's work never fails to make an impression; this year, probably more so than at any time in the past, chairmen were very aware of their responsibility to help improve things within their own clubs. All those present committed to work with the BGA through 2010 with the aim of reducing accident rates and embedding more of a true safety culture.

In contrast to the Chairmen's Conference, the Operations Working Group is a far more recent BGA invention. The group has been in formation over the last 12 months. It is intended to provide a forum to direct and co-ordinate the work of those BGA subcommittees and initiative teams that are most concerned with training, safety, technical and flight matters – regulatory and operational.

In its autumn meeting, the group took the steer on safety priorities that had been agreed during the Chairmen's Conference. It began work by reviewing the specific features of recent instructing and trial flight accidents and the initial hypotheses as to potential root causes. Initial detailed work areas have been identified and a number of the regional CFI meetings that take place early in 2010 will be structured so as to involve club chairmen and CFIs in the programme as early as possible.

Whilst important, safety will not be the only priority that will guide BGA work in early 2010. In early 2009, the BGA subcommittees and initiative groups most directly focused on gliding development met to discuss the potential merit in closer co-ordination and joint work. Since then, a subset of the group that met has been working on a new set of draft performance and development goals for UK gliding. These will be discussed by the broader group at its next meeting. In their finally agreed form, these goals are then likely to set the head marks for a new set of development initiatives in 2010.

As the work of the operations and performance and development groups progresses, the aim is to bring their outputs together into a new strategy for UK gliding.

We have, as a movement, had a very successful 2009. This provides us with the confidence with which, and a strong base from which, we can continue to move our sport on. I write this at the close of one year and the start of another. Thank you for your help and continued support of the BGA.

Stay safe, have fun.

**Patrick Naegeli**  
Chairman, British Gliding Association  
December 2009



# SAILPLANE & GLIDING



**Andy Davis**  
Competition flying



**Andy Miller**  
SLMG



**Howard Torode**  
Airworthiness



**John Marriott**  
Tugging



**Mike Fox**  
Instructing



**Dr Peter Saundby**  
Medical



**Andy Holmes**  
Winch operating



**Carr Withall**  
Airspace



**Alison Randle**  
Development

*S&G is privileged to be able to call on the advice of some of gliding's leading experts. If you have a question for our experts on any of the subjects listed above, contact the editor (details p3).*

## EXPERT ADVISERS



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**Alison Randle**  
BGA Development Officer  
alison@gliding.co.uk



Launch rate has a direct impact on both soaring experience and a club's annual accounts

## CHILD PROTECTION

At the time of writing, we are still awaiting specific guidance relating to voluntary roles within sport and details of how implementation of the new (mandatory) vetting and barring scheme will relate to gliding club operations, current child protection policies & procedures and safeguarding best practice. Once the BGA has received this, we will be publishing information directly to clubs and via the BGA website. In the meantime, please be assured that the BGA recommended best practice in relation to child protection remains the ideal and offers a greater degree of protection to club members and visitors than the new scheme. Phil Burton is running a series of Child Protection Awareness seminars around the country this winter. For details, please see the club management section of the BGA website and book your place via the BGA Office.

# Protect the financial health of your club

THE Treasurers' Forum at the recent BGA conference for club officials was well attended – but what did this group of hard-working volunteers have to talk about? Plenty as it turned out, with ground being covered by a mix of formal presentations and informal discussions. Although you will probably take comfort from the fact that VAT (and various threshold and in-or-out scenarios) was discussed in some detail, I doubt that you want to read about it here. If you are a treasurer and disagree with the last statement, there is now a Yahoo forum for you to join (email me for details).

However, there are other topics that will interest you,

either because they have a more tangible impact on your club flying experience or because you can influence the financial health of your club.

## Key performance indicators

Identifying a few simple milestones and indicators will help to answer the question "How is my gliding club getting on?". Most important is early recognition that external factors are beginning to affect the financial health of the club. Les Kaye asked treasurers "What do you monitor and what does it tell you?" He suggested creating a strategy map by identifying customer (membership) relations, financial, operational and development aspects of club management.

Treasurers discussed the financial and non-financial performance indicators that they monitor. Here's one that you already watch (especially if you are towards the back of the queue) ... launch rate. It's something that you all work together to boost and has a direct impact on both your soaring experience and the bottom line of the club's annual accounts. Much monitoring is likely to go on in the background, but please help your treasurer to implement any of these ideas that do appear in public – it should help to mitigate future rises in your membership and flying fees.

## Lightening the load

The voluntary role of the club treasurer extends far beyond the collection of flying fees. The financial framework for some clubs is complex; to ask one person to do it all seems unfair and is already resulting in a lack of volunteers for this vital role. So David Howse (Cambridge GC) suggested that the role is delegated and split into smaller chunks such as insurance, payroll, debt management, grant applications, capital expenditure planning, dealing with external organisation (bank, landlord, local authority etc). Many clubs already do this to some extent, but David's message was that it is important the treasurer has capacity to work on strategic financial issues and to communicate effectively with club members without becoming overwhelmed by the day-to-day items.

## Rating valuation

There is a Rates revaluation in 2010 which is likely to see increased charges for clubs ([www.voa.gov.uk](http://www.voa.gov.uk)), which clubs can appeal. Some clubs have successfully negotiated discretionary Business rates relief, but many of those have now reported withdrawal or reduction of this facility. Registering with HMRC as a Community Amateur Sports Club guarantees 80 per cent relief from local authority rates charges. If you have a concern about your club's rates, please ask your chairman to contact Roger Coote. The BGA is developing its knowledge base on this subject and is currently involved in discussions, including with the VOA.

## Music licensing

Despite lobbying of the Government by the sporting and voluntary sectors, all sports clubs and community organisations that play music (even on radios) where members can hear it will need to purchase the relevant licence(s). Lobbying has now shifted to ensure that the new system is affordable and straightforward to comply with. Last December, clubs were invited to contribute to the next round of consultations by taking part in a survey and submitting their views to the BGA – thanks to those who have done so. The BGA will keep clubs informed of developments.



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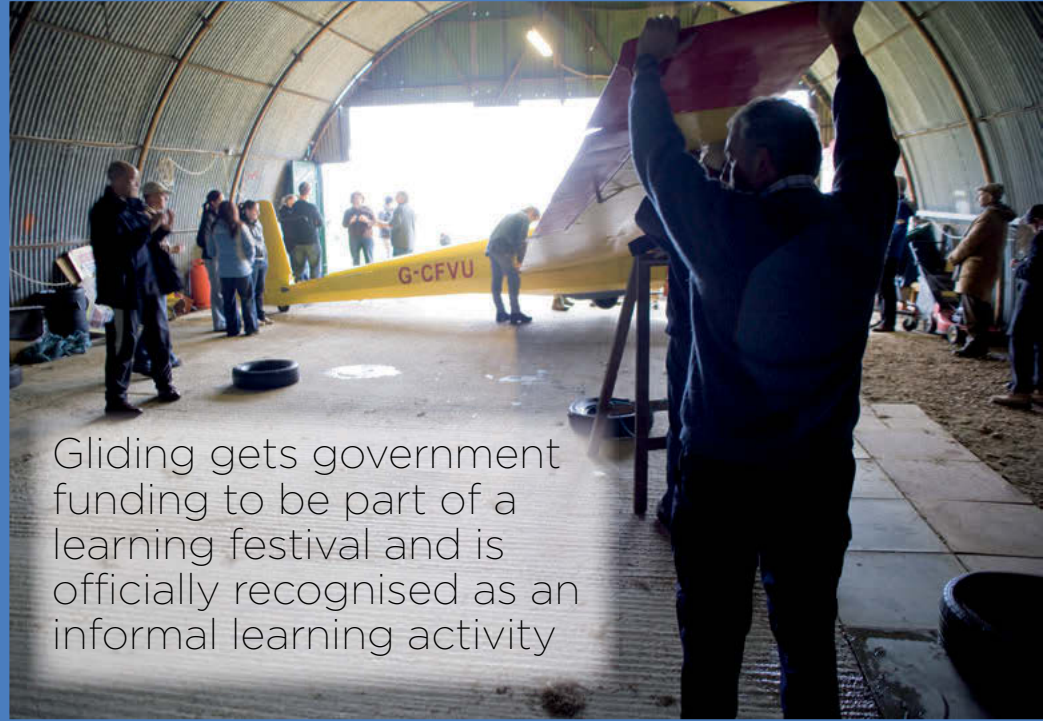
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Gliding gets government funding to be part of a learning festival and is officially recognised as an informal learning activity

Pictured above (left to right) Booker flew 15 visitors from two groups, the "rethink" mental rehabilitation charity and the Princess Royal Carers; (top pic) Upward Bound participant gives the experience a thumbs-up; BIS students watch and even help rig a K-13 just back from CofA at Vale of White Horse; VOWH chairman Paul Graham giving a briefing to participants (photos Jay Myrdal); fledgeling pilot David "Matey" Jones of Almeley, about to fly with Herefordshire instructor Mike Hayes in the back

**CLUBS THAT TOOK PART:**

- Bath, Wilts & North Dorset
- Booker
- Borders
- Bowland Forest
- Bristol & Gloucestershire
- Buckminster
- Burn
- Darlton
- Dorset
- Herefordshire
- Kent
- Lincolnshire
- Mendip
- Norfolk
- North Devon
- Northumbria
- Upward Bound
- Vale of White Horse
- Welland
- Yorkshire

# FUNDS FOR

**L**AST August, information about an October Festival of Learning was circulated, *writes Alison Randle*.

The Department of Business, Innovation and Skills (BIS) is keen to get more adults back into learning, so was offering grants to organisations that could offer informal learning opportunities for people to try.

I have a rule about funding, never respond to last-minute opportunities – it will result in poor quality projects, poor delivery, claw-back of funding, and general misery. So we declined to take part initially and anyway gliding isn't a 'favoured' sport, it doesn't get educational funding, so it was unlikely to be worth the work required.

In early September, the BGA was approached by the Central Council for Physical Recreation and asked to submit an application as take-up had been low – especially in those hard to reach rural areas (where you might find a gliding club!). I explained that we doubted that it would be possible – but was persuaded that we had a good chance of getting funding. By the end of the phone call we had designed a simple project which was to offer £1,000 to 20

(English) clubs if they could run an open day for at least 15 adults who lived in rural areas, weren't in education and didn't already glide.

Each open day was called a Try Fly Day and had to be held in October. We got confirmation of the £20,000 grant on 25 September and by the end of October (a month of both gorgeous and wild weather, if you recall) 20 clubs had indeed held Try Fly Days for 423 people, 35 of whom signed up for more with a further 149 expressing an interest to do it again.

This was no mean feat as clubs had very little time to plan, approach groups and get organised.

**New format for membership recruitment?**

Clubs who took part were showcasing gliding as an informal learning activity for groups of up to 20 people at a time – the days were busy with all sorts of learning activities on the ground in addition to the flying. Club members and participants alike thoroughly enjoyed their day with a great deal more conversation than usually occurs between trial lesson 'visitor' and established glider pilots. Eight per cent signed up for more, and



“The charities approached would not have been so keen to try gliding if they had had to raise the money. Now that they have experienced the benefits for their clients they want to raise money in order to repeat the event.”

BRISTOL & GLOUCESTERSHIRE GC

“Participants could look beyond their pre-conception that it must be expensive.”

BATH, WILTS & NORTH DORSET GC



“Next time we will begin a process of frequently contacting organisations and individuals to build relationships rather than sporadic voucher selling.”

BOWLAND FOREST GC

“It was good to see so many club members volunteering to take part and they took a pride in showing their club to the guests.”

MENDIP GC



**CLUBS LAID ON A RANGE OF ACTIVITIES:**

- Briefings – safety, met, navigation, flying
- Glider pilots shared their experiences
- Videos and YouTube
- Glider rigging
- Breakfast, lunch
- Hangar and workshop tours – gliders and powered aircraft, including vintage
- Tours round other airfield facilities, such as fire station and air ambulance
- Simulator sessions
- Flying and getting involved!

**CLUBS WORKED WITH GROUPS FROM:**

The nearest village, job centres RNIB, Macular Disease Society, Dyslexia Unit, Young Farmers, Rotary Club, Round Table, Inner Wheel, Freemasons, Townswomen’s Guild, Sure Start, Volunteer Action, councils and schools. Also taking part were people recovering from mental illness, substance abuse or homelessness, plus carers support groups and older people.

# TRY FLY DAYS

a further 35 per cent said they wanted to do more. So how many days like this would your club need to run each year?

The treasurers at their recent forum, led by Carol Marshall of Dorset GC, discussed ‘trial lessons – assets or liabilities’, with many clubs reporting that around 20 per cent of their revenue comes from this source. Yet as a source of new members, results can be disappointing and the negatives in terms of volunteer fatigue and poor membership retention have contributed to the closure of clubs in the past.

There will always be people who want to try gliding as a one-off experience and we cater well for them, but could we offer a different introductory experience to those who want to become glider pilots? Keith Auchterlonie, BGA Communications Officer, led a session on this point at the Chairmen’s Conference, with Paul Graham of Vale of White Horse GC sharing the club’s BIS experience. Their conclusion is that, although it was hard work with detailed preparation required, given longer to prepare and talk to groups, they would be running open days like these in the future.

## The evidence

We had to provide feedback to show what educational benefits there had been, so we took this opportunity to collect information from these people about their first experience of gliding.

Thanks to the clubs and participants who took part, and ensured that questionnaires were completed, we now have a great deal of information about how wonderful a day’s gliding is and real evidence to back up existing anecdotal evidence that people learn stuff whilst gliding.

This portfolio is available for clubs and the BGA to use when making applications for similar funding, ie grants for people to experience gliding, both on the ground and in the air, as an educational activity.

The BGA wishes to thank the 20 clubs, and all the volunteers and participants, for responding in such a positive way, and at such short notice, to this amazing opportunity.



Jay Myrdal

**PARTICIPANTS SAID:**

- It’s local, cheap and a fun day out
- Exhilarating
- Something I have always wanted to do
- Really glad that I tried this and look forward to doing it again
- I’ll be back – it was just great, the most exhilarating experience of my life



An infrared camera (above right) takes a 'digital film' of the wing surface of the Dresden Akaflieg Twin Astir. The data of the approaching airflow is measured by a five-hole probe (above left) mounted at a gallows at the wingtip, which enables measurement of angles of sideslip and attack. (Below) Falk Paetzold of the IFF tests a special helmet to detect the pilot's view and eye movements in flight (All photos by Jochen Ewald)

# TESTING TIMES

As Akaflieg students continue in their quest to improve future gliders, Jochen Ewald reports from Idaflieg



**S**CIENTIFICALLY interested students of the German Academic Flying Groups (Akaflieds) gathered for the 2009 Idaflieg summer meeting at the airfield of Aalen-Elchingen, west of Stuttgart. There they met with employees of the DLR (German Centre of Aeronautic and Spaceflight Research), the Institute for Flight Guidance and Control (IFF) of the Braunschweig University and the LBA (German FAA).

The airfield has the best thermal and cross-country potential during summer months, making it ideal for the students seeking ways to bring further improvements concerning performance, comfort and safety into the development of the future gliders.

The world-wide leading position of the German gliders shows the value of the Idaflieg's work. Most of the design engineers working at the German glider manufacturers are former members of the Akaflieds, and gained their experience during work on Akaflieg projects and the common work in the Idaflieg.

Learning the theoretical basics during university studies, combined with research and practical work in the Akaflieg, appears to be a really sensible combination for later success, although the work in the Akaflieds recommends a large additional amount of time from the students. Fortunately, this

work is rewarded by the possibility of some very interesting flying with a scientific background.

Those young engineers who learnt a lot about practical work and problem solution are generally preferred by later employers – not only in aviation – and given tasks requiring higher responsibility. With concerns that this high level of work had become quite difficult recently for the students who have to pay fees for their studies and to deal with shortened studying times, it was pleasing that this year the number of members in the Akaflieg, and participants of the Idaflieg meeting, started to increase again.

The weather was nearly optimal, especially for the performance evaluation flights which require stable air during the early morning hours. During such flights, the glider to evaluate is flown in formation with the DG-300/17m of the DLR. This DG has been performance-calibrated by many altitude-step flights. The flight data of both gliders is recorded using the system developed and operated by the IFF, and the evaluation after the flights delivers a very accurate polar curve, excluding the influence of slow air mass movements which can always be found in the atmosphere.

Unfortunately, the 'newcomers' were



not present on this year's meeting, but the Arcus T prototype arrived for some days to be demonstrated at Aalen. This gave the opportunity to get a first impression, but there was no time for a performance evaluation due to promised demonstration dates on other airfields.

Nevertheless, there were several interesting performance evaluation flights. Schempp-Hirth's Tilo Holighaus offered his Ventus 2ax to complete the research started last year on the influence of the cockpit ventilation on the performance. An LS-8 was evaluated with 15 and 18m span, and a DG-1000 with 18m. With both gliders, the influence of opened cockpit ventilation was also evaluated to get more data about this recently discussed theme.

Besides these flights, carried out as usual without sideslipping and in stable flight, additional situations were evaluated. A slightly sideslipping flight with different angles and defined small dynamic speed variations provided information about the performance loss caused by these situations. The DG-1000/18m's performance was also evaluated in inverted flight.

These evaluations were still experimental, to find out whether it makes sense to integrate them into future performance evaluations.

An unusual performance evaluation, done towards the end of the Idafleg meeting, saw an SG-38 primary equipped with the spare data recorder of the IFF to fly an altitude-step evaluation.

To evaluate modern high performance gliders using this system, a large number of flights on different days is required to minimise the influence of large areas of slowly moving air masses statistically (as had been done with the DG-300/17). However, with the high sink rates and bad glide angle of the SG, these effects have only little influence, so that its polar can also be evaluated with acceptable precision using only a small number of altitude steps.

For the flight characteristics evaluation following the Zacher programme, the Karlsruhe Club Class glider AK-5, DG-1000s, K-21, Duo Discus X, LS 7, LS-8, Ventus 2ax and the Pirat of the Dresden Akafleg were available.

Local owners also offered their Slingsby T-21b (Mario Sells, who also offered his SG-38, [www.oldtimerssegelflug-mariosells.de](http://www.oldtimerssegelflug-mariosells.de)) and an L-Spatz 55 (Michael Kost). Many new pilots were introduced to the Zacher programme, which was developed 70 years ago by Hans Zacher. It has since been improved and

makes a sensible, very objective assessment of gliders possible. The available vintage gliders enabled the many new, young Akafleg members, who grew up mainly flying only 'plastics', to get invaluable knowledge about characteristics you barely will find with modern gliders (but might experience when flight testing new types...).

The special projects of some Akaflegs and institutes were also interesting. The Dresden Akafleg continued the previous year's special project, measuring the data of the approaching air and detecting the transition lines (from laminar to turbulent) on the wing surface on its new Twin Astir, which replaces the Bocian. A new 'glove' over the wing was built with a surface making the condition of the airflow visible via an infrared camera, and the new camera tested this year appears to deliver invaluable results.

The DG-300/17 of the DLR was equipped with a fatigue meter of the DLR Goettingen, which collects 'load profiles' of aircraft during the flight. This serves to find out more about the normal and gust loads in flight, to improve the data used to stress and determine lifetimes of aircraft structures.

Another interesting project looked at ways of finding out more about the way a pilot watches airspace and instruments during flight. During the meeting, a helmet provided by the sport-science branch of the Leipzig University was tested in flight. Two cameras on this helmet show the range of vision of the pilot and his eye movements. The helmet (including a data recorder bag to be carried on the pilot's breast) can precisely record where the pilot looks in flight.

After long years of being stored, overhauled and equipped with a new (80hp Limbach) engine, the elegant single-seat motorglider D 39b of the Darmstadt Akafleg returned to the Idafleg meeting to complete its flight testing for final certification.

Last, but not least, the Akafleg Munich's aerobatic tug, the Mue-30 'Schlacro', was seen in action during the meeting. Its flight testing is now complete, and final certification was expected in the autumn. It proved also invaluable as a tug, especially for high tows with heavy gliders.

## **AN UNUSUAL, PERFORMANCE EVALUATION, DONE TOWARDS THE END OF THE IDAFLEG MEETING, SAW AN SG-38 PRIMARY EQUIPPED WITH THE SPARE DATA RECORDER OF THE IFF TO FLY AN ALTITUDE-STEP EVALUATION**



Falk Paetzold of the IFF, who leads the performance evaluations, and Idafleg president Peter Weinert install the IFF flight data recording system on the SG-38

Results of the Idafleg summer 2009 meeting were published during the winter meeting in January and will soon be available in printed form (in German), together with other Akafleg project reports. The 2008 Idafleg report (20.00 euros plus postage) can be ordered at:  
Idafleg e.V.  
Boltzmannstraße 15  
85748 Garching

[www.idafleg.de](http://www.idafleg.de)

# TAILFEATHERS

## The science – or is it the art? – of forecasting

VISITING a leading gliding club the other day I was very impressed by the morning's computer-aided, on-line, real-time, instantaneous, here-and-now weather briefing – with a human being in charge, though on this occasion, only just.

Satellite pictures swirled across the big screen, then maps of the North Atlantic swarming with numbers took over from the satellite movie, then a kaleidoscope of past, present and future isobars flashed past our eyes. I would say at a conservative guess that at least 10 million numbers or their graphic equivalent must have been hurled at us in a few minutes. (I do not exaggerate – we were clobbered by a chart or table every few seconds, each visual containing several thousand data-points.) And then the voice-over added yet more information, to be absorbed simultaneously with the visual blitz.

All around me, boggled minds struggled to take it in. Well, my boggled brain did not struggle – not because my superior intellect had mastered the numbers and the science that glued them all together, but because it had given up trying about 50 years ago.

All I have ever wanted by way of forecasts in my half-century of cross-country soaring was a smiling young woman holding up a board bearing a number from zero to five. A Zero or One day (unflyable or just local circuit-bashing for *ab-initios*) is great – off to the bar you go. Four and Five are great – take lots of sandwiches, water and peebags.



Cartoon by Mike Bird

Two and Three are a bit of a pain – make sure someone has the keys to the retrieve car and trailer. I can cope with that number of variables. Though there are six grades, in fact I boil them down to just three: 1) Useless 2) So-so 3) Good. Exactly the same as I do with beer, wine etc. Great minds keep things simple. It is the mark of a lesser mind to make things unnecessarily complicated.

Back to today's briefing. The room had been darkened so that the projection system could do its stuff.

Finally, pausing this deluge of data on the screen, the forecaster called to one of the pilots sitting by a window and said, "Er, do you mind lifting the curtain and taking a look at the sky?"

I warned to the man immediately. He was one of us after all.

**George Moffat comments:** *I recall the day at the '68 Polish World Gliding Championships*

*when the weatherman assured the multitude authoritatively, "There will be no cu!". He was lecturing from the open hangar door. Behind him, just breaking, was a sky full of wonderfully soarable clouds. The weatherman looked distinctly puzzled as we all burst out laughing.*

## Sun, wind and cheap frills

A COUPLE of editions back I whinged about the awful way in which technology lays waste one's cherished but dated jokes. However, not only humour but serious soaring advice becomes obsolete as progress hurtles forward.

When I was an apple-cheeked youth being briefed by cross-country veterans (scarred, sometimes literally, by a ratio of field-landings to take-offs of about 0.9) I was told to look out for smoke from chimney-pots and washing on lines in people's gardens, especially if I was getting low and in need of a safe into-wind arrival on someone's turnip-field.

Now everyone has central heating and new houses are built without chimney-pots. Likewise everybody has washing-machines and driers, so you no longer see frilly underwear blowing bravely from north-east to south-west as a substitute windsock for the desperately-low glider pilot.

You will say, "Never mind, technology has a habit of opening one door as another closes, and of course we now have GPS to give us our wind-direction."

Well, yes. But on one occasion – this was

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in the mountains of Nevada in 1994 – I could tell that the wind at soaring height was from the south, and when I landed the surface wind was 180 degrees the other way. I did a scary high-speed downwind landing on a small dry lake, which amazingly the glider and I survived. Some negligées and knickers, bravely blowing north to south on some little farmhouse, would have come in quite handy at that stage.

Well, why were ladies' unmentionables not fluttering helpfully in the breeze during my final pattern around the dry lake? The Law. In many American states it has for years been an offence to hang up your washing outdoors, the reason being that it lowered the tone of the area. Only poor Trailer Trash in the Deep South or the inhabitants of a Neapolitan slum would do anything so tacky. However American environmentalists, blaming clothes-driers for eight per cent of domestic power usage, are now challenging this crass waste of energy. Sun and wind do not only create electricity – they can actually save electricity by drying our undies, free. A number of states have accordingly repealed the laws against clothes-lines.

Someone of elephantine memory then says, "But, Plat, back in 1970 you regaled us in S&G with the story of how you crashed into the boundary fence of a cricket field in Cambridgeshire because you landed horribly out of wind. Why did fluttering underwear not save you on that occasion?"

The sad answer is that although, like the USA, Britain has sun and wind, we also have lots of rain. My prang occurred under a sky packed with massive cumulonimbus that had become more nimbus than cumulo. I was washed onto the deck in the company of several billion hailstones. So of course all the housewives in that part of Cambridgeshire had in those crucial last minutes sprinted out of their homes at the first flash of lightning and, bravely defying the risk of electrocution, hauled down their shirts and nighties and brought them indoors...

## **Surprise, surprise! OR, why we love gliding**

IT IS a melancholy fact that nearly all sudden, unexpected events in life are bad news. Good news is usually a long time in the making, and is the result of much effort and skill. Bad news descends like a thunderbolt.

It occurs to me that this must be why millions of people so illogically (to my statistically-trained mind) throw away money

on lottery tickets. It is an artificial way of creating just the faintest possibility of a sudden, unexpected piece of amazingly good news in a life where surprises are usually unpleasant.

I was philosophising in this way when trying to explain to a non-aviator at a party the appeal of gliding versus power-flying. It occurred to me as I was talking to the young woman that when you set off on a cross-country flight in a glider there are two sorts of surprises: nasty ones, such as when a good-looking cloud turns to worms and dumps you in a very muddy and inconvenient field belonging to a farmer who hates glider pilots – and nice surprises, when you hit a smooth 10-knot wave over flat terrain, or a street that runs for a 100 miles, or a sea-breeze that whisks you along the coast effortlessly with a spectacular view from 6,000ft, or when you arrive back at the finish line and the airfield is empty, with your rivals still struggling to complete the task.

In a powered flight, the only form in which a sudden, unexpected event can occur is one that is life-threatening. The engine stops. Or worse, one of two engines stops; I say worse because nerve-wracking choices have to be made in the next five seconds. Or the engine keeps pulling but you find yourself enveloped in snow, low cloud or a hailstorm – with no training for this eventuality. Or your electronic aids fail: radio, GPS, transponder, horizon etc. And because you have a motor you have the ability to enjoy all these surprises at absolutely the worst time – at night, over water or both.

Glider pilots who have no power-flying experience may nevertheless get an idea of this type of surprise when on a long aerotow. The rope breaks or back-releases over the middle of nowhere – I have had five of these in 50 years. Another surprise was finding oneself, and a few feet of rope leading to an invisible tug, in a blizzard the size of Bedfordshire at 300ft for the best part of an hour. Discovering on two occasions in near-zero visibility that the glider and tug could not communicate by radio was another shock. Learning on a very late air-retrieve that the home field's runway lights were not functioning was also memorable.

So, if you visit a power-club (and let me say I enjoyed getting my power-licence enormously) I suggest you do not say to a pilot about to depart, "I hope you have lots of lovely surprises on your cross-country!" You will get a funny look, to say the least.

## **Expect the unexpected**

MY EYE was arrested by this small ad the other day. Some generous glider pilot wanting to give away a caravan, free.

**"My 4 birth caravan up for grabs, etc"**

Well, I always suspected a fair amount of conceiving, intentional or unintentional, went on in club members' caravans, but for caravans to stand in for the delivery wards of a maternity hospital is something new. I hope the four infants are thriving. This idea might catch on and take a big load off the National Health Service.

Of course you still need midwives, but glider pilots, male or female, are by nature a resourceful lot, accustomed to dealing with the unexpected, and if the midwifery instructions are taped to the bulkhead in very large type (especially the list of DON'Ts) they should cope with any challenge.

Awful thought: maybe all four came at once. But then I would surely have read about it in the *News of the World*, or even in S&G Club News.

**SOME NEGLIGÉES  
AND KNICKERS,  
BRAVELY  
BLOWING  
NORTH TO  
SOUTH ON  
SOME LITTLE  
FARMHOUSE,  
WOULD HAVE  
COME IN QUITE  
HANDY AT THAT  
STAGE**



Professional meteorologist, author, TV weatherman, and now a gliding convert, Dr Simon Keeling reports on a phenomenon that may help all pilots, with the potential promise of guaranteed lift



**H**AVING been a professional meteorologist for more than 20 years, in 2009 I fulfilled an ambition of mine to learn to fly a glider. The Long Mynd is such a superb place to fly and, after a single trial flight (my first launch was by bungee!), I was hooked.

At every opportunity, the Mynd has been my host as I have escaped to the hills and grabbed the chance to fly. You can imagine that, being a weatherman, I am fairly popular at the club!

Now, knowing your subject can also present problems. Theories are fine when sat at a forecasting bench, but the reality is sometimes different. I first found this out when taking a powered flight along stratocumulus bases, and quickly found out that it is not necessarily the innocuous cloud it is portrayed as in meteorological texts.

One of the paradoxes I had trouble coming to terms with was that of flying towards the 'tendrals' of moisture hanging below cumulus clouds. Now, these dark areas have, as far as I was concerned, indicated a fall in temperature below the cloudbase, possibly by cold air descending through the cloud, reducing temperature, and allowing moisture to condense.

However, these were the very areas that experienced pilots at the Midland Gliding Club flew towards. I'd ask the question, "Why fly to the tendrals?", and the answer coming back was always, "Because that's where the best lift is!".

Okay, it was time to investigate what was going on. At this stage I should confess I am a self-confessed weather anorak. Those of you who have been on one of my Weather Schools, bought one of my books or the DVD, will already be aware of my passion for weather, and of trying to explain how it works in the simplest terms (as this is the only way I can understand it!).

For those of you reading this who don't know, cumulus clouds are formed by convection and are regarded as one of the best places to find lift. They rely on a parcel of air becoming warmer than its surroundings (through heating by the sun, or the cooling of surrounding air).

These parcels become more buoyant and less dense than their surroundings, and so rise upwards through the atmosphere. If there is enough moisture in the parcel, and temperatures fall sufficiently as



UP IN THE



it rises, then the invisible water vapour will condense into visible droplets, which we see as cloud.

If the air remains cold, then these parcels of air will continue to rise. We see these as fluffy cumulus clouds. Flying towards one of these clouds provides lift to a glider – well, most of the time anyway. Sometimes the cloud can have moved away from the region which created it and so may be slowly ‘dying’. One can spend a long time flying around the base of a cumulus cloud, trying to find the lift, only to discover that, actually, there is none left!

But wouldn't it be good if we could spot those clouds which are likely to give lift, and those that are not? And this is where I'd like to pass my experiences on to you. For this, we need to bring the 'tendrals' back into the story.

After a few flights I began to notice that the instructors (Dave and John) were right; areas with tendrals do seem to give lift. But I was not convinced that it was the tendrals that were doing this. On studying the cloud bases more closely, I began to notice that they had a convex nature to them.

Books on gliding weather did mention something about convex bases, and a search on the internet has revealed more, but I do not think that anyone has actually flown into these areas before to see what lift they can give.

If you have, and you are happy to share your results with me, I'd love to write about them for a future issue of S&G.

So, what should you be looking for? Well, after taking a trip in the club motorglider I've managed to get some pictures of such convex bases. This is surprisingly hard to achieve as they are frequently shrouded in other fragments of cloud. However, if you can spot them, you are virtually guaranteed an area of lift.

Looking at photograph 1, on first glance you could be forgiven for thinking that this would not be a particularly flyable day. However, take a closer look at the small cumulus bases. Notice the darkened base of

the cloud in the centre of the picture. It is here where we flew the glider and went from a sink of -2kts, to a lift of +5kts. This area was rather narrow, and we did struggle to stay within the main area of lift, but it was sufficient to gain 500ft, and so we flew on.

Photograph 2 shows another of these clouds, again with a darkened convex base, and so the same procedure was followed again. This time we achieved a climb rate of 7kts, again in a rather narrow area, but this time gaining an extra 1,000ft. What is also interesting is to note the invading cover of cirrus stratus cloud above, which perceived wisdom would say would kill any hope of lift.

And finally, a shot from the motorglider. Again the cloud in the middle of the photograph is the one we are interested in. Flying into the convex area of this seemingly uninteresting cloud gave us a climb rate of 4kts and a 300ft height gain; admittedly not a lot, but it might be enough to get you home.

All in all, it's very early days, but it has been proved through 2009 that every time I have flown into one of these convex cloud bases, significantly enhanced lift has been achieved.

It's also still very early days flying-wise for me, but what a year it has been. The gliding community has been so welcoming (especially the Midlands Gliding Club) and friendly. If I can do my bit by trying to enhance flying weather, and spot opportunities for flying when the weather appears otherwise, then I'll have given something back to this wonderful hobby.

■ You can get in touch with me by emailing [simon@weatherweb.net](mailto:simon@weatherweb.net) I'd love to see your photographs and read your experiences. If you do send reports, please make sure you include the data and time that the photograph was taken. I'll report more too to my Weekend Forecast list, which you can join for free by sending an email to [aviationweather-subscribe@weatherweb.net](mailto:aviationweather-subscribe@weatherweb.net) In return you will receive a free forecast for the weekend ahead each Thursday.

**FLYING INTO THE CONVEX AREA OF THIS SEEMINGLY UNINTERESTING CLOUD GAVE US A CLIMB RATE OF 4KTS AND A 300FT HEIGHT GAIN; ADMITTEDLY NOT A LOT, BUT IT MIGHT BE ENOUGH TO GET YOU HOME**



Dr Simon Keeling is the world's first Doctor of Broadcast Meteorology (University of Birmingham). Simon has presented weather forecasts for various television stations (BBC, GMTV, ITV) since 1995 and now spends much of his time writing about the subject, teaching weather and running a forecasting company. He took up gliding in April 2009 at the Mynd

**A WEATHERMAN'S PERSPECTIVE...**

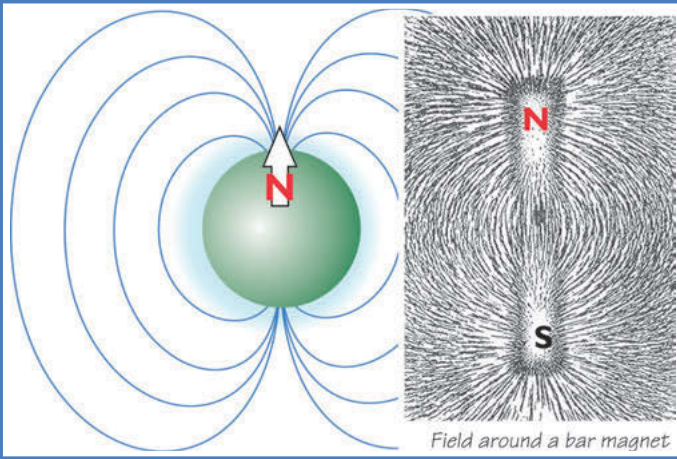


Figure 1: Magnetic fields

In the fourth part of a series on how aircraft instruments work and what they are really measuring, Steve Longland takes a look at the compass

**T**HE magnetic field surrounding the Earth is similar in shape to the one surrounding a bar magnet (figure 1), and also has a North and South magnetic pole. A freely suspended magnet in the geomagnetic (Earth) field will try to align itself both horizontally and vertically with the direction of the surrounding lines of force.

According to my Physics teacher, like poles repel and unlike ones attract, so why does the normally red painted north magnetic pole of a bar magnet point at Magnetic North? It certainly points at 'the magnetic pole which happens to be in the north', but, strictly speaking, that pole is a magnetic south, and the north pole of a bar magnet wouldn't point at it if it wasn't. From a navigational point of view Magnetic North, as originally mislabelled, makes perfect sense and doesn't confuse, which is probably why nobody's insisted on renaming it.

The Chinese made the first written reference to using a magnetised item as a 'direction finder', in about 1040AD.

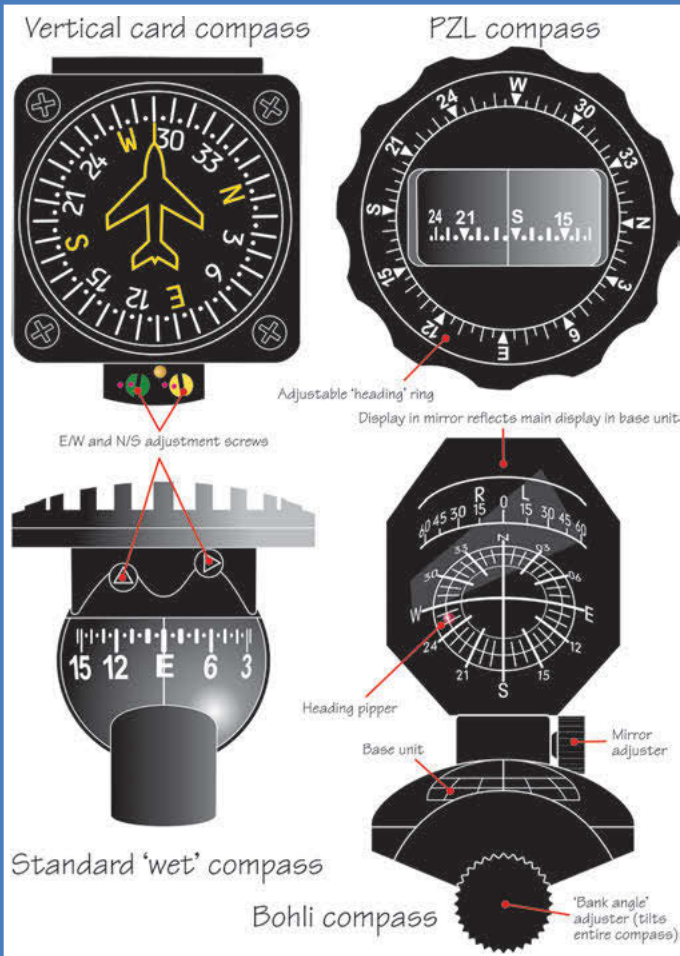
Today's compass magnet, with its small 'cup' bearing, and pivoted on a point, appeared in Mediaeval Europe around 1500AD. Apart from the Bohli, the basic configuration of most compasses has been much the same ever since (figure 2 & 3).

Mechanically the instrument could hardly be simpler, unlike the nature of the force that makes it work. A comparatively weighty circular heading scale is fixed to the magnet (figure 3) and, in northern latitudes, in a position that places their combined CG below and slightly south of the pivot point. This helps offset the natural tendency of the needle to respond to the dip angle (see later). 'Wet' aviation compasses (figure 2) are filled with liquid, to damp out compass wobble, tremble and various other twitches, but despite, or perhaps because of that, they can take several seconds to latch on to a heading once you've stopped manoeuvring. As you'd expect, compass cases are non-magnetic; made these days of perspex or plastic rather than the traditional brass or aluminium.

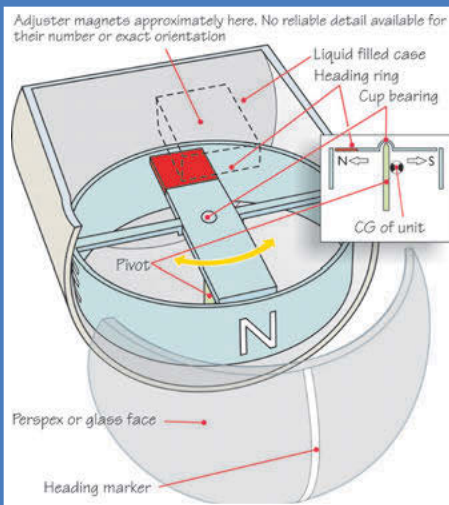
**Deviation**

All the magnetic compass has to do is sit and point, but even that basic couch potato function has complications. The geomagnetic field is extensive, but not particularly strong. It also fluctuates, and it isn't the only magnetic field around. Humankind has created cartloads of subversive extras! Electric motors, for example, create strong local fields. Mount a compass next to a T/S, fly off in a straight line, and you'll see one heading when the T/S is ON, and another when it's OFF.

Anything made of ferrous (iron) based metals such as undercarriage



(Above) Figure 2: Aviation compasses



(Left) Figure 3: Basic compass

**INSTRU**



levers, canopy latches, other instruments etc, along with any electronic equipment, including radios and speakers – even the panel wiring – will distort the local geomagnetic field and result in compass heading errors. These can be very large, but even if they're not, a basic and unadjustable compass of the sort a walker might use successfully, would, in a glider, get you lost rather a lot.

Simple compasses can't be corrected for such errors, unlike those designed for use in the magnetically 'distracting' environment of an aircraft or a ship. A non-magnetic screwdriver or special tool is used to alter the orientation of two or more smaller, built-in and strategically placed 'adjustment' magnets, which, in effect, bend the local field back into the 'correct' geomagnetic shape.

This is all part of 'swinging the compass', a procedure to be detailed in the final article. Swinging doesn't usually get rid of all heading errors – those remaining are Deviation errors, and noted on a deviation card – and only works when the error sources are, in effect, permanent; so the practical solution to the ON (error A) /OFF (error B) problem posed by the T/S, isn't to choose which one to correct for, but to mount the two instruments well apart.

Field strength follows a square law, eg, three times as far away, nine times weaker, so the separation may not be that great in terms of panel size.

**Variation**

True (geographic) North is where the 'axle' of the Earth's rotation passes through the surface, and where the northern lines of longitude meet (figure 4, inset world).

Unlike True North, Magnetic North and its companion pole are adrift (figure 5) on the convective currents within Earth's semi-liquid outer core. Given that it's a bad idea to base a navigational map on a feature that can't keep still, any decent map, particularly for use in aviation, is anchored to the geographic poles, and then to the latitude and longitude lines which form the permanent, albeit artificial, reference grid we've draped around the world.

Variation (also known as Declination) is

the difference, in degrees, between True and Magnetic North, and its value depends on where you are in relation to where they are, and to any fluctuations in the direction of the local geomagnetic field – see the isogonic chart (equal variation lines) for 2000 in figure 6.

On 1:500,000 maps, dashed blue lines connect places of equal magnetic variation, and are marked with the degree and the direction (W or E) (figure 4). They are correct only for the map's publication date.

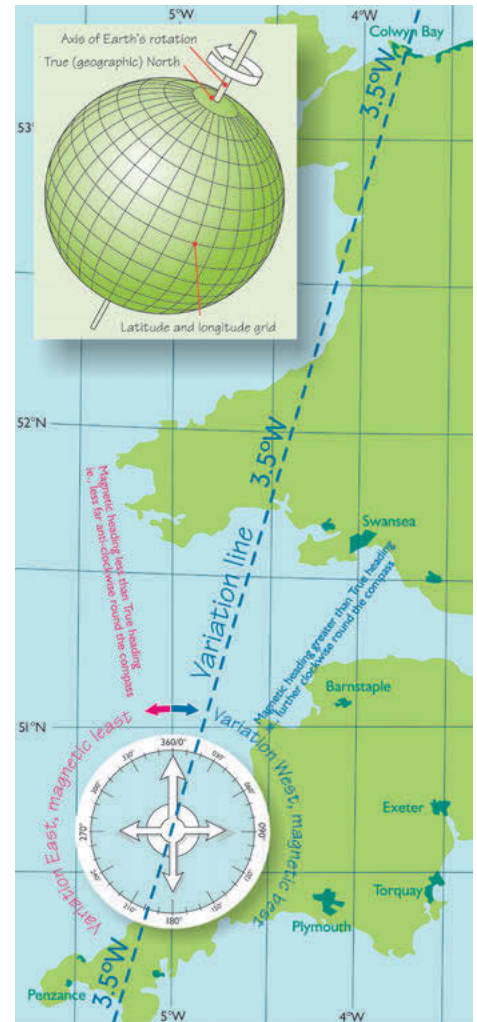
In conventional flight planning, the course is drawn on an aeronautical map and the True headings measured using a protractor against the lines of latitude and longitude. Since True and Magnetic North are not the same – except along the 0° isogonals (figure 6) – navigation by compass entails converting true headings to magnetic ones.

The mnemonic 'Variation East, magnetic least. Variation West, magnetic best' helps you remember whether to subtract or add variation to the True heading. If you're wise, you then write the resulting magnetic headings alongside the track lines. These days pilots don't bother, what with GPS and all that, but if they did, they'd know that Magnetic North, as seen from the UK (current variation West), is physically to the left of True North (figure 5). In other words, fly 0°M (magnetic) and True North is to your right. To fly a True heading then, the magnetic bearing has to be 'best', ie, further clockwise round the compass by the variation degree (figure 4). For an East variation the magnetic bearing is 'least' – less far, anti-clockwise, around the compass than the True heading.

**Dip or Inclination angle**

Given a decent rate of turn, the compass will read correctly twice during a circle, and in passing. For most of the rest of the time it is either ahead (leading), or behind (trailing) the correct heading, occasionally rotating against the direction of the turn, and sometimes jamming.

These problems are related to the dip, or inclination angle (figure 7). The geomagnetic lines of force run parallel to the surface at the Equator (figure 1). Anywhere else they



(Above) Figure 4: Variation UK  
(Below) Figure 5: Movement of Magnetic North



**THE COMPASS**



Born 1941. First glider flight in 1968 at Meir, Staffordshire. Joined Cambridge University GC in 1970. Soloed 1970. Instructor 1972 - lots of free time and requirements then far easier. Completed Diamonds in 1988. CFI twice (lack of judgement). Stopped instructing in 2005. Currently nearly 5,000hrs and still not getting it quite right. Date of decease, pending

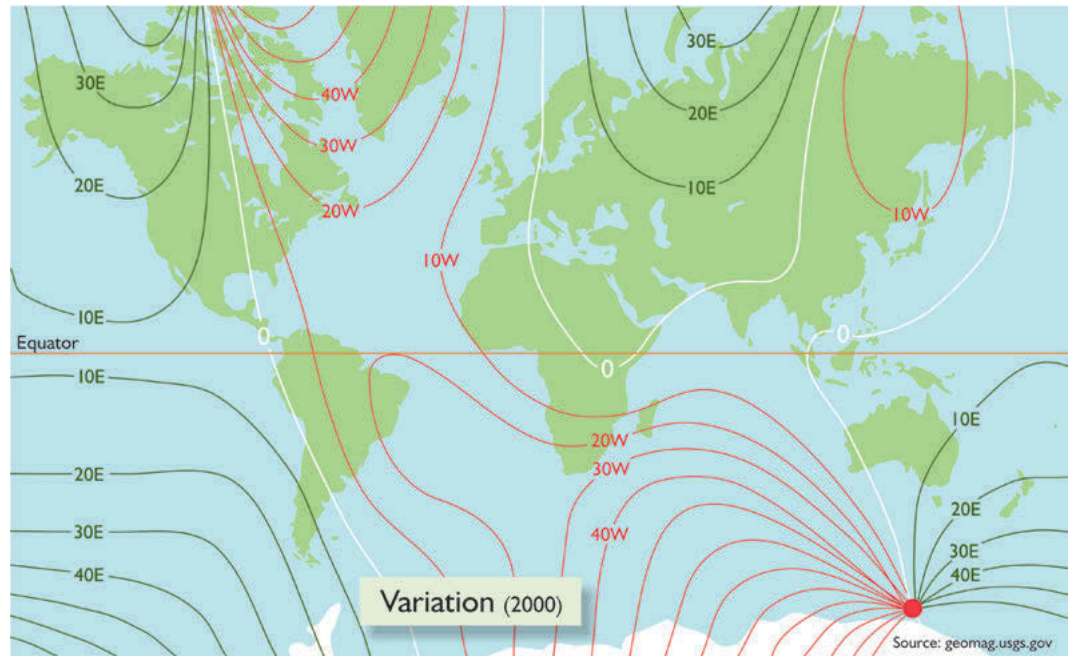


Figure 6: Variation worldwide 2000

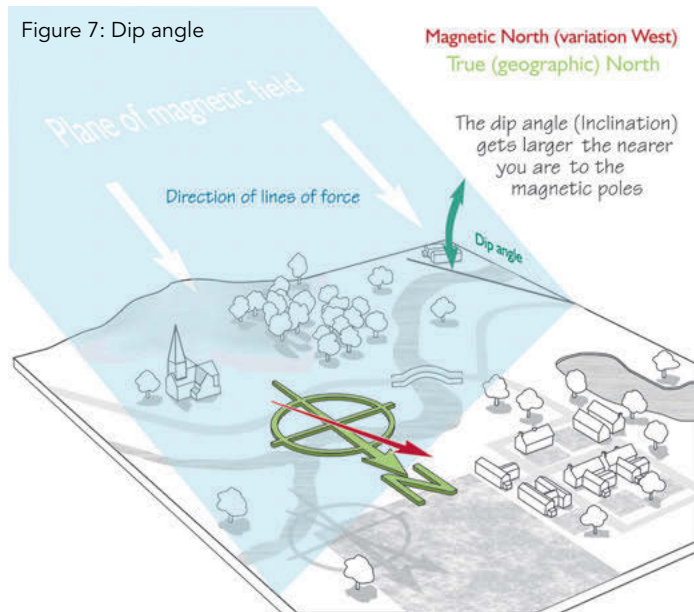


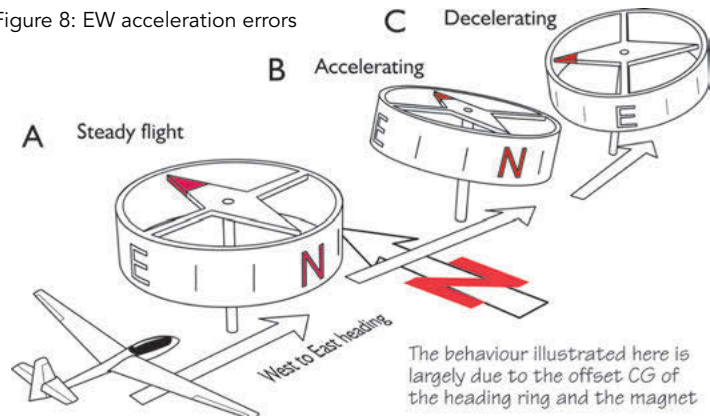
Figure 7: Dip angle

✦ dive into the ground at an angle that steepens progressively as you near the magnetic poles, where they go straight down. For design reasons and because the compass magnet tries always to align itself with the local field direction, any tilt greater than about 20° causes the heading ring to foul the casing. Result, magnetic compasses are unusable close to the poles. They can also jam when the sum of the dip and bank angles is greater than 90°, and the closer you get to the magnetic poles the shallower the bank needed to make that happen.

The compass is also affected by acceleration. On an East/West heading the magnet will tilt and rotate as shown in figure 8B. Decelerate, and 8C happens. You don't get heading changes if you accelerate or decelerate on North/South headings. Exactly how the instrument behaves during a turn depends on the relationship between the magnetic plane (dip angle), the bank angle and the g forces involved. Rolling out on a predetermined heading when you're cloud flying is really frustrating, but you can get round the problem.

When the turn rate is constant and the bank isn't too extreme, the bizarre behaviour of the compass proves to be remarkably consistent. If you're turning left, say, and as you pass through the heading you want, the compass freezes briefly and then starts rotating backwards – check

Figure 8: EW acceleration errors



**THE MNEMONIC 'VARIATION EAST, MAGNETIC LEAST. VARIATION WEST, MAGNETIC BEST' HELPS YOU REMEMBER WHETHER TO SUBTRACT OR ADD VARIATION TO THE TRUE HEADING**



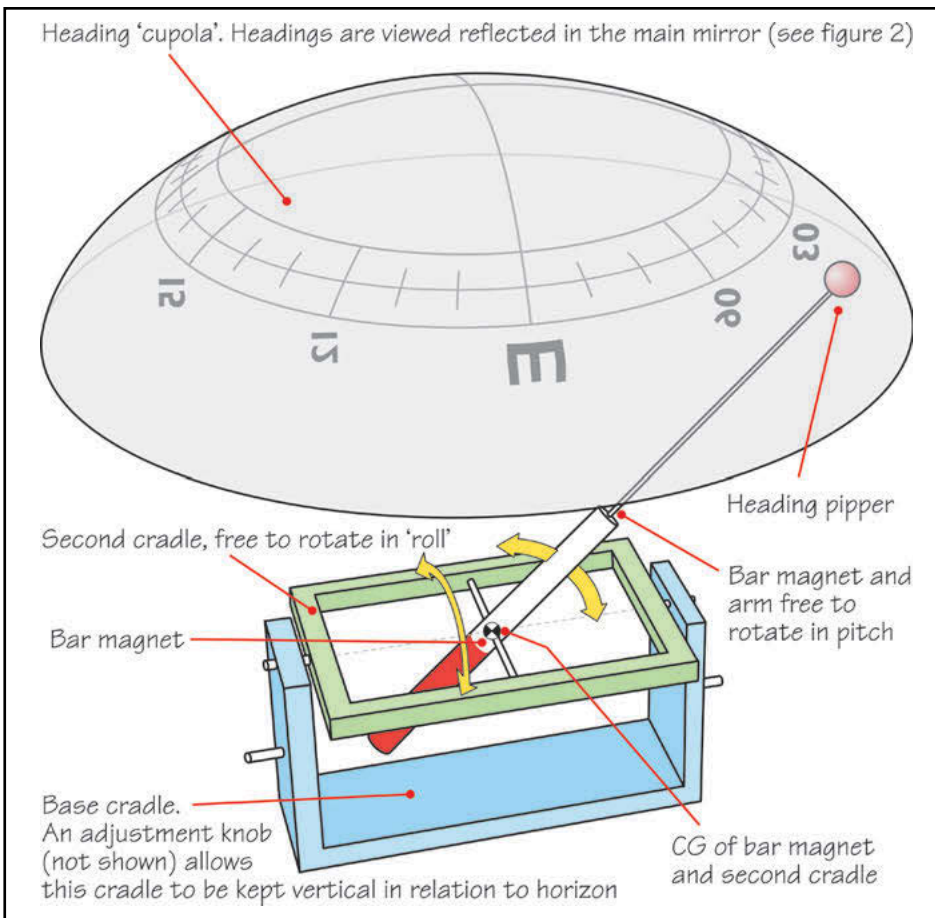


Figure 9: Bohli in section

its behaviour against a visible landmark along the intended track before entering cloud – then you’ll know when to straighten up. Do it right and you should end up very close to, if not exactly on, the required heading.

**The Bohli compass**

I’ve included the Bohli (figure 9) in this article because, even though the original manufacturer no longer makes or repairs it, the novel design of the compass freed it from most of the errors that bedevil the rest, and it was done without resorting to sophisticated electronics and that Achilles Heel of modern instrumentation, the battery. The Bohli isn’t without drawbacks. Its use is restricted to areas where the dip angle is between 40° and 75°, which cuts out most of South America and a large part of Africa, and a different unit is needed for Southern latitudes.

That aside, of several unique features the key ones are the movable cradle supporting the magnet (figure 9), and the fact that during a turn the entire unit can be swivelled to stay vertical in relation to the horizon, as in the sequence in figure 10. The magnet and heading pipper pivot at their combined

CG and also at that of the second cradle so that, almost regardless of what the aircraft does, the magnet remains aligned with the direction of the magnetic field. This makes the Bohli immune to acceleration errors, unlike standard compasses.

The instrument also indicates the correct magnetic headings throughout a turn, with the pipper describing a circle around the display. Coupled with its deadbeat behaviour, this means that it can be used as a form of T/S. Tellingly, it is banned from high-powered competitions in countries where cloud flying isn’t allowed!

**So, why bother with a magnetic compass when GPS is so much more accurate?**

- 1) The magnetic compass has no batteries
- 2) It can’t be turned off on a whim, unlike the GPS net, which is looked after by the US Military
- 3) You’re legally obliged to have one onboard, if only as a back-up.

● Steve is on the lookout for broken variometers to aid his research for this series. If you can help, please contact the editor (contact details on p3)

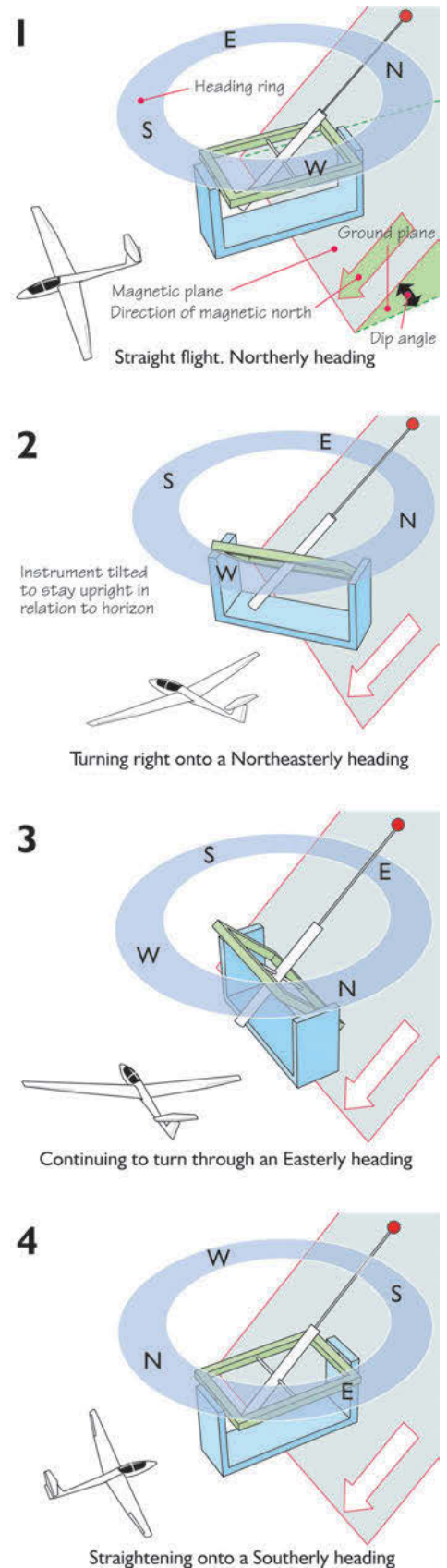


Figure 10: Bohli on headings

Illustrations by Steve Longland

# CROSSING

## 29.8.09 WORMINGFORD - ST INGLEVERT, CALAIS, 130KM

**A**LTHOUGH I had made a Channel crossing in 2005 in my LS3a, I had always wanted to do it in my Skylark like most of the crossings were done in the 1950s. It is always very easy to pass up the idea due to the hassles of retrieves etc and nerves!

As previously, it was a spur of the moment decision – the day before having looked at the wind and predicted cloudbase which both looked almost right.

Luckily my wife had mentioned that she fancied a day trip to France so the crew was organised! I took a winch launch mid-morning and climbed away easily.

I had a near landout after crossing the Thames, otherwise the flight down to Dover was reasonably good. The wind had a southerly component when reaching Dover, which caused a sea breeze effect. As we reached the coast large curtain clouds formed, full of heavy sink and usable clouds were steadily receding inland. After nearly an hour and down to 2,500ft a good climb was found approximately 6km inland. This took me to 5,600ft agl. I set off through the curtain that had formed straight into heavy sink, which meant I crossed the coast south of Dover at a less than ideal 4,700ft agl (4,900ft asl) with a tailwind component of 15kts. This is the part where the nerves play up!

Fortunately, once over the sea, the sink rate became sensible and about half way across I appeared to fly into a weak convergence with the vario staying on zero for some time (Rob, who had set off as I arrived at Dover, had found the same good air), this meant a comfortable crossing of the French coast at 1,900ft agl. Lucky because the tailwind component had dropped to nearly zero! The best I could do was find very rough broken lift low down which carried me at the same height to the high key at St Inglevert.

I had declared Abbeville as previously but, with less height and performance to push inland to usable lift compared to the LS3, I was more than happy to reach St Inglevert.

The retrieve was efficiently carried out as usual by my wife and Dad, with us arriving home at 5am – two hours ahead of last time!

**John Gilbert**





# THE CHANNEL

News of John Gilbert's second Channel crossing, described here, had Wally Kahn reaching for the record books and reminiscing about his own experiences and Philip Wills' memorable flight in 1957

**W**HEN I was a great deal younger, soaring across the English Channel was a dream most of us cherished. History seems to show that to date only 24 soaring cross-Channel flights starting in England have been made.

Pioneer of the soaring brigade was Geoffrey Stephenson who, in April 1939 flying his Gull 1, made the first successful crossing. The post-war list is headed by Welch and Miller in 1950. Thereafter attempts were made by any number of pilots.

For years I kept a toothbrush and a copy of H.E. Bates' magnificent classic war novel *Fair Stood the wind for France* in the Surrey club Weihe in case the weather proved favourable. When my day came in 1955, I chickened out having failed to gain enough height over Dover – my previous close encounter with that large dollop of water was when I was towed across, clearing our coast at 600ft, climbing to 3,000ft in the middle and letting down to cross the other side again at 600ft. It was my tug pilot Lorne Welch's idea of a joke and I resolved next time to have much more height.

The aim was to cross with enough height, on average between 6-8,000ft, at Dover to reach soaring conditions in France and then dream of really going places. Justin Wills is the clear winner with a flight of 835km, still a UK record. The weather was always the dominant factor, wind direction changes playing havoc with pilots' dreams. The wide spread of landing places – Holland, Southern Germany, Luxembourg, Belgium and the middle of France proves the point.

The honour board makes fascinating reading and I salute the 'crosschannellers'. Now the turbo and SLMG crossings are the norm, more's the pity. Shades of Derek Piggott, who was towed across in the open EON primary, and other madcap endeavours

are nothing compared with Philip Wills' fantastic flight in September 1957 – a copy of his S&G article written after the flight appears below. 'The Gaffer' really did lead a charmed life.

## **ONE WAY NOT TO DO IT, OR, I, TOO, CAN CROSS THE CHANNEL**

by Philip Wills

**S**UNDAY, 15 September 1957, dawned at Henley a cloudless blue with a fair north-westerly wind, backing to north above 2,000ft. We hooked up the trailer and fled for Dunstable.

I was launched in the Skylark at 10:45, by which time ragged cumulus were beginning to form, and at 11:00 caught a narrow thermal off the Zoo, which took me off on a southerly course. I had told my wife Kitty to go to Detling (the site of the Kent Club, about 75 miles south-east and the other side of London and the Thames) with the trailer, and thus had to make a course well east of the wind direction. But, in fact, no great difficulties were encountered, though at one point near Hornchurch I was down to around 600ft. I then flew into seven ft/sec lift and was off again with little delay.

The possession of a Cook electric variometer really opens new worlds in this matter of picking up lift from low altitudes, and indeed one must take care to keep a watchful eye open for available landing fields, else the confidence inspired by this new instrument may lead to serious trouble.

As I approach Detling the conditions got worse. For some quite unforeseen reason, the sun was cut off by a sheet

## **CROSS-CHANNEL FLIGHTS IN GLIDERS (NON MILITARY)**

In 1930, *The Daily Mail* offered a prize of £1,000 for the first double crossing by a glider. On 20 June 1931 flying his Wien, Robert Kronfeld won the prize, starting at Calais, being towed to 10,000ft, landing near Dover and later that day returning in the dark to Calais Airfield. Then, eight years later saw the first soaring crossing.



John Gilbert fulfilling his ambition to cross the Channel in his Skylark, having previously crossed in his LS3 (Jo Hoy/Andy Wells)

- 22.4.39 Geoffrey Stephenson, Gull 1, Dunstable – 15km E of Boulogne, 204km
- 12.4.50 Lorne Welch, Weihe, Redhill – Brussels, 338km
- 12.4.50 L (Dusty) A Miller, Gull 1, Detling – Coxyde, Belgium, 149km
- 14.5.55 L Welch and Frank Irving, Eagle, Lasham – Louvain, Belgium 402km
- 11.6.57 Tony Goodhart, Skylark 3, Lasham – Vitry-en-Artois, nr Arras, 302km
- 21.8.57 Anne Burns, Skylark 3, Lasham – SE Calais, 257km
- 28.8.57 Robert Cockburn, Sky, Farnborough – Wimereux, nr Boulogne, 180km

- 15.9.57 Philip Wills, Skylark 3, Dunstable – St.Omer, France, 214km
  - 21.5.58 Andy Gough, Skylark 3, South Cerney – Heerlen, Holland, 560km
  - 7.6.59 Joe Croshaw, Skylark 3, Upavon – Gravines, nr Calais, 228km
  - 13.7.59 Rocky Stone, Skylark 3, Booker – Cassies, nr Calais, 190km
  - 5.7.61 Alf Warminger, Olympia 419, Swanton Morley – Rosieres, Amiens, 362km
  - 1. 8.76 Mike Carlton and Brian Spreckley, Calif, Fairford – nr Luxembourg, 603km
  - 1.8.76 Justin Wills, Libelle, North Hill – Trier, Germany, 713km
  - 1. 8.76 Mike Pope, Nimbus (22 metre), Stratford-on-Avon – Yves, nr Brussels 535km
  - 3. 8.83 Tom Docherty, Nimbus 2, Lasham – Cambridge – Joigny, S of Paris, 666km
  - 7. 9.85 John Bally, ASW20, Sutton Bank – Ambleteuse, nr Boulogne, 425km
  - ?.6.86 John Gorringer, LS4, Booker – Calais, 190km
  - 29.5.86 Justin Wills, LS6, Rufforth – Epire, w of Dijon, France, 835km
  - ?.7.88 Bruce Owen and Brian Spreckley, Ash 25, Hereford – Pithiviers, 83km S of Paris, 558km
  - 4.7.95 Gary McKirdy, Jantar, Edgehill – Calais, 269km
  - 6.5.05 John Gilbert, LS3a, Wormingford – Abbeville, 220km
  - 29.8.09 John Gilbert, Skylark 3, Wormingford – St.Inglevert, Calais, 130km
  - 29.8.09 Rob Lockett, ASW20, Wormingford – Abbeville, 220km
- Hopefully this list is complete, however apologies if not!*

☞ of stratocumulus at around 3,500ft and visibility deteriorated. However, my ground speed had averaged 50mph, it was only 12.45pm and the air was still interesting enough, so I continued on towards Hawkinge. I flew up and down within a few miles of the coastline, from Hawkinge, Folkstone, Dover, to Deal. The interesting thing was that, although the sky looked so dead, there was lift to be found, and I played around between 1,000 and 2,000ft in the grey air until at length it looked as if I must land, a half mile or so north-west of Deal.

I picked a field and was circling it preparatory to a landing when, at under 600ft, I once more flew into six ft/sec lift. The wind was fairly strong, and was now blowing from the NNW, and as I climbed away a fascinating plan offered itself. It turned out to be the piece of cheese in the mousetrap.

Since the sea is uniformly heated, in the general way the air above it contains no vertical currents and a sailplane will descend steadily whilst flying over it. But for many years there has been a theory that, about the month of September, when the land has cooled much more rapidly than the sea after the summer months, one might find up-currents persisting out over the Channel itself.

I now had a chance – the first time anyone had had a chance – of finding out if this theory was correct, and apparently without taking any risks. Reference to the accompanying sketch map of the flight will show the plan. From Deal down to the South Foreland the coast runs roughly N-S, and the wind, although strong, was blowing out to sea at a fairly narrow angle. I could therefore circle along in my lift, only gradually leaving the coastline as I gained height.

If the lift petered out, I could immediately turn inland again at any point; if the lift continued all the way, I would leave it as I came abreast of the Foreland and fly back to land. Q.E.D.

The plan worked splendidly. Lift continued smoothly and over a wide area, and as I climbed the wind got stronger. The sky was grey and overcast, and underneath it

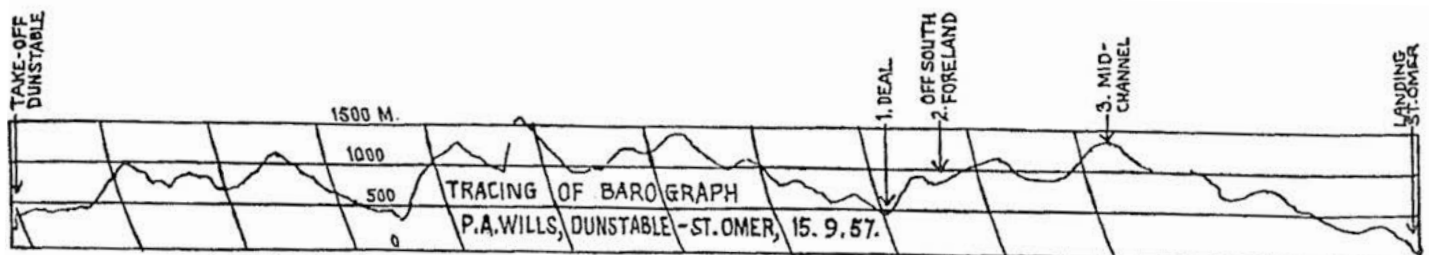
a milky green sea heaved uncomfortably in the freshening wind. Visibility was perhaps 10 miles, so I could not nearly see the French coast. Instead, I kept a watchful eye on the slowly receding coastline of Kent, and was still climbing well, at 2,500ft, when the South Foreland came abreast of me, perhaps five miles to the west. I had circled and climbed over perhaps nine miles of sea – very interesting indeed. Undoubtedly the lifting air went on, but it was not for me. I turned onto a westerly course towards the white cliffs of England.

And I almost immediately flew into eight ft/sec – down.

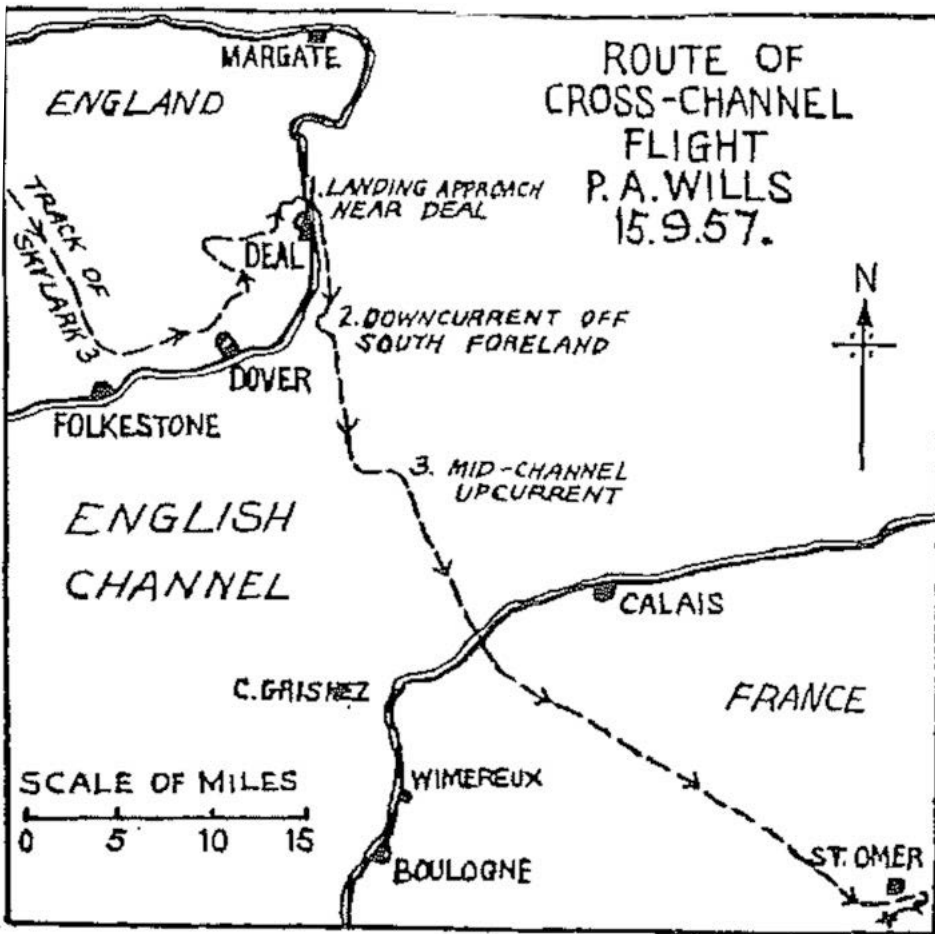
It was as if someone had picked a bucketful of the turbulent sea below and suddenly thrown it through my cockpit window over me. My first instinctive reaction was to wrench the Skylark round and back into the comforting upcurrent behind me.

Next came a feeling of fury at my stupidity. For if in these conditions upcurrents are to be found over the sea, then clearly one should expect compensating downcurrents also to be found around them, and as I could not possibly guess how fierce and how wide this downcurrent was, it was now simply a matter of blind chance as to whether I could get back to the English coast or not, beating across the strong NNW wind. The coast, which looked so near, was, in all probability, cut off from me by an invisible cataract of descending air. If one must be a pioneer, at least let one be an intelligent one. But it had looked such an innocent little bit of pioneering!

The alternative both looked and felt desperate, but quick calculation showed it was theoretically the better one. From where I was, although it was invisible in the grey mist and greeny sea ahead, the French coast could not be more than 25 miles away at most. I was still climbing, around half a mile up, and with the following wind my gliding angle in straight flight was over 1 in 45. I only had to circle and stay where I was in the friendly air for a few minutes more, and if I could hold course thereafter and not find any more downcurrents, I was there.







I went on circling and climbing gently until the land behind had faded from sight. Except for one or two ships ploughing short and faded furrows in the cloudy sea below, I was alone in a grey and misty sky. Slightly to the east of my track, I saw a darker smudge in the dull overcast – I flew over towards it – and encountered good strong lift! The back-room boys were triumphantly vindicated.

Just at this moment a Bristol Freighter smugly carrying its load of motor cars from England to France sailed below. I did not know it at the time, which was just as well since I had enough on my conscience as it was, but the pilot saw me circling at 2,500ft and wireless back that he had seen a glider in difficulties half-way over the Channel, whereupon the Air-Sea rescue teams were all alerted. My piece of innocent pioneering was giving the maximum number of people the maximum possible amount of trouble.

As a matter of fact, of course, it was just at this moment that I was finally and certainly out of trouble – from natural causes, though what might happen from outraged international practices remained to be seen.

For my mid-Channel thermal took me firmly to 3,500ft and, a few minutes later, the French coast came in sight. I crossed it at 3,000ft – having left the English coast 30 miles away at 600ft. I had produced one of the most startling barograph charts of all time, but it would remain something of a monument to my lack of forethought.

One of the few consolations was that, at that blinding moment when the trap into which I had fallen became evident, I took the correct, if apparently the more difficult decision to go on into the far mist towards France, rather than make a blind dash to the deceptively close coast of England.

I landed in a ploughed field half a mile short of the aerodrome of St Omer about 30 miles inland, after finding one or two bits of lift on the way. The newspaper said it was the field Douglas Bader parachuted into when he was shot down during the war. There ought to be something clever to say about the coincidence, but I can't think of anything.

Philip Wills' article was first published in the December 1957 issue of S&G.

## Weather School

### Weather School

Simon Keeling runs Weather School, which offers one day courses to pilots, explaining all things weather. The courses are run several times a year, so for the next dates and more information see

<http://www.weatherschool.co.uk>

### Weather Whys DVD

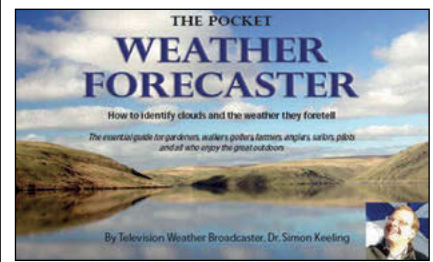
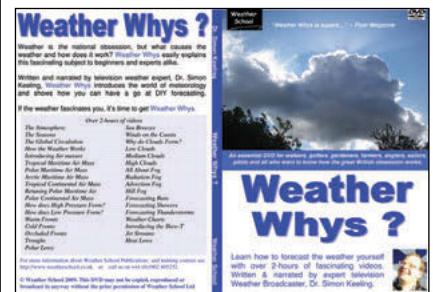
Containing 35-short videos, with a total running time of over two-hours, Weather Why's describes how the weather works. It introduces DIY forecasting by looking at various clouds and the weather they foretell as well as explaining how fronts and pressure systems form, plus much more. You can watch sample videos now at

<http://www.weatherweb.net/weatherwhys.htm>

### The Pocket Weather Forecaster

Everyone's guide to the clouds and the weather they foretell, The Pocket Weather Forecaster is Simon Keeling's popular guide to the sky. It helps the glider pilot identify clouds, and predict the weather for the coming hours. See sample pages online now at

<http://www.weatherweb.net/books.htm>



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*This page, clockwise from top left:*  
On a Saturday last November, Robin May and Steve Lynn took a couple of engine climbs to get out to the wave beyond Banbury. They then climbed to 10,000ft with a temperature of -7°C, brrrr (Steve Lynn)

Walking on Air's K-21 re-distributing some snow on the airfield at Portmoak (Jim Cooke)

Surrey Hills on 23 December 2009. The ground was snow-covered but some intrepid members braved the cold to fly the T-21 (Steve Codd)

Club Puchacz at Rivar Hill after a great day's flying in January 2010 over the snow-covered countryside (Phil Morgan)







*This page, clockwise from top:*  
Flying from Fuentemilanos airfield (in Segovia, north west of Madrid) during a perfect winter day in 2009 (Carlos Seoane)

Colin Ebdon spotted this rather unusual display of unclassified (?) undulatus-wave type cloud over the Essex and Suffolk airfield on the morning of 4 December, 2009 (Colin Ebdon)

K-21 on aerotow at a snowbound Lasham last year (Gerry Cook)

If you would like your previously-unpublished photographs to be considered for inclusion in Gliding Gallery, send them to [editor@sailplaneandgliding.co.uk](mailto:editor@sailplaneandgliding.co.uk)



# 1,800 MILE OUT-AND-RETURN

Towing a two-seat glider back from Southern France was a perfect opportunity for Pete Stratten to road test a new towcar and to share basic towing tips

**A**LMOST all gliders have a trailer – even the best pilots land out occasionally! An increasing number of pilots are finding that towing to other sites in UK and elsewhere with their own or their club's gliders can extend soaring opportunities and experience.

Every now and again, much to the relief of the other members of the syndicate, someone will offer to drive an out-and-return of 1,800 miles with half of it towing a two-seat glider in its trailer. "That's handy," said my colleague the S&G editor, ever ready to spot an opportunity. "You can put a few words together for the magazine that might help people new to towing."

## **Prior planning prevents poor performance (there should be six P's of course)**

Publicly offering any kind of advice is fraught with danger. However, a few well-known tips are probably non-contentious and, although obvious to many, are worth repeating:

- Make sure the trailer is regularly serviced and maintained. It is not wise to leave a trailer unused for long periods before taking it out on the road without checking it for serviceability.
- Tyre condition and tyre pressure are critically important.
- Check that all lights are working and that electrical cables do not drag on the road.
- Many problems associated with towing a trailer are caused by incorrect loading. Consider putting heavy items in the car and not the trailer. As long as the trailer is evenly loaded, the nose weight is correct and the whole outfit sits level on the road, problems with snaking are unlikely to be experienced.
- A stabiliser will reduce snaking by increasing the turning friction between

towing vehicle and trailer. A stabiliser will not compensate for bad loading or weight distribution.

- Anyone can be unlucky. Think about how you'd cope in the event of a breakdown, flat tyre or an accident.

## **BGA Laws and Rules**

To save you the effort, a lot of really helpful trailer towing information has been collated from numerous verified sources and published in that must-have publication, *BGA Laws and Rules*.

## **Licensing**

There are some complications regarding driver licensing and trailer towing. These are generally associated with younger drivers. A Government website offers surprisingly straightforward advice. [www.direct.gov.uk/en/Motoring/DriverLicensing/CaravansTrailersCommercialVehicles/DG\\_4022564](http://www.direct.gov.uk/en/Motoring/DriverLicensing/CaravansTrailersCommercialVehicles/DG_4022564)

## **Weight**

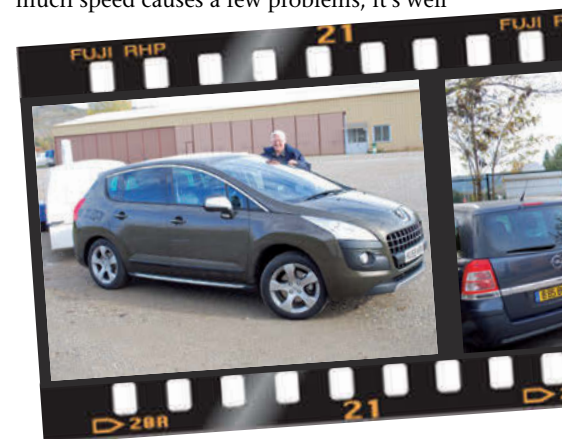
Of course weight is an issue. For example, towing a glider trailer with a lightweight vehicle presents all sorts of difficulties in addition to legal compliance issues. The Department for Transport website offers useful advice. [www.dft.gov.uk/pgr/roads/vehicles/vssafety/requirementsfortrailers](http://www.dft.gov.uk/pgr/roads/vehicles/vssafety/requirementsfortrailers)

## **Speed**

In gliding where not enough rather than too much speed causes a few problems, it's well



Pete Stratten, who flies from Bicester, has a small share in a Duo Discus flown in the UK and France







Ready to head north again – the Duo trailer was no challenge for the 3008 (photos by Pete Stratten)

## PEUGEOT 3008

In my view, the new Peugeot 3008 is unlikely to disappoint. Following the Peugeot PR event at Stratford GC last September (see S&G Dec/Jan 10), where the car was demonstrated to the press, I was fortunate to be offered the chance to try out a top specification 3008 HDi 150 on a planned trip.

The 3008 is marketed as a 'crossover' vehicle that is designed to meet any number of leisure or work needs. Having now experienced two very long journeys in the 3008, it's clear that Peugeot have worked hard to develop a very good towing platform and the designer's attention to detail has paid off.

The ride, braking, seating position and comfort are superb. The in-flight entertainment and nav system in this example was outstanding and the added touches such as automatic wipers, cruise control and head-up display of speed, closing distance, etc, all add up to a safe, confidence-inspiring and comfortable driving experience.

The Duo Discus in a twin-axle trailer that was hooked on to the car for the return journey obviously impacted on acceleration and fuel economy, but not much – gear changes were rarely needed, we didn't hold up anyone, even on the mountain roads, and the trailer probably added one refuelling stop on the return journey.

The car's handling both with and without trailer was sublime throughout the journey in dry and very wet road conditions. In addition to getting you and three others around in comfort with performance and safety, this car copes easily with manoeuvring a towed glider around a tight spot, lugging water ballast and other gliding stuff, towing trailers and coping with the occasional late driving decision.

And the car is capable of launching gliders – but check with your CFI first!

Take a look by Google searching under 'The Lion Has Wings', YouTube'.

known that most modern, well-maintained and well-driven cars coupled with modern, well-maintained and accurately loaded glider trailers will breeze along at sensible speeds. To avoid having to explain all this to the boys in blue prior to cheerfully accepting a ticket and/or parting with your hard-earned euros, it's well worth understanding what the law demands where trailer towing is concerned.

### Insurance

Third party insurance cover is required for the trailer as well as for the towcar. Most policies do cover you third party when towing, but it is your responsibility to make sure that this is the case. If you're in any doubt, seek advice from your insurance company.

### The experts

The numerous organisations that exist to support caravan owners offer quite a lot of expert advice covering all of the above and much, much more. For example,

the document at [www.nationalcaravan.co.uk/images/resources/Caravan\\_Towing\\_Guide\\_080805.pdf](http://www.nationalcaravan.co.uk/images/resources/Caravan_Towing_Guide_080805.pdf) offers detailed and helpful guidance, much of which applies equally to glider trailers.

And what about that 1,800 mile out-and-return to pick up a two-seat glider from Southern France? After 900 miles in a borrowed Peugeot 3008 150 HDi without a trailer, and an early start the next day, my co-driver Dickie Feakes and I dropped in to see some gliding friends at La Motte du Caire. Club members were getting stuck into the annual maintenance of various gliders in an autumn scene no different from any other gliding club anywhere in the world – other than it was snowing!

As kind offers to get involved seemed likely, we drank their coffee, made our excuses, topped up the tyres and checked the electrics before hooking the trailer on to the Peugeot to arrive back where we'd started in the UK, two and a half uneventful days after setting off.

(Far left) Sea France were helpful when booking in the trailer one way only  
(Below) The trip was uneventful, and even Dickie Feakes (far left) was impressed with the navigation system (centre)



# VINTAGE YEAR

Chris Wills gives an overview of the current international scene

**O**UR international rally is to be at Tibbenham during July/August. A Number of EoN Olympias are being restored to take part in this rally and the Olympia Rally, which it is hoped will run in parallel with the Olympic Games.

A new VGC group has been formed at Buckminster GG at Saltby. It has created a workshop out of two containers and hopes to restore an EoN Olympia. It has already a Mucha Standard, Prefect, T-31 and Skylark 2. Bruce Stephenson has formed this group.

Peter Underwood has not only almost finished a Grunau Baby 2B, but has also started to repair the 1935 Kite 1 prototype, which has for years had very bad glue failure. This will be a long-term project. A second replica of the Colditz Glider is being worked on.

**THE NETHERLANDS:** The historic 1938 V-20 has not only been beautifully restored, but has had its first test flights. A team is now working on the unique Grunau 8, a two-seater from before 1930! The new Minimoo, which was being built by Bob Persyn, has for some time

been at SZD Jeslow for finishing off. It was due to be ready by the end of 2009.

**BELGIUM:** SZD Jeslow has finished the unique Spalinger S.15K and it has been returned to Belgium in beautiful condition. It must be the oldest Spalinger Type, as they were originally built during 1933/1934. Koon der Roy has sold his 1953 Huetter H.17B to Stefanie Gester in Germany. This machine was almost totally restored in Poland and was seen at our Angouleme International Rally.

**GERMANY:** It was noted that, of the 50 entries from Germany in last summer's International Rally at Achmer, many were entered by the younger generation. Thus, there must be a healthy atmosphere for older gliders in Germany. We are hoping that a third DFS Habicht will soon be ready to join the other two that are airworthy. Another Hütter H.28-2 may soon appear. The new Horten 4A is expected to fly during 2010. It appeared uncovered, less its metal wing tips, at Achmer and looked very fine. Now, Sascha Heuser is working on it full time and alone at Potsdam. He has given up working on the new Minimoo for the Oldtimerfreunde Donauwirth Stillberghof in Bavaria, as he had not enough time.

There are three Minimooas currently airworthy in Germany. A fourth Minimoo is airworthy in Britain. Out of the 110 Minimooas built, only these four are airworthy, but we hope that these will soon be joined by a new one in the Netherlands.

A new Rhoenbussard, built by aeromodellers, is believed to have flown. With this one, there are two Rhoenbussards airworthy in Germany, the other with the Oldtime Group Wasserkuppe. A Mu 13D-3 should soon be ready to fly in Bavaria. This one was formerly at La Ferté Alais in France and has been restored.

The Geier 1 that was formerly at Aston Down with Rick Fretwell has returned to Kempten in Bavaria where it was built in 1956.

The first Geier 1 was built by Josef Allgaier in 1955 and he built some parts for the second one, which was assembled at Kempten. It has returned to Kempten to be flown, but may later be put into a museum for Josef, who is currently 86 years old and very ill. Bernhard Rakil at the Nordhorn Lingen GC is restoring a Grunau Baby 2B. Hermann Beiker is building one Weihe out of two Spanish Weihes near Hamburg. A Swedish Kranich 2B-1 is being gradually restored by Eggersdoff by Arno Anders.

Siegfried Lorenz, who has been preparing and completing old glider drawings on the Wasserkuppe, says that he has now sets of drawings for the following gliders:

- Moazagottl
- Rhoensperber
- Reiher
- Sperber Junior,
- Sperber Senior
- RRG Ente (Lippisch rocket glider)
- Luftkurort Poppenhausen
- Musterle.

He has already sent drawings of the Reiher 3 out to Achmer, someone in Caen, France, and to Gerry Wenger (in the USA), whose group has just completed the new Rhoenbussard.

**DENMARK:** The group of veteran Danish glider pilots, led by Johannes Lyng, has continued to work on the Mraz-built Kranich 2B-2 that was severely damaged in Germany. They have made incredible progress and the Kranich 2B-2 should fly during 2010. It is the last of 1,312 Kranich 2B-2s built by Mraz during the war, although another one might be being restored near Aalen Elchingen. Work is continuing to rebuild the last genuine Mu 13D-2, which is likely to fly. Its incredible life started in Lithuania in 1939, when it won the first championships of the Baltic Sea. It then became Russian before returning to Germany, where it was built, as a Russian Booty aircraft. It was broken in Germany and then repaired and sent to Denmark to be flown by the German forces there. British soldiers arrived in 1945 and took every glider they could find that had German registrations. Somehow they did not find the Mu 13D-2, which later flew Danish records.



Ulf Kern is pictured above during the 2009 VGC International Rally at Achmer after completing a seven-hour flight in the Hol's der Teufel primary replica in his bare feet. On 29 August, 2009, Ulf completed his Silver C on the Hol's der Teufel with a two-hour 101km flight from Perleberg (Jochen Ewald)





**FRANCE:** There has been a slow-up during the restoration of the Avia 152 nacelled primary at the Museum Regionale at Angers. This is due to its restoration team only able to work on it during one half-day a week. However, it is covered with fabric and might have already been flown by now. It was one of hundreds built in France and Algeria during 1941/42 and after the war.

**SLOVENIA:** There is a vintage glider movement in this country which has been flying, among other gliders, two Yugoslavian-built Weihe's.

**LITHUANIA:** Here, we have some very keen VGC members. They come regularly to our International Rallies bringing an Olympia 419, which presumably they obtained from Slovenia, and a Bergfalke.

**POLAND:** At last we can announce that the 1936 new Salamandra training glider at Jesow has flown. We hope that the second Salamandra replica at Gliwice will fly in the summer.

**CZECH REPUBLIC:** After the triumphant repair of their SG.38, which was badly broken at the Wasserkuppe two years ago, work on the "SDY VLK" (Grey Wolf) vintage two-seater replica has been resumed at RANA. We are glad to say that Jiri Lenik, who was badly hurt when the SG.38 crashed, has recovered and, having repaired the SG.38, is now working on the new "SDY VLK". About 24 of these small, light tandem two-seaters were built between 1934 and 1938. Three of them were fitted with "Walter Atom" auxiliary engines.

**USA:** The Slingsby Gull 1, built in New York just after the war, is now statically displayed in the National Soaring Museum on Harris Hill, New York State, after being beautifully restored. Gerry Wenger's new Rhoenbussard flew successfully during the International Vintage

Soaring Meet on Harris Hill last July. The event had less than perfect weather, but everyone had a good time.

**NEW ZEALAND:** The NZ vintage glider fleet has increased in size, largely owing to the efforts of Ian Funkley, who has imported a Skylark 3, a Weihe and now a Fauvel AV.22 flying wing. An MG 19A "Steinadler" has also arrived there, but this one was not imported by Ian.

**SPAIN:** A vintage glider group is now operating from Santo Tome, near the old site of Somo Sierna. It has a slope hundreds of kilometres long. The chief of this group is Carlos Bravo. Malcom Wilton-Jones now lives there and has his KA-2B with him. A VGC Rally was held there last summer in super weather. Taking part were: T-21b, T-31 and Kranich 2B-2 from the Netherlands. KA-2B from Britain, two Blaniks, one KA-3, one KA-6, one Bergfalke, one Libelle and a Tandem Falke from Spain.

Flights to over 10,000ft were achieved and 1,000s of km were flown. The best weather occurred between 3pm and 8pm in the evening. Neelco and Marja Osinga took part with their Spanish-built Kranich 2B-2 from Holland.

Seventy Kranich 2B-2s were built in Spain during the 1950s. Ten of these were sent to Argentina, but they all became damaged by salt water as they were stowed as deck cargo (some of these may have been made airworthy by Reimar Horten). All of the 70, except for two, were burnt. (Such is the dictatorship of state control.) The two survivors are Neelco's and that of the group in Bavaria at Donauwith Stilberghof.

On the way to the rally, the Osingas visited Huesca Monflorite, from where they obtained their Kranich 2B-2 many years ago. They received a tremendous welcome.

Above left: Merijke Waalkens' Doppelrab 5 from the Netherlands (Alexander Gilles/VGC News)  
Above right: Geoff Moore's Mu13d from the UK (Dr Gerd Hermjacob/VGC News)



Five T-21s attended the 2009 international rally (Alexander Gilles/VGC News)



Zbigniew Jezierski's Jaskolka from Poland (Dr Gerd Hermjacob/VGC News)



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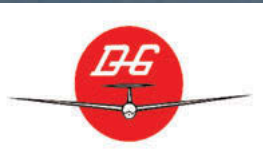
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\*Grip Control and Head Up Display are available as optional extras. †130 g/km CO<sub>2</sub> on the combined cycle is the official emissions figure for the 3008 with HDi 110 FAP engine and electronically-controlled manual transmission.



(All photos: [www.alshobbies.com](http://www.alshobbies.com))

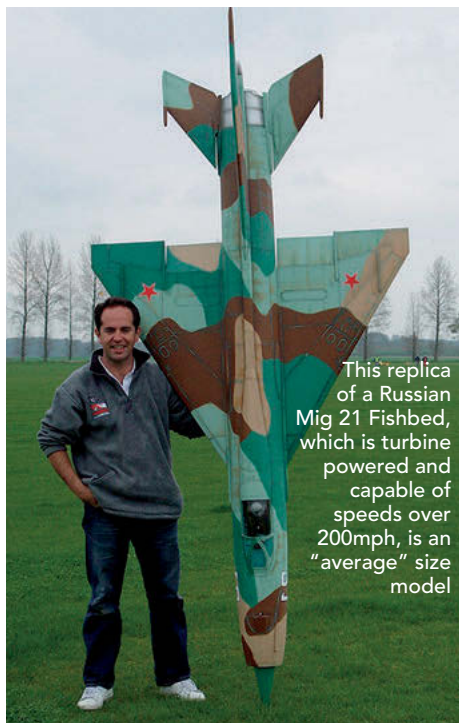


One of Al's new demo models is a 13.5m span ASW 22, thought to be the largest span radio control model aircraft in the world

(Above) Probably the largest and heaviest turbine powered radio control model in the world – with a 21ft span, the C-17 weighs in at over 300lb. Al is shown landing it at RAF Cosford. It now resides in South America, where Al heads twice a year to fly it for the new owner

# A MODEL

Years of flying model aircraft for a living paved the way for Al Machinchy's speedy progression as a novice coming into gliding



This replica of a Russian Mig 21 Fishbed, which is turbine powered and capable of speeds over 200mph, is an "average" size model

**I**T ALL started as one of those 'spare' days. Everything was in place at work, so I decided to award myself the day off. The only issue was what to do with it.

Not being a man of any hobbies (well other than the one that I have as my job – don't laugh, but I fly radio-controlled model aircraft for a living), the prospects were looking bleak. Another day in the workshop was about the best I had to look forward to. I decided that it might finally be time to try and scratch an itch that I have had for as long as I can remember – the itch that is gliding.

Coming from a form of aviation background I had the idea that if I were to fly in a glider, the last thing I wanted to do was get strapped into an old crate with the glide angle of a shed. Knowing at the same time that the chances of finding myself sat in a Duo Discus for my first flights were slim to zero, I spent an evening trawling through the internet for something in the middle.

I came across the Cambridge Gliding Centre website and was impressed with the layout and level of professionalism of the site, and even more impressed with the fleet of aircraft.

So, a quick call to Joanne at CGC to see if there was any chance of a trial flight that very same day (I have to admit to being a little pessimistic about being able to get a

flight at this short a notice). To my delight she pulled some strings and I was in.

On arrival at the club I was struck firstly by the vastness of the airfield. I don't know what I expected really, but it was never anything to the scale of Gransden Lodge. I was also really impressed with first impressions – not only of the club itself, but more importantly the people I met.

To cut a long story short, I was so happy with what I saw and a five-minute chat with Joanne at reception, I somehow found myself a fully paid-up member of Cambridge gliding club. The funny thing is I can still remember thinking to myself, "I wonder if I will ever make much use of this year-long membership"? As well as wondering, "what happens if I don't like this gliding malarkey?" Oh well! In for a penny...

I need not have worried. My first flight was with Robert Theil in one of the club's K-21s. Without my log book here I can't tell you exactly how long it was, but I seem to remember close to two hours. Plenty of lift and lots of smiles. Well that was me done. Hook, line and sinker!

From that very day, to this day still, I find myself planning the coming week, juggling appointments, travel plans, meetings and the like. All with the desperate hope that I can make that special





It's not only jets and gliders. This is a 1/3rd scale replica of a Douglas Skyraider powered by a five-cylinder 400cc radial four-stroke engine



Long before he took up gliding, Al built a near half-scale replica of a K-21 based at Dunstable. This model is now being refinished as a replica of KFY – the glider that Al went solo in at Gransden. Albeit powered by a turbine!

# STUDENT

free day in the week (weekends are my busy times as I am usually at an air show either in the UK or overseas), at the same time hoping the weather gods will align on that one special day.

My instructors Andy Beatty and Robert Theil have been superb. I do a lot of instructing in my line of work, and I know that just because somebody is a great pilot does not automatically qualify them to be anywhere near a decent instructor. These two have been spot on for me. Not too soft, not too harsh. Not letting me get away with too much, but never making me feel uncomfortable.

They and others at the club tell me that I have picked up the flying aspect really quickly. I am sure like many others, my solo could not come quick enough for me.

I guess I have been really fortunate. Everything seems to have fallen into place for me. I have picked a great time of year to fly, as the weather has been pretty conducive. Even the days where there has been no lift or high winds have been ideal, as these have fallen just at the time when I needed to do repetitive winch launches for cable break and circuit practices.

My instructors and club have been super flexible. On occasions, I have been driving past the club on the way home and popped in on the off chance of getting a flight, with not much hope as it's peak time and

the weather is booming.

Not once have I been turned away. Every time all those at the club have done what they can to get me airborne.

I did start to work out my flights to solo time and I think it was the 22 or 23 flight mark. Whatever number it worked out to does not really matter to me right now, as I can still feel the tingle of excitement on my forearm when I think about that first winch launch, that first downwind leg and landing. So many firsts in different gliders and different conditions.

The one thing that has remained the same through all of it is the amount I smile when anything gliding-related comes into my head.

I know that most of you reading this are fully aware of where I am at right now and what I am feeling.

Gliding really is the single most enjoyable experience/hobby that I have ever been involved with.

I have friends who fly PPL and with them and through work I have had the chance to fly in some pretty great aircraft, from Mustangs to L-39 jets.

But none of these have come close to rewarding me with that sheer exhilaration of being up at 4,000ft just below cloudbase over a beautiful sunny Cambridgeshire, banking all the way over to my right with only a buzzard for company.

■ My company, Al's Hobbies, is a chain of retail stores that specialises in selling radio-controlled and model aircraft, cars, boats and such.

My specialist area within the company is centred on the high end radio-controlled aircraft. By high end I mean the large (up to 300lb in weight), the fast (up to 300mph) and the collectable (one of the fleet recently sold to a collector for the price of a decent-spec new Porsche 911).

My job is to sell, build, prepare, test fly and deliver such toys to their new homes. This is often outside the UK and can see me away for up to 25 weekends in a year, either with clients or at demos or events around the world.

It does take a fair bit of explaining to convince people that there is such a market in these high-end elaborate toys, and even more so that a living can be made from playing with them. I guess what I am trying in a roundabout way to say is that I think my years of experience with flying model aircraft has helped me somewhat pick up the flying aspect of gliding quicker than some.

So for any of you looking for a means of keeping in some way aviation active over the winter, please feel free to have a look at my site, and if I can be of any help do email me and ask.

[www.alshobbies.com](http://www.alshobbies.com)



# REFLECTIONS

## BEEFLECTIONS

Many people followed John Williams' blog on the Scottish Gliding Centre's website when he shipped his beloved Antares off to Argentina for the season with Jean-Marie Clement ([www.topfly.aero](http://www.topfly.aero)). He came back with claims for a world record, a 1,500km FAI diploma and no less than 10 UK National records – not to mention an irresistible desire to return for more. S&G asked him for his immediate reflections for this issue



# ON PARADISE

**I**T'S HARD to comprehend what I'm doing here, or why I'm back in the UK in a cold and dark January. It's also hard to try to sum up what have been lifetime flying (and non-flying) experiences in mere words and pictures. To get a proper view you need to see Argentina for yourself – and it should be on every glider pilot's bucket list. But it's most definitely not to be done lightly.

In recent years, we've discovered that on rare special days in Scotland you can cover the length of the country four times and still have plenty of soarable daylight left. So to do longer flights you really need bigger geography and Argentina fits that bill perfectly. It's 35 times the area of Scotland, the long chain of the Andes lies right across the usual run of the jet-stream and it's closer to Europe than New Zealand. So why don't more pilots go? Well there are reasons.

- Just getting a visiting glider into the country is an extraordinary achievement. The bureaucratic obstacles at customs are simply incomprehensible and, at every stage, one has the feeling that one whimsical stroke of an official's pen could simply stop the whole expensive expedition stone dead. It took four days of determined effort to get our container through this "process"; another European shipment just after ours took three weeks!
- With the recent transition from military to civil control of aviation, there are many uncertainties as to how recreational flying will be affected. If you put a blanket restriction on flying above FL195 when a significant portion of your country lies above FL200 there are bound to be consequences for pilots!
- Flying solo in often difficult wave, for prolonged periods at cold high altitudes over unfamiliar terrain, permanently in controlled airspace in a language you struggle with and where land-able options may be 200km apart is challenging stuff.

If it weren't for the extraordinary potential of the place the hassle just wouldn't be worth it; but one good flight in the lee of the Andes climbing at 8+kts while running at 140kts, or viewing volcanoes in 200km visibility helps you instantly forget all the problems. Where else can you wait out a rainy morning and then

say, in all seriousness, "let's have lunch, then we can have a crack at the world 1,000km out-and-return record later in the afternoon"? And then there's just being in Argentina in what would be the short, dark days of a northern winter. Scenery that makes you pinch yourself each morning, barbecued fillet steaks you can cut with a fork (and for £8, big enough to feed a family), wonderful malbec, wildflowers, ibises on the lawn, condors on the ridges and local people who go miles out of their way just to be helpful and friendly.

There are many apparent paradoxes in Patagonia – each one logical when you analyse it, but the combined effect is to make you question all your assumptions in an unsettling sort of way.

- The Andean rain shadow is extraordinary. When it's bucketing down in Bariloche it can be bone dry with big lenticulars at the airfield just a few miles away. Despite 30kt winds the rain that's always just about to wipe out the airfield never actually reaches it.
- Of course the sun travels north-about, it just takes time for a northerner to get used to.
- The familiar sight of Orion in the evening sky is comforting, until you notice that his sword is pointing *upwards*.
- Skies that look like decent thermal cumulus with no discernible patterns turn out to be huge wave days – but only after you're above cloud.
- In an unstable air-mass, the sudden disappearance of crosswind clouds can turn out to be helpful. The cork-screwing streets that take their place foretell the entire system starting to go up in a single (pseudo hydraulic) jump tens of kilometres downwind. Lots to learn and marvel at here.
- Once you've tried it, you can start to trust that all that sink downwind of a big conical volcano will recombine in a super convergence you can just park in and (thankfully) climb in at 10kts.
- Recording pulse oximeters can generate fascinating data: what your pulse does as you get high and oxygen saturation drops, what it does when you get low and too near the terrain, how the use of freezer bags can affect breathing. There will be articles on this in the gliding press in future and much to learn. Some wags have ↗





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Pictured clockwise from top left: a great wave bar; Antares wing and Lanin Volcano – super ellipse against super cone; dream numbers on the panel during 1,550km out-and-return; Tronador Volcano – those glacial cliffs are 70 metres high

Main pic on centre spread: Lago Gutierrez – just one of the beautiful local lakes

ALL PHOTOS BY JOHN WILLIAMS

✎ also proposed their domestic use to detect relative pulse rates and breathlessness in other activities...

● Don't celebrate straight after you land knowing you've just beaten a world record. Wait a few hours. There may have been a towel on your deckchair and another Patagonian pilot may have raised the bar even further that same day. It's that sort of place.

● When you reach a truly great climb you need to ask yourself one relevant question. How fast do I have to fly to ensure that I don't bust airspace limits before I reach the end of it? If that speed is too near VNE can I get a higher clearance in time or alternatively can I reach poorer air in time?

● It doesn't matter how good the sky looks – when your logger shows that there's 775km to run to get home from the first turning point, it needs a conscious effort to relax and just fly.

It undoubtedly was the trip of a lifetime. Completing a declared 1,550km out-and-return on St Andrew's day on the first sortie to the deep south was wonderful. Even better was learning that the speed was enough to be a new world record; that implies that

if you can fly fast in Scottish wave the same techniques will give good results in much bigger playgrounds. Having Klaus Ohlmann retake the record (all are subject to ratification) was less concerning – it's just nice to feel that on the right day and with a brilliant glider you can compete at this level.

And on the final day in Argentina, an attempted 1,000km out-and-return to the north felt pretty good. A slow start was followed by a great run before losing 9,000ft at the turnpoint left me with the 15,000ft asl Domuyo volcano blocking my route home. "Wasting" half an hour there to climb over a coll still left the overall task speed at 198kph, five hours and four minutes for the 1,006km task. Hourly distances down task make interesting reading, they are (in km) 171, 275, 97, 269 and 191.

The "what ifs" are irresistible and even without them I'd be claiming a bunch of National records – if only it weren't for the fact that I somehow missed the proper start sector by 480 metres... Oh well I'll just have to go back in 2010.

■ Read John's blog at <http://scottishglidingcentre.com/blog/>



John Williams was a keen sailor until "forced" to take up gliding in 1993 when his job moved him to London. After early years at Dunstable he moved to Scotland and became intrigued by wave opportunities from Portmoak. He is one of a small group of Scottish-based pilots who continue to explore the boundaries of "what might still be possible but hasn't been done yet". He has an Antares, 2,000+hrs, a BI rating and a 1,000km diploma, as well as a very understanding partner, Wendy. "What more could anyone want?"

# THE APPROACH

BGA National Coach Mike Fox talks us in for a safe landing with an article that's of benefit to the experienced pilot as well as the novice



**G**ETTING the approach and landing right can bring a satisfying end to a flight, but all too often it becomes simply a means of getting the aircraft back on the ground. I still find a nice approach and landing, executed safely, stopping exactly where I want to roll to a halt without using too much wheel brake is a most enjoyable experience. I find it enjoyable because doing it well is HARD!

What I would love every pilot that reads this article to do after their next flight is ask themselves four questions:

- Did I land in the intended place?
- How much airbrake did I use; was the approach too shallow or too steep for comfort?
- Did I get a bit close to obstacles on the ground?
- Did I retain appropriate speed until the roundout?

## Reference point

There are many books that explain the reference point (RP) and its use. Let's think a little here about how to position it safely. Position your RP such that a slight over/undershoot ends more in self-rebuke than a prang. There are lots of incidents where wet grass or slightly less wind than a pilot thought meant the pilot runs into something.

If you wish to stop opposite your trailer, organise your RP so that you will simply roll past it if you overshoot a bit.

Likewise – don't organise the approach too close to obstacles. It's difficult to judge lateral distances, and what's to stop someone driving or walking into your path after being hidden

from view by a bus/trailer?

Work out where you want the glider to stop and, from that point, work out where to put the RP.

Using your experience of the glider and how conditions affect its approach and landing performance (field gradient, wind strength/direction; groundspeed, airbrake

effectiveness, wheel brake/skid, surface), judge:

- How far the glider will roll once on the ground
- How far will the glider fly in the flare.

The RP technique only works when the speed and attitude of the glider are stable. If you wish to accelerate by lowering the nose for example, the reference point will move up the canopy while the nose is going down. This does not necessarily mean that you are undershooting. Wait for the speed and attitude to stabilise before checking the movement of the RP. Note it is the movement of the RP – not the position – that we are interested in.

## Speed control

Instructors are always talking about approach speed control, but why? Speed is a measure of energy – kinetic energy to give it a name. In fact this energy is taken as the square of the speed so if you double the speed, you quadruple the energy the object has. That's why a few extra knots make a big difference to how far the glider floats during the flare. If the speed is low, the major problem is that we may approach the stall at some point during the approach. Even getting near the stall is bad, because once we get close, the induced drag increases massively, which slows us down more, and increases the drag... You get the picture.

So how should we select what speed to approach at? There are so many different aircraft types, airfields and conditions that it is impossible to set a rule. Appropriate approach speeds are usually worked out by experience and reference to the aircraft flight manual.

Beware though – the flight manual may well list the minimum flare speed; experience suggests that this is often too low for anything but totally benign conditions and leaves no energy in reserve. The best course of action is to have a chat with an experienced instructor.

It is almost impossible to retain a totally accurate airspeed on a bumpy day – you need to give yourself a margin – but there needs to be a rock bottom limit that the speed will never be allowed to reduce below. So you could say when you are criticising your own

**APPROACH CONTROL IS COMPLICATED TO GET RIGHT AND REQUIRES PILOT SELF-CRITICISM AND PRACTICE!**



approaches that “It’s a bit windy, so I’ll use a target speed of 60 knots, 55 is the absolute minimum and 65 is getting a little fast”.

### **Airbrake setting**

Your instructor encourages the use of half to two-thirds airbrake during the approach. It’s important to realise that this is an aim; not a requirement. If you find that the wind gradient is stronger in the last 100 feet than you thought, or you encounter sink on the approach, then you must reduce the airbrake setting or, if in doubt, close them as appropriate.

Don’t forget the fundamentals – we do not have an engine, so we only get one chance. The worst outcome is to sink through the hedge or trees or whatever is on your threshold at stalling speed.

If you find that on every approach you have very little airbrake showing; especially at the end of the approach, then you are using the wrong technique. It is wrong because you have very little spare energy in hand to deal with sink or other energy-robbing atmospheric effects; think about how long you are close to the ground during a shallow approach vs a steep one. Of course, if you habitually end up with full or nearly full airbrake on every approach, you may one day find yourself rolling into the hedge during a field landing. It’s this balance we must practice.

We are taught to use the airbrakes to control the angle of descent and the elevator to control airspeed. However, if the speed is dangerously slow anywhere near the ground, you must reduce the airbrake setting or close them fully to allow the glider to accelerate more easily. You must be careful not to use this ‘technique’ on every approach. If you are, you are doing something wrong earlier in the approach.

If you do find yourself in the flare with small amounts of airbrake, the risk of a Pilot Induced Oscillation in pitch is high. Round out and hold off as normal (it’ll take a long time) and once the glider is on the ground, get the brakes out to stop it taking off again. If you are performing a field landing and the upwind hedge is looming up, you have no choice but to open the airbrakes in the flare. You must do this gently though, or you will find yourself landing heavily.

### **An example approach**

So let’s go through a challenging approach and work out what we are doing in the various phases.

It’s bumpy and windy but safe, so we choose 60 knots for the approach with a minimum of 55. We fly a circuit, making sure we judge the final turn appropriately for the wind. We have a good look out before we turn final while identifying our reference point. We check the speed – down to 57 – lower the nose to get it back to 60. Speed and attitude are constant – what’s happening to the reference point? Good – it’s moving slowly down the canopy, so we are going to overshoot with no airbrake (if it was stationary, or especially if it was moving up, we need to check out the options for landing in the undershoot field; we got our circuit planning very wrong).

We then judge when to open plenty of airbrake... Just another second or two... Now! We open two-thirds airbrake, while lowering the nose to compensate for the extra drag. Good – the airspeed and pitch have stabilised so we can check the movement of the RP. Bother – it’s moving up the canopy, so we are undershooting. We reduce the airbrake setting and raise the nose a little to maintain speed. What’s the RP doing now? It’s moving up very slowly, so we reduce the airbrake a little more while maintaining speed, and we check to see how much airbrake we have extended – hardly any, so this will lead to a shallow approach in a strong wind – not what we want!

We have misjudged the initial bit of this approach today, so shut the brakes completely and reassess when to open the brakes again for a steeper approach nearer the ground. Ahh, that’s better – speed still good. We are down to roundout height now, so take our eyes off the RP and speed; concentrate on the roundout and flare.

So what have we learnt on this approach?

- That we misjudged when to open the airbrakes initially
- That we retained and monitored the airspeed safely
- That we corrected the initial misjudgement and performed a steeper approach near the ground
- That next time in this glider and these conditions, we need to wait a little longer before opening the brakes
- That approach control is complicated to get right and requires pilot self-criticism and practice!

■ A quarter of all the gliders broken in the UK have their accidents while trying to land back at the home airfield! These accidents do not cause many injuries, but they do break loads of aircraft. What’s the root cause? Well, we don’t have engines and pilots are not keeping enough energy in reserve to use if some outside influence grabs some of it. All too often the accident report blames wind shear, wind gradient or a gust of wind. These meteorological tests are sent to try us glider pilots. I believe that it is possible to survive all but the most severe problems by managing the approach appropriately. In addition, pilots are landing too close to objects and hitting them.



Getting the approach and landing right can bring a satisfying end to a flight (Neil Frost)



Mike Fox is the BGA National Coach. He flies an LS4 from Pocklington

# ZEN



## AND THE ART OF CROSS-COUNTRY GLIDING

Iain Baker looks at how to improve cross-country skills by achieving the right combination of physical, mental and emotional conditions

### THE FIVE S's

- Seiri** – Organisation (Sort out)
- Seiton** – Neatness (Systemise)
- Suso** – Cleaning (Scrub)
- Seiketsu** – Standardisation
- Shitsuke** – Discipline (Self-discipline)

**THERE IS A DOUBLE MEANING OF ZEN AND KAIZEN AND THE CONCEPTS BEHIND THESE WORDS CHARACTERISE MY APPROACH TOWARDS GLIDING – AND MUCH ELSE**

**A**LMOST without exception, the first question I'm asked about my glider is, "What does the writing on the fin mean?". In fact it's the same as the registration, ZEN, just written in a Japanese semi-cursive script. But very few people really probe about why I chose D-KZEN as the registration.

All German motorgliders' registrations are D-Kxxx and, as D-KOOL had already been taken by the Dunstable-based EB28, I chose D-KZEN. Aside from a mischievous desire to be quirky, there are genuine good reasons for the choice. There is a double meaning of Zen and Kaizen and the concepts behind these words characterise my approach towards gliding – and much else. It was during the last Soaring Safaris season in South Africa that these unconsciously held concepts crystallised and could be more clearly expressed.

### Kaizen and lean thinking

Kaizen is often loosely translated as continuous improvement based on knowledge and is part of lean thinking. The pioneer of lean thinking was the Toyota Production System and nowadays it is seen in many guises, including Value Based Management and Six Sigma.

One of the commonly-utilised tools in lean thinking is to break down processes into a value stream map, essentially a highly detailed activity flow. Such maps enable clearer identification of over-complex and iterative activities and help with the application of the

five S's (see panel below left).

The point is that if processes are well organised and standardised then they fall into a predictable routine, with no disruption and higher efficiency.

OK, but what is the relevance in terms of gliding? Well in the simplest form, having a set sequence for rigging gives less opportunity to make any errors, such as not fitting the total energy tube or filling wing tanks before the tail tank. And if the sequence is properly ordered, then it should take less time. It possibly seems rather anal, but fast, efficient rigging means less rushing around getting to the launch grid and leaves more physical energy for flying.

In the air, flying the five S's means flying crisply, decisively and automatically. It means having the instrumentation set up properly and understanding how to use it. It means having prepared the glider, studied the weather, sorted out the trailer (and organised a crew), and thought through the task. All this frees up mental capacity for decision-making in the air. Get rid of all the polluting distracting thoughts floating around your brain and focus on the critical matters.

### Eliminate waste

Another lean tool is waste analysis. In every process there are essential value-adding tasks, essential non-value-adding tasks, and wasteful tasks. Often the maximum efficiency improvements come, not from doing the essential tasks faster, but from eliminating the wasteful tasks.

In an industrial environment there are the classic seven wastes: motion/movement, inventory, over-production, over-processing,



waiting time, rework, and transportation.

I've sometimes labelled wasteful gliding behaviour as the twin cardinal sins of turning in sink or flying slowly in sink. Add to these: not centring quickly in a thermal; not staying centred; eking out the last bit of height out of a thermal even though the climb rate has died off; exiting thermals in the wrong direction or at a slow speed.

I aim to eradicate such bad decisions, and make post-flight analysis using SeeYou to identify my lapses.

### **Increasing cross-country speed**

The easiest (and classic) way to increase cross-country speed is to improve the average climb rate. Cut out the wasteful behaviour and it should happen.

The more advanced second means of boosting speeds is to optimise routing during the cruise, finding and creating lines of energy so that less circling and climbing time is required. This requires mental capacity – so applying a disciplined approach to gliding will greatly help.

### **Talent vs skill**

When first learning to fly, some pilots find they have a natural talent, but the vast majority of us have to learn and develop the hand-eye coordination skills. After a few flights though, the proficiency of the mechanics of flying become secondary to the ability to absorb information and make judgement decisions.

Early on we learn to look at the windsock before making a circuit, to assess the wind strength and direction and decide what direction to land, and decide on an appropriate approach speed.

When soaring, we learn to judge the location of the thermal core under a cloud, and to adjust the circle centre to maximise climb rate. And once flying cross-country, we learn to look at the clouds, to judge where the lift is likely to be strongest and route accordingly.

Talent becomes subsidiary to learnt skills combined with experience.

### **Mental capacity and enlightened performance**

In cross-country gliding, decision-making is critical. It takes considerable mental capacity to absorb and analyse all the available information, to compare against the databank of experience, and then to make appropriate decisions.

Creating the necessary mental capacity,

particularly at times of high workload, requires being in an appropriate mental state. This is where the sports psychology and the state of Zen kicks in.

And beyond creating mental capacity, beyond relying on mere talent, skill and experience, the right combination of physical, mental and emotional conditions can generate enhanced performance levels.

Just occasionally I have reached this airborne enlightenment (or Ideal Performance State as Jim Loehr calls it), where my flying seemed faultless. It's hard to describe if you haven't experienced such a condition, but everything seems to click – just knowing there will be 10kts under that cloud, just knowing it will be working better in the blue – it's like the flight is scripted and the pilot is merely an observer, watching the events unfold.

The Ideal Performance State is typified by feelings of confidence and calm, while being focused, challenged and ready for fun and enjoyment. It is impossible to reach this state if there are feelings of fatigue, insecurity, fear, confusion or anger.

Physical, mental and emotional well-being cannot be isolated as they are interlinked. Being physically tired or hungry or dehydrated means being mentally stressed and emotionally low. And being emotionally overstretched tends to sap energy and lead to lethargy.

### **Enlightenment training**

Sometimes the state is reached through the right combination of circumstances, but Jim Loehr asserts that top sportsmen reach and sustain the enhanced state through training.

Training should include cycles of stress and recovery, sometimes termed wave theory. Without stress, then there is no development. Without recovery, then there is breakdown. Sustained low level stress is neither stretching nor recovery.

The appropriate level of stress while practising is to go beyond the comfort zone but not beyond the (mental) pain barrier.

As pilots we are used to training, but usually limited to the mental skills like effective thermalling. Many or most pilots (me included) avoid physical training and overlook emotional training.

It is the combination of physical, mental and emotional conditions that enable higher levels of performance, and as the

**EVERYTHING SEEMS TO CLICK – JUST KNOWING THERE WILL BE 10KTS UNDER THAT CLOUD, JUST KNOWING IT WILL BE WORKING BETTER IN THE BLUE – IT'S LIKE THE FLIGHT IS SCRIPTED AND THE PILOT IS MERELY AN OBSERVER, WATCHING THE EVENTS UNFOLD**



### **ZEN - REACHING ENLIGHTENED PERFORMANCE**

Zen is about achieving the right mental and emotional attitudes to make the most from my gliding – and much else in my daily life. For me, the concept of Zen is not mainstream Buddhist philosophy but more an enhanced form of sports psychology. My reference is by James E. Loehr<sup>1</sup> as suggested by Dick Moffat many years ago in *S&G*. I recommend his book to anyone, straightforward to understand and grounded in real experience from training top sportsmen like Chris Evert and Dan Jansen.

✎ three are interlinked, then all three have to be considered during training.

### Imaging and acting

One technique of emotional management is to have a performer self and a real self. The performer self is acted out, believing or even becoming the role upon demand. Self-doubt doesn't exist in the performer self, only self-awareness. Resorting to the performer self when poised on the edge of success can be a very effective mental block to choking or bottling.

But the real self cannot be subjugated; it must be broadly aligned with the performer self as the performer self cannot exist in isolation or be sustained for ever. This may sound schizophrenic, but the art is in developing and using the performer self to improve the real self.

I suspect that very few people have the same self-perception as friends and peers. Internal self-doubt and indecisiveness are not visible. Sometimes it is better to live up to perceived image, to adopt it as part of the performer self. More directed training includes imaging (projecting desired emotional and mental states) and emotional response practice (constructive positive reaction to challenging circumstances).

### Reaching enlightenment

So how to reach this enlightened state? I can only say what works for me.

On the ground I feel stressed and unfocused if I'm not well organised, hence that application of the five S's. By making lists of things to do, I can prioritise and temporarily discard the low priority or irrelevant. This can appear to be very clinical but organisation makes me feel in control, and so helps me be calm and relaxed.

If there is an issue causing distraction, frustration or anger, I either forcibly consign

it as low priority (provided it does not need to be dealt with immediately), or I have to address it. An issue can cause a disproportionate level of frustration if it is the final burden on top of accumulated problems. Problems need to be confronted until they are at manageable levels.

In the air I make a distinction between problems and mistakes. Everyone makes mistakes; the real difference is how we respond to them. In the air, I feel very relaxed about mistakes, to the point of laughing at myself for making them.

OK, I don't want to make the same mistake twice, so the key is learning from errors, not berating myself. After all, history cannot be re-written or a mistake undone. But learn from history, and don't repeat errors.

At a low point how do you react? Negatively, with frustration and impatience? Or positively, with amusement and learning? Don't dwell on the past; focus on the future.

Problems are conundrums to be addressed and solved. For example, if the thermals seem to have deteriorated – and I'm confident it's not just my thermalling skill – then why? Has the airmass changed? Is there wave interference? There is a genuine enjoyment in solving the puzzles. I consider them as abstract external issues.

Talent and skill are no real substitute for experience<sup>2</sup> so I try and fly whenever it is useful – but not flying for mere hours building. Flying in tricky weather is an investment for those difficult periods found in all long flights. Flying in easy conditions is ideal for trying to boost cross-country speeds.

To paraphrase Jack Nicklaus, "I'm lucky and the more I practise, the luckier I get".

<sup>1</sup> *The New Toughness Training for Sports* by James E. Loehr, ISBN 0-451-26998-9

<sup>2</sup> Chris Rollings: *The first 10,000 thermals are the hardest*

### MOTIVATION

In my view, understanding the motivation for flying is important, then it is possible to maximise the enjoyment in flying. It should be obvious, but if I'm enjoying a flight, then I fly better. Motivations vary enormously so it's vital to be self-aware. Ultimately you are the pilot, and you have to be self-reliant and able to make your own decisions. Know thyself, fly your own flight, live your own life.



Iain Baker started gliding with Cambridge GC in 1982, accumulating 2,000 hours, plus the requisite set of badges. He is now a gliding nomad, flitting between South Africa, UK, France, Germany and Spain. He struggles to balance working for Soaring Safaris, flying his Antares, and consultancy demands for his aerospace expertise (but expects and receives no sympathy for his predicament)

# 75

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Christopher Claxton  
rediscovers the  
delights of gliding  
with his new toy,  
a Discus Turbo



Photo by Adrian Hobbs

# SPOI

**I**T IS not often that we men-folk can enjoy a second childhood. “So you have a new toy,” e-mailed receptionist Amanda from Dunstable’s London Gliding Club. “You do not hang about do you?”

It was true. I had taken up gliding in my early 40s, trained at Booker, flown rugged Astirs, a magnificent DG-300, a veteran Vega; and I had flown at Aboyne, Chambery in the Alps and from Fuentilmanos near Segovia. I had on business travelled round the world nine times, worked in 43 countries, set up businesses in 107, launched and general managed a global newspaper, the *International Express*. I had also written seven books; but now I returned to gliding.

At the Long Mynd, the Midland Gliding Club shows off its expertise along that enticing ridge. There after a 16-year lay-off I was enticed, but did not fly.

“Come on, the girls are waiting and getting cold,” demanded a former colleague, Major Simon Rudd-Clarke, who lives at Church Stretton below and so we did not fly that day, but trudged on foot off up an adjacent ridge.

## **Brideshead revisited**

But Lasham was kind. Two days of flying reminded me about coordinated turns, aerotows, landing techniques, and the entirely new experience (for me) of winch launching, there having been none at Booker, nor at Aboyne, nor in Spain. A few flights and the drug was back, pure adrenaline flowing once more through my arteries and veins. I am sure that is what it is; we are adrenaline junkies.

Instructors are tough types. Like sergeant-majors who bark to inform that you have idle boots, sloppy drill, they are quick to criticise, slow to praise. I was apparently doing everything wrong. Don’t do this, don’t do that, do the other, and then a withering, “well it has been 16 years”.

G Dale of Lasham and New Zealand fame had this to say: “This retreat (he unkindly noted) needs extensive retraining!”. But my Silver C stood me in good stead, once I had found the certificate, although the log book had gone the way of all flesh.



# LT VETERAN

## Discus Turbo

Then I made another mistake. Memories of that glorious DG-300 had me turning to McLean Aviation at Rufforth. Yes, a new DG-808 would be available but with all the gear, a Solo turbo get-me-home engine, a nice box, instruments, wingtips and electronics, £136,000 would be about the order of magnitude. What about a share in a DG-1001? That was a possibility, but as quickly as it was offered on gliderpilot.net it was gone to another suitor.

Which sequence of events led me to Bidford. There in a nice Cobra box was a splendid Discus Turbo, its lacquered coat gleaming in polish and, although first flying in early 1993, still looking like new.

Frank Jaynes, former CFI at Bidford, was selling it on behalf of the estate of its late owner, Dr Andrew Cox of that gliding club. CJCX's bright Solo engine looked in splendid condition, and a former owner Robert (Bob) Starmer assured me that it did all that it promised. Like a good woman, it seduced me.

The deal was done, there and then. Glad to get the prospective buyer off the premises, Bob even offered to drive it down to Dunstable.

## Dunstable

Now Dunstable is another seductive place. Lasham glories in flat lands but the opposite is true just up the MI and close below the Dunstable Downs. The renowned gliding site below its useful ridge was established in the 1930s, when the best launch was a catapult off the ridge. It has a natural charm and beauty all of its own, one which is distinct from many a windswept former bomber base like Bassingbourn.

Yorkshire's Sutton Bank has its enormous charms, but it is at the top of a ridge. Booker has its unique swarm of helicopters to orchestrate a Mahler-like symphony of noisy mosquitoes. Each site has its favourites, benefits and disadvantages. And although Dunstable is about as level as a badly chosen landing out, its peace and quiet seduced me.

I joined within minutes of arriving. The friendly welcome and accessibility were the keys, only 38 miles from the centre of

London's St Pauls, where I now lived with my lovely lady. She was in favour too, anything to get me "out of the house" in favour of peace and quiet.

So even before Dunstable's CFI Andrew Roch had time to disapprove (as he was on holiday) CJCX in its Cobra box came rolling on to the site. "You should have asked the CFI's permission," volunteered one local expert. And he was of course right, another bloomer, but Andrew was forgiving.

"We will have to get you up to speed." So that too was arranged.

## CJCX

Flying at Dunstable is fun. The vagaries of flyable boundaries, of nearby Luton airport, curlover from the ridge in easterlies, and an airfield so undulating that it would be well suited to hold the British Open Golf Championship, made for yet more interest. I was getting my flying feet back. The CFI was quite unlike the sergeant-major types that I had hitherto met.

Meantime the bird was in its box. The red buttons need touching up bright red. The green trim knob needed a touch of bright green from Halfords. A new PDA Compaq 3970 from eBay arrived, only to die within three hours of being fired up. A replacement 3950 was on order; Dickie Feakes at Bicester provided the Registration Key for the SeeYou Mobile moving map.

"You have a well kitted-out machine there," offered Mark Burton, scion of Montague Burton, the renowned outfitters. All that waited was the magic launch.

This veteran of a thousand commercial battles where the competition is dangerous but your colleagues are deadly; of the cloud closing under you at high altitude above the Scottish Grampian Mountains; of cloudless blue days over Segovia where you blunder around hoping to bump into the next invisible thermal; of six books and the title of the third, *Do It or Die!* changed by unhelpful colleagues to *Do It and Die!*; I was awaiting the big day.

My seventh book is entitled *The Truth At Last*. Spoilt veteran indeed; yes, most certainly, me and my new toy.



Christopher Claxton took up flying in his 40s in 1984. He trained with Brian Spreckley and Graham MacAndrew at Booker on K-13s; went on to K-8s, K-21s, Pegasuses to Silver C, then a DG-300 Elan with Colin Jackson and Phil Jarvis now at Lasham, and a Vega. He flew at Aboyne, at Fuentimilanos in Spain with the late world champion Helmut Reichmann, and at Chambery. In 1993 following a disastrous divorce he gave up flying he thought for ever, but restarted this July first at Lasham then at Dunstable. There after intensive retraining he regained his wings.

**A FEW FLIGHTS AND THE DRUG WAS BACK, PURE ADRENALINE FLOWING ONCE MORE THROUGH MY ARTERIES AND VEINS. I AM SURE THAT IS WHAT IT IS; WE ARE ADRENALINE JUNKIES**



Figure 1. Underside of a glider cockpit following a crash, revealing the close proximity of the seat pan to the outer skin of the glider and therefore the limited seat structure available to help absorb energy

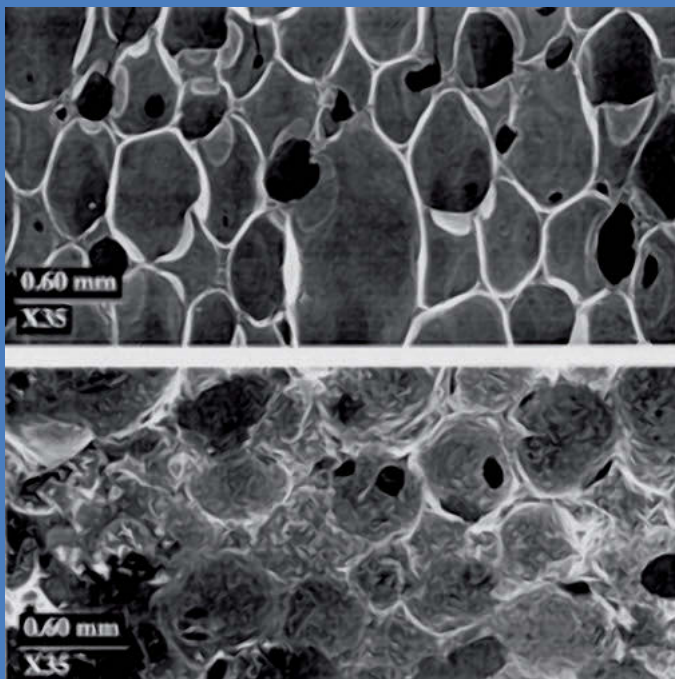


Figure 2. Scanning electron microscope photograph of a particular viscoelastic foam showing the holes in the faces of the cells. The "rise direction" is the direction in which the foam rose during the manufacturing process. The upper picture is a view perpendicular to the foam rise direction and the lower picture a view looking in the rise direction  
(Photograph courtesy of *Cellular Polymers*, 18(2), 1999, 117-136  
Davies, O. L. and Mills, N. J. *The Rate Dependence of Confor Polyurethane Foams*)

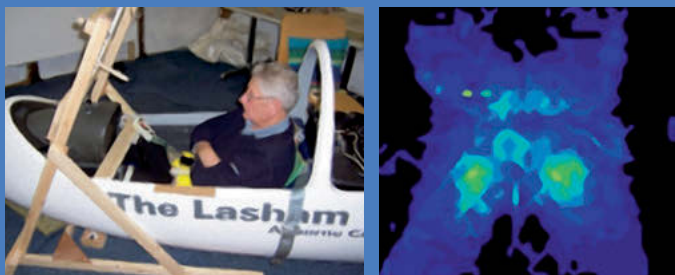


Figure 3. The left picture shows a pilot sitting on a safety cushion in the Lasham simulator equipped with pressure-mapping equipment. The right picture shows a visual-snapshot example of the output. The bright green areas shown are the highest pressures created on the buttocks

# SAFETY

Energy-absorbing cushions can reduce the load on your spine in a crash or accidental wheel-up landing. Dr Colin Jackson reveals that research shows a new material, Confor, is a comfortable option

**T**HE BGA Safety Committee recommends the use of cushions that contain energy-absorbing materials. Dynafoam has traditionally been used for this purpose in the UK. This article gives a brief account of the scientific research showing that a new material, "Confor C45/C47", is also suitable for this purpose and provides additional advantages.

Cushions designed to absorb energy and minimise deceleration in a vertical crash have been used for many years in military and commercial aircraft and also in gliders. A safety cushion is particularly important in gliders because there is very little "seat-structure" available to help absorb energy (see Figure 1).

Pilots using cushions to make themselves comfortable in flight must ensure that they do not significantly increase the risk of spinal injury. Conversely, pilots using cushions to reduce the risk of spinal injury need to be sure that they do not introduce significant discomfort – or they will then remove them and/or introduce other comfort measures that could well be inherently unsafe. Thus comfort and safety are closely interlinked.

It has long been noted that the discomfort of glider cockpits has led to many pilots feeling distracted at the end of long flights, in some cases compromising their safety, and has acted as an inhibitor to the undertaking or continuation of long flights (see *An informal survey of flying comfort of glider pilots: some observations concerning pilot discomfort generated by glider cockpits* by Emck AJ and Jackson C, published in *Technical Soaring* 2009; 33(1):28-35).

In their quest for comfort, some pilots have installed devices such as inflatable cushions, soft furniture foam and even polystyrene, builders' foam. These are all dangerous. In simple terms this is because, at first, they decouple the body from the impact deceleration: the aircraft structure effectively rebounds whilst the body continues on to meet with the arrested or upcoming structure creating an even higher level of deceleration.

Secondly, elastic materials can project the body back upwards as they release their temporarily-stored impact energy. At the end of the bounce, the descending body will again meet the rebounding aircraft structure, potentially generating significantly higher levels of deceleration. It can thus be seen that the absorption of energy to eliminate bouncing plus the close coupling of the body to the seat



# Y CUSHIONS FLY LONGER, BE SAFER...

and associated structure are very important.

Some modern, open-cell, polyurethane foam materials are viscoelastic and are particularly good at absorbing energy. Very small holes link adjacent bubbles in the foam – hence the description open-cell (see Figure 2).

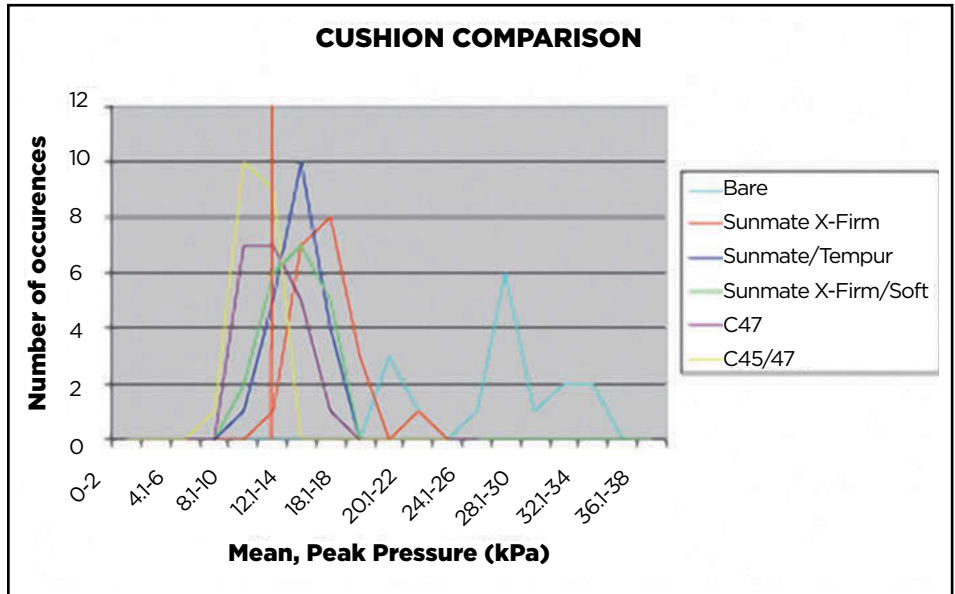
These foams' properties are said to be rate-dependent. In other words the measured, mechanical properties vary, depending on the rate at which a load is applied. If an attempt is made to compress them rapidly, the foams appear to be almost rigid. This viscous effect means that after impacting such a foam, all the energy is not returned as it would be in a simply elastic material. In fact, in modern, viscoelastic foams, 90 per cent or more of energy can be absorbed – providing that there is a sufficient thickness of foam in relation to the impact energy imparted. At this level, even small percentage improvements in energy absorption significantly reduce pilot-bouncing deceleration problems.

It used to be thought that when such foams are compressed slowly, the air has time to escape and the foams feel relatively soft. It is now known that, for some open-celled foams, it is not the escaping-air mechanism that produces the rate dependence, it is principally the polymer substances' inherent, mechanical characteristics.

In the *UK Laws and Rules*, Recommended Practice 38 states that, "It is recommended that all gliders, whether club or privately owned, should be equipped by the owners/operators with cushions containing energy absorbent materials". Thus the BGA specifically draws pilots' attention to the desirability of using safety cushions.

Where such cushions are used in the UK, they are almost always made up of a product called Dynafoam (this is the UK brand name for an American product called Sunmate). The standard grade of Dynafoam used is called Extra-Firm (Sunmate X-Firm). However, many pilots find that it is hard to sit on and it becomes uncomfortable after about an hour.

What is perceived to be comfortable by one person may well be perceived to be uncomfortable by another. Simple subjective



comparisons are therefore valueless.

My colleagues (Adrian Emck, Dr Mike Hunston, Phil Jarvis, Dr Tony Firmin) and I developed a technique for measuring comfort that did not require any individual to supply a subjective opinion on the comfort of a safety cushion.

Our approach was as follows. We identified a quantifiable parameter related to human physiology that determined whether or not a cushion was comfortable. This turned out to be the time-averaged, localised peak pressure ("mean peak pressure") generated by a cushion and inflicted on the buttocks.

We determined the critical value of this pressure below which capillary blood-flow in the buttocks would be maintained and therefore discomfort avoided. We then measured this parameter for several cushions made up of different, energy-absorbing foams to find the value of this parameter that was generated for each of a number of pilots, representative of the UK gliding population.

The experiments involved large numbers of pilots – to whom we would like to repeat our most sincere thanks – sitting in the Lasham simulator, some for long periods.

The pressure on their buttocks was measured by sophisticated pressure-mapping sensors (see Figure 3), and the results

Figure 4. Frequency distribution of mean peak pressures achieved by the different energy-absorbing foam combinations tested. A vertical line indicates the critical mean peak buttock pressure. Although this graph is a histogram, for clarity the midpoints of the histogram bars have been joined by straight lines for each foam. The foams tested were 1. Sunmate X-Firm; 2. A layer of Sunmate Soft on top of Sunmate X-Firm; 3. A layer of Tempur Firm (T85-18) on top of Sunmate X-Firm; 4. Confor C47; 5. A layer of Confor C45 on top of C47; and 6. The bare seat without any foam. All underlying foams were nominally 1 inch thick and the overlaying foams 0.5 inch

**WE IDENTIFIED A QUANTIFIABLE PARAMETER RELATED TO HUMAN PHYSIOLOGY THAT DETERMINED WHETHER OR NOT A CUSHION WAS COMFORTABLE**



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↺ were recorded and subsequently analysed. Rigorous statistical tests were applied to check whether the results were meaningful.

In Figure 4, apart from the vertical line showing the critical pressure, each coloured line shows the distribution of mean, peak pressures generated on all of the pilots by a particular cushion. Those to the left of the vertical line will be comfortable, those to the right will experience discomfort.

The findings showed that Dynafoam would only be comfortable for about 15 per cent of UK glider pilots (see Figure 4). By contrast, a composite of 13mm of Confor C45 on top of 25mm of Confor C47, which has similar but better energy-absorbing properties than Dynafoam, would be comfortable for about 85 per cent of UK glider pilots. Earlier investigations of the safety of the Confor materials included tests using manikins with pre-compressed foam.

To check whether the pressure-relieving qualities of the C45/C47 cushion would still be maintained in practice under real, stressful, flight conditions, a trial was undertaken. Kim Tipple, a member of the British gliding team taking part in the European Gliding Championship held in France in August 2007, as well as in the British Overseas Championships in Spain in May/June 2007, expressed an interest and was provided with C45/C47 cushioning, created by Adrian and Trish Emck (see Figure 5).

To ensure that the fitting was satisfactory in his Nimbus 4, pressure-map readings were taken for him for the entire seat and lumbar regions. Kim flew for approximately 45 hours, the longest flight being six hours. After the competitions, he reported that the cockpit had been so comfortable that, "At no time did I feel the need to 'shuffle' and reorganise my posture in the cockpit as has always been the case in previous flights". In fact this trial was so successful that he is still using these Confor cushions and wants to keep them. Since then, several pilots have installed C45/C47 safety cushions and confirmed their exceptional comfort.

If you are interested in the scientific work behind all this, it can be found in *Pressure measurements and comfort of foam safety cushions for confined seating* by Jackson C, Emck AJ, Hunston MJ and Jarvis PJ, published in *Aviation Space & Environmental Medicine* 2009; 80:565-9 and *A simple comparison of the characteristics of energy-absorbing foams for use on safety cushions in glider cockpit environments* by Jackson C, Emck AJ, Hunston MJ, Jarvis PJ

and Firmin A, published in *Technical Soaring* 2009; 33(2):47-53.

Work on the extensive testing of Confor foams for safety cushions by the US government and military can be found, for example, in *Crashworthiness considerations in aircraft seat cushion design* by Hooper SJ, Lim T, Rahematpura M, Goedken B and Dakwar E, undertaken in 1994 at the National Institute for Aviation Research at Wichita State University and *Evaluation of the safety performance of ejection seat cushions* by Cheng Z and Pelletiere JA, undertaken in 2004 at the Air Force Research Laboratory, Wright-Patterson Air Force Base.

Confor foams are widely available commercially and the costs appear to be comparable to Dynafoam. To protect them, energy-absorbing materials are best covered in thin, stretchable material that will not ruck and cause folds.

Because of the limited space available in many cockpits, the installation of energy-absorbing cushions frequently requires adjustments such as moving seat-back positions or removing existing seat cushions. This is important because many glider pilots think unrealistically that they can simply place a safety cushion in their existing cockpit and just "jump in and fly".

With regard to the Confor C45/C47 cushion, if, after trying to adjust the cockpit layout, there really is insufficient room, the top layer of C45 should be removed. Our research showed that Confor C47 was the second most comfortable viscoelastic foam. Furthermore, this single C47 layer has better energy-absorbing qualities than the equivalent 25mm of Dynafoam Extra-Firm (Sunmate X-Firm).

Finally, pilots should not have unrealistic expectations regarding how much protection around one inch of energy-absorbing foam can deliver. If a foam were to provide a perfectly uniform deceleration within such a thickness – and this was the only means of decelerating – a drop of only one metre would generate 40 g. In reality, peak decelerations could be around four times this "ideal" value.

By contrast, if the undercarriage were lowered, if it were 25cm long and if it, too, were designed to collapse in a perfectly uniformly decelerating fashion – without impinging on the pilot – the best deceleration would be around 4 g.

## **MANY GLIDER PILOTS THINK UNREALISTICALLY THAT THEY CAN SIMPLY PLACE A SAFETY CUSHION IN THEIR EXISTING COCKPIT AND JUST "JUMP IN AND FLY"**



Figure 5. The left picture shows the two layers of Confor C47 and C45 that were used to make up the seat cushion. The right picture shows the covered cushion in position. A lumbar support made out of the same materials can also be seen. Note that the manufacturer's supplied cushions were removed

### **SUMMARY**

- Unless seat buttock pressure is below the critical value, pilots will be uncomfortable because capillary blood flow will be blocked
- 85 per cent of pilots will be comfortable on Confor C45/C47
- Pilots are likely to install energy-absorbing foam if it is also extremely comfortable
- Confor has superior energy-absorbing properties
- To sum up, pilots using energy-absorbing cushions now have a choice. They can continue to use Dynafoam or install the more comfortable Confor with the confidence that it is at least as safe.

Dr Colin Jackson is a member of the OSTIV Sailplane and Development Panel (SDP)



ON 10 December, 2009, Oliver Beams went solo on his 16th birthday, writes David Beams. Whilst we appreciate that this is not particularly uncommon, this 16th birthday first solo has a twist.

Kent GC has been running a scholarship scheme for about 10 years. The scheme provides places for eight students per year who are taught to fly at no cost to themselves. Oliver is one of this year's in-take and commenced his formal training last April.

What makes this first solo unusual is that Oliver was sent solo by his father David Beams and aerotowed by his grandfather, David Manser.

We cannot recall hearing of a 16th birthday first solo involving three generations of glider pilot before, perhaps your readers can throw some light on this.

Oliver's mother also soloed at 16.

■ If you can you match, or even beat this, contact the [editor@  
sailplaneandgliding.co.uk](mailto:editor@sailplaneandgliding.co.uk)







*This page, clockwise from top:*  
Devon & Somerset's Mark Courtney sports a tree-mendous new afro hairstyle on a recent trip to Talgarth (Cheryl Smith)

Young member 14-year-old Ben Harper tastes wave for the first time in Black Mountain's K-13 at 7,500ft (Robbie Robertson)

Dartmoor's Bob Jones who, on 14 October 2009, flew his Open Cirrus G-CCGY, to celebrate the 50th anniversary to the day of his going solo, having first taken to the air on his own in a Slingsby T-31 with 1GFS at Hawkinge in Kent

Oxford award winners, (right to left), Rob Jackson - Best Flight from Weston, 300km in a Skylark; Claudia Hill - Club Ladders; Neil Swinton - Two-Up award; Jon Cristensen - First 5-Hours; John Mart - Best Flight Club Glider; Paul Morrison - Deep Breath (Steve McCurdy)

This screen-grab shows how one enterprising Black Mountains member decided to communicate directly with the membership via the club's webcam on Saturday 12 December. At least one member assumed it was a wind-up and went Christmas shopping with his wife, missing out on trips in brilliant sunshine to 10,000ft and beyond

*Facing page, clockwise from top left:* Burn's Ian Myles, Kevin Moseley and Tommy Lynch are now the proud owners of the Diamant G-CHGT, pictured here in the mid-winter sun (Kevin Moseley)

Burn member Frank Thompson recently celebrated his 90th birthday and is still flying gliders (Ian Cudahy)

So who says you can't still have fun on a snowy airfield even though there is no flying? Oxford members find other ways of entertaining themselves during January (Paul Morrison)

Our thanks to all the photographers and to our *Club News* contributors for sending these in. If you'd like to submit your previously-unpublished photographs for possible inclusion somewhere in *S&G*, send them to [editor@sailplaneandgliding.co.uk](mailto:editor@sailplaneandgliding.co.uk)



# CLUB NEWS

## ANGLIA (WATTISHAM)

**WWW.ANGLIAGLIDINGCLUB.ORG.UK**  
**520739N 0005722E**

THE club held its AGM towards the end of 2009, where a significant increase in flying over the past 12 months, compared to previous years, was reported. An ambitious four-year plan was put forward and there was a lot of enthusiasm for the future. As the weather has progressively deteriorated, we are happy to report that members from Essex GC have once again joined us at Wattisham to fly over the winter, as their home site becomes too wet to operate at. Along with their contingent of committed members, they also bring their K-13 and tug, meaning Anglia members – who usually lack access to a spinable two-seat aircraft – have plenty of spin refresher training to look forward to in the coming months!

**Andy Smith**

## BANBURY (AQUILA)

**WWW.BANBURYGLIDING.COM**  
**5204355N 00118784W**

WE HAD an excellent turnout at our recent AGM. It had been a good year both from a flying and financial point of view. Treasurer John Batch did a splendid job looking after the accounts. The committee, chaired by John Giddings, work extremely hard and maintained a healthy momentum for the club throughout the year. Several awards were presented for various achievements, notably Laurie Clarke, who was our landout champion picking up the "Where is he calling from now?" trophy; the cross-country trophy went to Tony Limb; John Giddings the club ladder. Our thanks go to Roger Coombs, tug master, for all his hard and diligent work looking after the tugs and Peter Fincham for keeping the gliders airborne. Finally, our thanks to Janet Veal for her excellent work as club secretary. Janet retired at the AGM and Jim Hughes succeeded her.

**Rod Watson**

## BATH, WILTS AND NORTH DORSET (THE PARK)

**WWW.BWND.CO.UK**  
**510742N 0021445W**

INVESTMENT in our club infrastructure continues apace with the addition of another John Deere 'gator'. These versatile 4-wheel drive vehicles are proving very effective at retrieving gliders from the airfield and have coped well with the very wet conditions we endured during November. Most of the mini tractors and one of the older Land Rovers have now been sold, with just a couple of mini tractors held in reserve. The club took part in the "Learning Revolution" programme, introducing over 20 local senior residents to our sport. Those that took part enjoyed a free flight

and lunch. This event also generated income for the club, so thanks to everyone involved, especially Mike Thorne who had to organise things at very short notice. The very wet spell of weather has curtailed flying recently, but Ian Molesworth, part of the Bath University Club, managed to complete his Cross-Country Endorsement. Club expeditions include Jaca (Spain) in June, and in mid-September a return to Sutton Bank, plus four separate flying weeks at The Park.

**Jason Sanderson**

## BIDFORD (BIDFORD)

**WWW.BIDFORDGLIDING.CO.UK**  
**520803N 0015103W**

AT TIME of writing, we are sat here continuing to watch the wind and rain and, not surprisingly, nothing much has been happening for a while! We congratulate Kirk Akdemir for his first NPPL solo, and Geoff King for his first towing solo. Also, congrats to Dave Sandells for completing his BI course – thanks to him we now have a weather station up and running, which can be found at [www.bidfordgliding.co.uk/liveweather](http://www.bidfordgliding.co.uk/liveweather). Our Regional Competition is being held 19-27 June, and we are running a two-seat challenge the first week of August. More details on our website.

**Lynne Burkert**

## BLACK MOUNTAINS (TALGARTH)

**WWW.BLACKMOUNTAINSGLIDING.CO.UK**  
**515848N 0031215W**

DESPITE a miserable wet November, we have already exceeded the total hours and launches flown during the whole of 2008. The usual autumn wave has only appeared sporadically, the best being a climb to 14,000ft by Tony Crowden in southerly wave off the Brecon Beacons. The club K-13 also contacted, going to 7,500ft and giving one of our youngest members his first real wave flight. Thanks to sterling work by several members, all the concrete paths round the new briefing room complex have been laid and the new briefing and simulator rooms are now fully commissioned. It is a tremendous addition to the club facilities. Congratulations to John Clark and Geoff King on becoming tug pilots.

**Robbie Robertson**

## BOOKER (WYCOMBE AIR PARK)

**WWW.BOOKERGLIDING.CO.UK**  
**513642N 0004830W**

WE ACHIEVED 22 solos in 2009, our membership increased; our tug maintenance arm, Booker Air Services, under Adrian Hegner, with a team of John Nichols, John and Paul Sawney, not only kept our tugs airworthy but achieved part M certification for their

operation – even our financial position has improved. Our thanks to all staff and members who have contributed to this success. Our political team of Dennis Campbell and Glyn Read, together with Chairman Geoff Tabbner, have begun to make real progress in the task of strengthening our position at Booker, and are actively developing positive contacts with both local and national politicians. During October we gained one of the BGA grants from the Adult Learning Initiative and flew 15 visitors from two groups, the "rethink" mental rehabilitation charity and the Princess Royal Carers' trust. Plans for the winter include a wide-ranging series of lectures, RT and aerobatic courses, and our Easter Aerobatic Competition and Spring Shobden expedition. One of our oldest and best-loved members, Dudley Steynor, recently celebrated his 100th birthday. Very sadly as we go to press we learn that Dudley has died; see p71 for an obituary.

**Roger Neal**

## BORDERS (MILFIELD)

**WWW.BORDERSGLIDING.CO.UK**  
**553514N 0020510W**

TONY SALES was sent solo just after his 16th birthday in October, followed shortly by his first 1-hour flight. Steve Marriott claimed his Gold height in his newly-purchased DG-300, while Steve Rae and Ken Sangster both got their Silver 5-hour duration flights – Steve in the club Astir and Ken in his LS4. Well done to all four. Milfield held the annual remembrance day service at 11:00 on the 11 November at the club's memorial. The ceremony was attended by Canadian Air Force Captain Jason Furlong, who laid a wreath in memory of the Canadian AF pilots who lost their lives while flying from RAF Milfield. Thanks to our president Jimmy Hogarth and his wife Eilean for organising the event and to The Rev John Evans and all club members who helped out.

**Rich Abercrombie**

## BRISTOL & GLOUCESTERSHIRE (NYMPFIELD)

**WWW.BGGC.CO.UK**  
**514251N 0021701W**

RIDGE runs to Bath were done in November and there were even some thermals. The big Grob, P20, is back in action after repairs. We flew 20 delighted local young people for the government's Festival of Learning scheme (see p12) and our marketing group is planning to push the club more by running similar events and showing off a glider at shows. Congrats to Alison Mulder on her Full Cat. Plans are afoot to update our [bggc.co.uk](http://bggc.co.uk) website. Don't forget we're running the 15m Nationals 3-11 July.

**Bernard Smyth**



Left to right) Members laying concrete for the new briefing room complex at **Talgarth** (Robbie Robertson); Tony Sales, 16, going solo at **Borders** (Rich Abercrombie); Ian Myles about to take to the skies in **Burn's** Janus (Kevin Moseley); Sarah Cook was sent solo by Brian Birlison at **Cotswold** (Alex Mazzolini)



**BURN (BURN)**  
**WWW.BURNGLIDINGCLUB.CO.UK**  
**534445N 0010504W**

THE club took part in the October Festival of Learning. Seventeen participants were given a day's gliding experience, which included one flying lesson. The participants were men and women of all ages who would normally never have the opportunity to pilot an aircraft. A special thank you to Edna Sharples and Elaine for providing the refreshments. There was very good coverage of the event by the local daily paper and the two weeklies. We have got several enthusiastic new members, who are taking advantage of our fixed price to solo offer. Alan Brownbridge is organising an internal club competition with the aim of further improving our cross-country flying.  
**George Goodenough**

**CAIRNGORM (FESHIEBRIDGE)**  
**WWW.GLIDING.ORG**  
**570613N 0035330W**

THE CofA season is upon us again and our thanks go to Roger Greig, Ian Carruthers, and Nick Norman, our tireless inspectors. Our Puchacz is off for a full re-life refurbishment and should be back early in the new year. Mayfest 2010 runs from the 1-16 May and is already over 50 per cent booked out, so if you would like to come and sample the pure delights of late spring soaring at Feshie and grab that Diamond/Gold height, 300k etc, please book with [chris@cabrich.com](mailto:chris@cabrich.com) ASAP. No booking fees, free trailer parking, free camping, 2,000ft aerotows only £20, superb catering, and the best real ale bar in gliding.  
**Chris Fiorentini**

**CAMBRIDGE (GRANSDEN LODGE)**  
**WWW.GLIDE.CO.UK**  
**521041N 0000653W**

OUR new Robin tow plane arrived from Europe and is now ready to take its place beside our Pawnee. With a Rally also available at short notice we are now well covered for aerotows. A seven-day week flying operation (weather permitting) is proving popular during the winter with winching offered at least five days a week. Congratulations to Keith Marshall and Adrian Moore, our latest solo pilots.  
**Derek Coppin**

**CHILTERN (RAF HALTON)**  
**WWW.RAFGSA.ORG/CGC/**  
**514733N 0004416W**

CONGRATULATIONS to Pip on winning both the 'normal' (ie for the retired or nouveau riche) and the Weekend Summer Club Ladders, and to Mike Newman for winning

a couple of trophies (for his more vertical form of flying than the norm) at the AGM; Lukas Port and Don Knight were other worthy winners. Well done Dylan (Tommy Trinder) for completing his Silver on 1 October with a 50km to RAF Odiham. Tommy's flight was followed up three days later by the first Weekend Winter Ladder flight of 127km by Luke and Neil in the Duo XT, so we are looking forward to a more competitive winter ladder.  
**Andrew Hyslop**

**COTSWOLD (ASTON DOWN)**  
**WWW.COTSWOLDGLIDING.CO.UK**  
**514228N 0020750W**

WE HAD a large increase in student members from UWE, so thanks to all members who have been involved in basic training. The annual expedition to Portmoak was marred by rain and SE winds but some members did manage to contact wave and get good flights. Thanks to Richard Kill and Sandy Clarke for providing a super early Christmas dinner to the Friday Fliers at the clubhouse. The team, aided by Jackie Huband, also hosted a fantastic Moroccan dinner where we learnt that our new secretary, Helena Brogden, has talents as a belly dancer. We have started to review our fleet of airfield and glider recovery vehicles and have taken delivery of a small Kawasaki automatic all-terrain pickup, with LPG conversion, to replace an ageing Land Rover.  
**Frank Birlison**

**CRANWELL (RAF CRANWELL)**  
**WWW.CRANWELLGC.CO.UK**  
**530231N 0002936W**

WITH winter upon us, there is much maintenance, fettling and polishing of equipment and aircraft being done in readiness for the first thermals. The club held a flying day for station personnel, which was well received allowing all participants the experience of engineless flight. The end of November was fairly busy with Jamie Cloughton going solo – congratulations to him and proud dad in attendance. A number of people also achieved extended flights, despite the weather. Many thanks to all the members that have contributed to the many jobs, however large or small, that needed to be done in and around the club.  
**Zeb Zamo**

**DARLTON (DARLTON)**  
**WWW.DARLTONGLIDINGCLUB.CO.UK**  
**531444N 0005132W**

A RELATIVELY quiet period to record, largely dominated by unusually poor weather conditions and a waterlogged airfield,

which severely restricted flying. However, congratulations are due to Roland Buchta, one of our new young members supported by The Caroline Trust, who soloed in the K-13, and Dave King for his first aerotow solo. The membership, when not flying, is very active with ground school lectures and ever-on-going work on club development. Our second hangar is slowly being covered in a metal skin by our key construction crew, while the new clubhouse is now occupied with further fitting out work in progress. The annual visit to the Borders club (Milfield) was successful with some memorable performances. The small group that visited the Black Mountains Club (Talgarth) enjoyed excellent flying conditions from an exciting site in a beautiful location.  
**Geoff Homan**

**DARTMOOR (BRENTOR)**  
**WWW.DARTMOORGLIDING.CO.UK**  
**503517N 0040850W**

ON 14 October, a pleased and justifiably proud Bob Jones flew his Open Cirrus G-CCGY to celebrate the 50th anniversary to the day of his going solo, having first taken to the air on his own in a Slingsby T-31 with 1GFS at Hawkinge in Kent. Jeff Cragge re-solo'ed, much to his (and instructor Bob Pirie's) delight. Elsewhere, during a typically wild and woolly West Country autumn, our Bronze Badge cadre, father and son team Barry and Roger Green, Andrew Beaumont and Phil Hardwick have all taken their Bronze exams and, thanks to Allan Holland's (and others) excellent tuition, are confident of successful passes.  
**Martin Cropper**

**DEESIDE (ABOYNE)**  
**WWW.DEESIDEGLIDINGCLUB.CO.UK**  
**570430N 0025005W**

WELL done to our visitors achieving Diamond heights and good cross-country tasks in the last year. Don't forget we can get good wave conditions at any time of the year, so feel free to visit this spring. The dates for the next UK Mountain Soaring Championships are 5-11 September 2010. Full details, including entry forms, are available at [www.deesideglidingclub.co.uk](http://www.deesideglidingclub.co.uk)  
**James Addison**

**DERBY & LANCS (CAMPHILL)**  
**WWW.DLGC.ORG.UK**  
**531818N 0014353W**

THE Vintage Week was again a successful feature of our "summer". Mike Armstrong went on to make a clean sweep of every day at the Northerns and so win the contest. He also came second this year in the two-



(Left to right) Devon and Somerset's Alex Schmarsel after being sent solo by Guy Adams (Cheryl Smith); Edensoaring's busy launch point (sandyprints); Kent's Mike Pounsford taking up slack on his first solo, watched from the wing tip by his instructor Dave Beams (Adam Palmer)



seater comp at Pocklington, aided and abetted by Andy Melville and John Collins. Congratulations to Brian Allen and Stuart Dodson on becoming BIs. We are fitting Launch Assistant to two winches, all the club gliders and a number of private ones. Our second Puchacz, Romeo Juliet, has arrived on site, as has a private Discus 2. We have run another RT for members, and a group recently enjoyed an informative visit to Manchester International ATC. Successful expeditions included Edensoaring (two Gold heights, as well as lots of wave and ridge soaring) and Aboyne. Planning is under way for our 75th anniversary in 2010.

**Dave Salmon**

**DEVON AND SOMERSET (NORTH HILL)**  
**WWW.DSGC.CO.UK**  
**505107N 0031639W**

CONGRATULATIONS to Alex Schmarsel on being sent solo and to Henry Ford on passing his Bronze written exam. Members had a great trip to Portmoak in October with some fantastic flying. Matt Wright did his usual trick of launching in the morning and not landing until it got dark. Our DG-505 spent a month in Talgarth with members attending for some very interesting flying due to the weather – one instructor claimed he had had his 'hairiest' aerotow in over 2,000 hours of flying! Unkind weather has given us time to strip out and renovate our glider workshop. Many thanks must go to Peter Smith who has organised this, and to the club members who have put in many hours of hard toil. Our old winch has now been sold to make way for a new Skylaunch.

**Cheryl Smith**

**DORSET (EYRES FIELD)**  
**WWW.DORSETGLIDINGCLUB.CO.UK/DGC**  
**504233N 0021310W**

OUR hangar – a canvas over steel frame construction – is in a sad state. The hangar was originally made for shipment to the Falklands at the start of conflict there, and has served us well for the past quarter of a century. We have been awarded a grant from Sport England (thank you to Doug and Jon for helping to achieve this), which will go a long way towards paying for a replacement cover. This, together with the recently painted hangar floor and spruced up metalwork, should give us many more years of service. Two refurbished shipping containers will improve our storage facilities. Flying has suffered due to the inclement weather, but a band of instructors gave lectures, etc. Guy Jarvis, one of these instructors, has recently completed the CAA FI SLMG with the BGA SE SLMGs, Andy Miller.

**Colin Weyman and Doug Every**

**DUMFRIES & GALLOWAY (FALGUNZEON)**  
**WWW.DUMFRIESGLIDING.110MB.COM**  
**545638N 0034424W**

NOVEMBER was a wonderful month for our club. We were given grants from Awards for All and local charity, the Holywood Trust. These allowed us to buy a two-drum winch from Lasham GC, who we thank for their help. Another member, Richard, provided us with materials to build an extension to our hangar to accommodate it. Our launches are now much improved, but the appalling rain and wind we had in November prevented much flying due to a waterlogged runway. Despite this, our youngest member Connor continues to improve and our two new solo pilots, Iain and Allister, continue to strive towards reaching their Bronze badges. May I thank everyone for their hard work in 2009.

**Wendy McIver**

**EDENSOARING**  
**WWW.EDENSOARING.CO.UK**  
**5441875N 0235000W**

THE first full year of flying at Skelling farm in Cumbria. A full-time instructor was a great motivator and Don did a fantastic job of training the new members (we totalled 14 new members in the first year). As with all new clubs, there was a lot of work done by a few people, many thanks to you all. The many visiting pilots boosted numbers and lots of wave flights were taken. The club has the use of a donated K-13 and a K-8 for the time being for local members. Cumbria has welcomed the club and local B&Bs have been outstanding with their help and encouragement. The site is placed right under a wave-forming spot, with spectacular views and many areas on the ridge to explore. The site will re-open in May – book your place now, as space is limited.

**Sandy Hawkyard**

**EAST SUSSEX (RINGMER)**  
**WWW.SUSSEXGLIDING.CO.UK**  
**505423N 0000618E**

IT SEEMS that few places in the UK missed out on November's double helping of wind and rain. Thankfully East Sussex didn't see any severe flooding, but flying certainly wasn't on the agenda as our combination of field works and slow draining wealden clay quickly conspired to make the airfield unusable. On the positive side, it does mean that we will have more time to concentrate on our winter programme of lectures and teach-ins on subjects ranging from cross-country to field operations. We might also find a few hours to fit floats to the Cub...

**Jim Izzard**

**ESSEX (RIDGELL)**  
**WWW.ESSEXGLIDING.ORG**  
**520253N 0003330E**

A VERY warm welcome to new member Steven Codd, who is not only an instructor but also a tug pilot. Congratulations to Vee on her first solo aerotow, but commiserations on the loss of her K-6 in the November storms when the "T" hangar, in which it was residing for the first time, was damaged. It can't be very often that a club tug master becomes a media star but our Peter Johnson did just that when he appeared on BBC Television recently, in his capacity as an aircraft restorer, talking about how many hours of dedicated work was required to restore a Tiger Moth that he was currently working on. During this winter period we are very much looking forward to flying again with the Anglia Gliding club at Wattisham.

**Peter Perry**

**ESSEX & SUFFOLK (WORMINGFORD)**  
**WWW.ESGC.CO.UK**  
**515630N 0004723E**

TWO new basic instructors are ready to take on their new responsibilities and steps are in hand for more BIs and for existing BIs to advance to Ass Cat level. Congratulations to Leon Green on his first solo. In this case it is a matter of father following in son's footsteps, as George is a long-standing and respected young cross-country and competition pilot with many notable flights to his name. We have added variety to our club fleet in the shape of an SF-27, recently acquired from a club member and brought into service for those of us who enjoy flying "wood".

**Dick Skinner**

**FENLAND (RAF MARHAM)**  
**WWW.FENLANDGC.CO.UK**  
**523854N 0003302E**

FENLAND now has its own tug – a chipmunk! This allowed us to fly 29 RAF personnel based at RAF Marham on the station's LEAP (Leadership, Ethos and Air Power) day in November. Hopefully we will see some of those who flew return for some more flying and, who knows, they may even join the club. Dave Honour went solo the day before he went to RAF Halton for a week's gliding JSAT (G) course. Whilst on the course, he converted to aerotow too. Congratulations to Mike O'Brien – Gold badge, Diamond Goal – and to J Oakley, A Bramwell and Alex Saunders on their Silver badges. Thanks to Paul McLean for leading the RAF team to victory at the Inter-services Gliding Comps.

**Brian Eames**



(Left to right) Pirat DFW on very short finals flown by **Lincolnshire's** Dick Skerry; Dan Irvine is congratulated by instructor Robin May on his first solo flight at **London** (Tom Pridgeon); **Mendip's** Terry Hatton has a new glider, seen here about to be test flown by Andy Whiteman for Terry's type conversion



**FOUR COUNTIES (RAF WITTERING)**  
**WWW.FOURCOUNTIESGC.CO.UK**  
**523645N 0002835W**

THE late and unexpected soaring conditions of October coincided nicely with the new influx of students from LSUGC's affiliated club. Congratulations to Connor Hickey who re-soloed in early November. November also saw work start on an engine change for the Falke tug. We have converted the Skylaunch to Dynema to offset previous problems caused by crosswinds and cable drift. Launches are higher and are much smoother in the process. Members are looking forward to the annual pilgrimage to Portmoak at Easter and we have gained a new syndicate with a smart-looking, and possibly unique, tipped Astir.

**Ian Dawson**

**HEREFORDSHIRE (SHOBDON)**  
**WWW.SHOBDON.COM**  
**521429N 0025253W**

WE WERE awarded a £1,000 grant to take part in the October Festival of Learning. We invited two groups of local people, who would not normally have an opportunity to fly. Thanks to those members who pulled out the stops to make it all happen. This took place during our October Wave Week, which was notable for having no wind, no weather and no wave. We have made the best of the recent bad weather by continuing with ground-based works, including further improvements to the workshop. Phil and Diana King are now living close to Shobdon and, following the AGM last month, were both co-opted to the committee.

**Diana King**

**HIGHLAND (EASTERTON)**  
**WWW.HIGHGLIDE.CO.UK**  
**573508N 0031841W**

OUR board of directors and members are working on a 10-year strategic vision for the club, which includes getting our planning permission changed in order to allow powered aircraft to use the airfield, building a new hangar and converting the far end of the grey hangar to a workshop. One of the first actions will be to obtain a wood-burning stove for the clubhouse. Our Wave Week had several wave flights (up to 12,000ft) and re-solos by Helen Chalmers and Dave Webster (visiting from Northern Ireland with his wife Jacqui). During October, Pete Stratten and Mike Fox came to visit us and we exchanged some views on the administration of the BGA. Our most recent addition to the hangar at Easterton is a Jabiru micro-light which is getting plenty of airtime with its enthusiastic owners.

**John Thomson**

**IMPERIAL COLLEGE (LASHAM)**  
**WWW.UNION.IC.AC.UK/RCC/GLIDING/**  
**511112N 0010155W**

DESPITE a rainy start to the academic year, we've managed to regularly take our 19-year-old Grob 103C 496 for a spin at Lasham (literally). 496 has recently received a shiny new mobile home (sometimes referred to as "trailer", although we call it "the cathedral"). Over New Year we retreated to the "tropical mountain resorts" of Portmoak for some ridge flying action. But more importantly, the glamorous 80th anniversary annual dinner is coming up on 12 March in London. All current student, ex-students and friends of icGC are most welcome to join us; please contact [gliding@imperial.ac.uk](mailto:gliding@imperial.ac.uk) for details.

**Ruben Menke**

**KENT (CHALLOCK)**  
**WWW.KENT-GLIDING-CLUB.CO.UK**  
**511230N 0004945E**

A STRONG end to the season in Kent saw our two nationals pilots, Graham Dury and Tony Moulang, achieve 305km in November – up and down our 30km ridge in their Duo! Our Christmas award dinner saw the same two gentlemen dominate the cross-country trophies. Awards also went to Dave Crimmins, Mirren Turnbull, Richard Hill, Stefan Bort, and Brian Tansley. Alan Murdoch and Gen Francis brought our total number of Silvers achieved in 2009 to seven. James Paine is our new Assistant instructor and Mike Pounsford went solo. Finally, we were all disappointed to hear that Andy Young has had to stop gliding for health reasons, and thank him for his contribution to the club.

**Stefan Bort**

**KESTREL (RAF ODIHAM)**  
**WWW.KESTEL-GLIDING.ORG.UK**  
**511403N 0005634W**

DESPITE being hangar-less at Odiham, we had a very good year, increasing our launch rate and hours and, to round off our 60th year, ran two enjoyable expeditions to North Hill and Portmoak. After a number of attempts, congratulations finally go to Jim Aggiss on his 5-hours and height gain, while Giles Austin achieved his Ass Cat rating. We must also send a big vote of thanks to 618 VGS who have helped out with hangar space for our K-13 and, on occasion, K-21 – this helped to keep us going during the winter weather. The club Discus and K-21 have been away for refinishing, and work is now in progress for our new hangar, which should be up ready for the new season.

**Neil Armstrong**

**LINCOLNSHIRE (STRUBBY)**  
**WWW.LINCSSLIDINGCLUB.CO.UK**  
**531836N 0001034E**

THE refurbishment of the K-13 KHH is complete. Our other K-13 is going in this winter for similar treatment and we will end up with the tidiest K-13 fleet out there. The club continues to attract visitors and new members alike keeping us busy on the flying days. We benefited from a grant from the Learning Revolution, a part of the department for Business, Innovation and Skills to introduce people to gliding, which was a great success.

**Dick Skerry**

**LONDON (DUNSTABLE)**  
**WWW.LONDONGLIDINGCLUB.CO.UK**  
**515200N 0003254W**

CONGRATULATIONS to Simon James, Richard Hewett, Dan Irvine and Graham Nixon on first solo flights. We have enjoyed some good flying conditions including "sporty" ridge flying days and the occasional hint of wave. Free flying time for club members lasts to the end of February. The winter programme is in full swing with Bronze lectures on Saturday and Wednesday evenings and Geoff's Sunday carvery. We have introduced an online duty rostering system, which has made it easy to organise complicated swaps (see [www.dutyman.biz](http://www.dutyman.biz)). We are looking forward to expeditions to Shobden and Cerdanya. The Dan Smith aerobatics competition takes place 27-28 March. Congratulations to members Nicola Pursey and Justin Craig on their marriage.

**Andrew Sampson**

**LOUGHBOROUGH STUDENTS UNION (RAF WITTERING)**  
**WWW.LSUGC.COM**  
**523645N 0002835W**

WE HAVE more than doubled our membership of last year and it's fantastic to see so much enthusiasm in the club. The flying lists are always full and we are hoping for plenty more days over winter where we can get our K-13 out. Congratulations to Conor Hickey for re-soloing after a few years out of gliding and also to Matt Davis for placing third in the Juniors in August. Our thanks as always go to the guys at Four Counties GC for hosting us and for all their help.

**Sam Roddie**

**MENDIP (HALESLAND)**  
**WWW.MENDIPGLIDINGCLUB.CO.UK**  
**511544N 0024356W**

WORK has begun on the new bus to transform it to our launchpoint facility. Andy Whiteman completed his Diamond badge following a 500km flown earlier last year. Congratulations



(Left to right) Chris Shepperd in instructor mode with **Nene Valley's** new CFI Steve Jarvis on the wing (Kerry Mertz); Steve Winstanley of **Oxford** landing after his first solo (Richie Hale); **Portsmouth Naval's** Paul Burgess after his first solo, with instructor Alan Clark



to the new K-6 syndicate of Jack Tonkin, Dave Close and Tony Smith. We now have an ASW 20BL on site, which is the new purchase for Colin and Terry. The ASW went to Slovenia in December for a total refurb. Finally, belated congrats to Mike Stanton on going solo.  
**Terry Hatton**

**MIDLAND (LONG MYND)**  
**WWW.LONGMYND.COM**  
**523108N 0025233W**

BONFIRE night threatened to be a washout but the conditions improved at the last moment. Pyrotechnics were arranged by Mike Witton and Clive Jones – cloudbase was marginally above rocket height. We welcome new members Alex Pepler, Alex Saunders (both juniors) and Tony Evans. Congratulations to Steve Foster and Alex Rowlands on becoming assistant instructors and to Mike Greenwood on becoming a Full Cat instructor. The Mynd is operating to its winter timetable –Thursday through to Sunday – but any potentially good day is negotiable.  
**Steven Gunn-Russell**

**NENE VALLEY (UPWOOD)**  
**WWW.NVGC.ORG.UK**  
**522612N 0000836W**

STEVE Jarvis has completed his Full Cat training and is now the club's CFI. Well done to Steve for fast-tracking from BI to Full Cat in record time and to Dave Munro for all his help. We'd also like to offer a heartfelt thank you to Roger Morrisroe for all his hard work and effort over the years as CFI for NVGC. We also have a new face in charge of ground equipment in the form of 'Desperate' Dan Chidley (NVGC's very own gliding star of the future)! I will be assuming the role of PR Member. Lastly, congratulations to Chris Shepperd for completing his Ass Cat training.  
**Kerry Mertz**

**NORFOLK (TIBENHAM)**  
**WWW.NORFOLKGLIDINGCLUB.COM**  
**522724N 0010915E**

STATISTICS shows the best number of entries ever recorded on our club ladder with an average task length of 157km per entry. At our successful experimental 'in-house, in-tent' annual presentation dinner the trophies for the fastest, furthest and highest were won by Tim Davis, Pete Ryland, Tom Smith, James Francis, Ray Hart, Simon Urry and Ian Atherton, with Ben Kirk the youngest first solo. Planning is well advanced for the International Vintage Rally in July and, if you are really quick, you could still get a discount on the Eastern Regionals 29 May - 6 June.  
**Mike Bean**

**NORTH WALES (LLANTYSILIO)**  
**WWW.NWGC.ORG.UK**  
**530239N 0031315W**

OUR hangar extension is finished, which will be a boon for next season as rigging a K-7 on a weekly basis is very hard work. The annual visit to Feshiebridge was made by 10 members, most of whom were able to fly five days out of the seven, the wind conditions being less "hairy" than last year. Once again, it is good to report a successful year on the finance front and, as a result of some good publicity, we have attracted new members including a young Silver C from Kent GC, Jack Stockford, working in North Wales for a couple of years.  
**Brian Williams**

**OXFORD (RAF WESTON ON THE GREEN)**  
**WWW.OXFORD-GLIDING-CLUB.CO.UK**  
**515249N 0011311W**

JOHN Hanlon takes as CFI from Howard Stone. We thank Howard for all his hard work and wish John well. Other committee changes are the Keith White as secretary, Paul Smith as treasurer, with Peter Boulton and Phil Pratley joining as 'ordinary' members. Peter Brookes, who has been both CFI and chairman in his time, was granted an honorary membership. For the first time in many years, I missed the AGM, and for the first time in many years, I was awarded a prize! Other more worthy award winners were Rob Jackson, Claudia Hill, Jon Christensen, John Mart and Paul Morrison. Congratulations on a first solo for Steve Winstanley, and to Jon Christensen and Paul Smith on completing their BI ratings. And finally, long-established club members Nick Hill married Claudia Büngen.  
**Neil Swinton**

**PETERBOROUGH & SPALDING (CROWLAND)**  
**WWW.PSGC.CO.UK**  
**524233N 0000834W**

MEMBERSHIP remains at a healthy level with new members replacing members that have disappeared from the radar. Congratulations to Chris Shepperd for completing his Half Cat and to our chairman, Paul Goulding, who has renewed his PPL. Our two club expeditions to Milfield and Aboyne were such a success we have already made our bookings for September and October. With our new hangar floor complete, it has highlighted the need for major repairs to both hangar roofs. To raise the funds we are continuing with the weekly raffle, as well as other fundraising events. One of the fundraiser's will be an evening with local covers band (Lost Halo) with three of the five-piece band being club members.  
**Merv Bull**

**PORTSMOUTH NAVAL (LEE ON SOLENT)**  
**WWW.PNGC.CO.UK**  
**504855N 0011225W**

STRONG winds and torrential rain have set in and we have a new lake onsite! A series of well-attended Bronze lectures are being run on Wednesday evenings, and we hope this will encourage member badge aspirations in the coming months. In 2010 we hope to arrange a programme of expeds surpassing that of recent years. Our Astir has been sold to Southdown GC, and one of three K-13s is for sale also. Congratulations to Paul Burgess on his recent winch solo.  
**Neil Shaw**

**RATTLEDEN (RATTLEDEN)**  
**WWW.RATAIR.ORG.UK**  
**521001N 0005216E**

THE Annual Dinner was held in October; Paul Steggles was awarded the Numb Bum Cup, Martin Raper won the Cunningham Triangle Cup, Pete Harrison and Lorna Willcox jointly won the Jean Towse Cup for the best flight in a club glider, and Andrea Cornish won the Landlords cup (most improved pilot), Andy Collings won the Club Ladder.  
**Helen Page**

**SCOTTISH GLIDING CENTRE (PORTMOAK)**  
**WWW.SCOTTISHGLIDINGCENTRE.CO.UK**  
**561121N 0031945W**

AS I compile these notes, our very own John Williams is soaring over the Andes in his Antares. Back at Portmoak, the flooding of the airfield has led to a lot of splashing about and shaking of heads. Despite all this wet stuff, the following pilots are to be congratulated: Adam Watson, Stuart Murray, Rolandas Bakutis, David Dodds, D Auchterlonie, C.Henshaw (1st Solo); Robin Birch, Vernon Brown, Richard Renman, John Bugber (Diamond Height); Vic Leitch, John Castle, Frank Roles (Diamond Height and badge) and yours truly (1st Solo in the Falke).  
**Ian Easson**

**SOUTHDOWN (PARHAM)**  
**WWW.SGC1.ORG**  
**505532N 0002828W**

IAN Ashdown and Craig Lowrie gave splendid lectures before packed houses recently. The topics covered cross-country flying in the summer, and ridge running in the winter. We were delighted to have attracted pilots from the Vintage Club, and from as far afield as Husbands Bosworth. Les Blows flew a couple of 300km flights, entirely along the South Downs, during November. Our long serving K-18 is to be replaced by an Astir CS, so the club fleet is now entirely glass. The



(Left to right) Derek Hudson after his first solo flight, at Stratford on Avon (Nick Jaffray); Wold's Toby Jones soloed on his 16th birthday, pictured with Eddie Room; York's Josh Parry was sent solo by Colin Richardson; Yorkshire's John Marsh congratulates Ross Cleave on a first solo



management has been active in linking up with tourist organisations in the Arun Valley, to promote gliding for visitors to the area.

**Peter J Holloway**

**SOUTH WALES (USK)**

**WWW.USKGC.CO.UK**

**514306N 0025101W**

TOWARDS the closing months of 2009, a winch course was held and, as a result, Carwyn Grange went solo and Sarah Reed was cleared for solo aerotow. Members enjoyed a second visit to Jaca. Thanks to all who helped out on the BGA simulator and club stand at the Usk Show. Our lecture season was kicked off by Dave Thomas' Moroccan night, presenting a DVD about his adventures in Morocco with John Bally, before tucking in to Moroccan food.

**George Robertson**

**STRATFORD ON AVON (SNITTERFIELD)**

**WWW.STRATFORDGLIDING.CO.UK**

**521406N 001431W**

IT'S FULL steam ahead on those winter jobs at the moment – catching up on paperwork and making preparations for the forthcoming year. And, oh yes, there's the odd bit of flying activity occurring as well. Congratulations to Derek Hudson who soloed in early December. We're planning our marketing strategy for 2010 and capitalising on having one of our club gliders positioned in Stratford town centre the week before Christmas to promote gliding and sell trial lesson vouchers.

**Richard Maksymowicz**

**SURREY HILLS (KENLEY)**

**WWW.SOUTHLONDONGLIDING.CO.UK**

**511820N 0000537W**

WE finished off the year with our Christmas Dinner and prize-giving. Prizes went to Brian Yates, Russell King and Dorcas Pointon, who has worked tirelessly in the club office. I would like say get well soon to David Johnson, who works alongside Dorcas in the office. I believe he is on the road to recovery and hopes to get back to work in the spring. A final thanks goes to Steve Codd, who has helped to make the club a more efficient and well-run place.

**Marc Corrance**

**THE GLIDING CENTRE (HUS BOS)**

**WWW.THEGLIDINGCENTRE.CO.UK**

**522626N 0010238W**

OUR launch point has been enlivened by fresher's week students from Warwick, Kingston and Loughborough. The Motor Falke is being refurbished over the winter by volunteer members. Frank Roles and John Castle achieved Diamond height at Portmoak. Rob

Visse went solo. We have three new assistant rated instructors, Alex Stanford, Martin Turnham and Richard Gardiner and Rob Barsby is now a Full Cat. We welcome our new Tugmaster Nick Woods and thank Tom Burton for his dedicated service. Our annual awards were presented in December, the main recipients being Mike Cater, Chris Curtis, Christine Foster, Guy Wilson, Ken Payne and Russell Cheetham.

**Tricia Pearson**

**TRENT VALLEY (KIRTON IN LINDSAY)**

**WWW.TVGC.ORG.UK**

**532745N 0003436W**

AUTUMN saw a group from Trent Valley make an expedition north to Milfield, where they enjoyed an excellent week of wave flying as guests of Borders GC. Meanwhile, a day trip to the superb museum at RAF Cosford was also very well supported. Thanks were due in particular to Ian Hall for stepping in with minibus transport. The year was rounded off in lavish style with chairman (and Head Chef) Vin Marchant's traditional Christmas dinner.

**Alan Spencer**

**VALE OF WHITE HORSE (SANDHILL FARM)**

**WWW.SWINDONGLIDING.CO.UK**

**513614N 0014030W**

OCTOBER 24/25 saw the BIS Learning experience completed. The places filled quickly through efforts of the committee and the local council. Day 1 was a washout, but the learners were shown how to rig a K-13, just back from CofA. Day 2 and everyone had flown in the newly-rigged glider and its sister craft. We expect some of the learners to return for further training. Thanks to the BGA and especially to Alison Randle for her efforts to secure funding.

**Paul Graham**

**WELLAND (LYVEDEN)**

**WWW.WELLANDGC.CO.UK**

**522758N 0003430W**

WITH rains wetting our clay field, members have been visiting our neighbouring Four Counties Club at Wittering, sharing their concrete runway. Trophies were presented at the annual dinner dance to Mario Staniscia, Gary Robertson, Roger Tallowin; and Jo Cooper.

**John Strzebrakowski**

**WOLDS (POCKLINGTON)**

**WWW.WOLDS-GLIDING.ORG**

**535541N 0004751W**

JOHN Norman is our new CFI. Our thanks to Tim Milner for his hard work and enthusiasm during his period as CFI. Congratulations to Patricia Ridger and Derrick Roddie, who also completed their Full Cat. John has appointed

Derrick and Chris Price as his deputies. Irvine Hunt soloed in October and Toby Jones went solo on his 16th birthday. Planning is under way for our 25th Two-Seater Competition in August, when we hope to have some special silver anniversary events.

**Avelyn Dell**

**WYVERN (UPAVON)**

**WWW.WYVERNGLIDINGCLUB.CO.UK**

**511712N 0014700W**

TEN members represented the club in the Inter-Services Regionals at Keevil, but although DJ Graham achieved 2nd place in Sport Class and Will Chappel 3rd in Open Class, the Army team was unable to wrest the title from the RAF. Elsewhere, Wyvern members have been competing in National and Regional competitions, putting nine members into the BGA ratings for the top 300 pilots, including Eric Smith, Chris Marren's, Will Chappel and Roy Gaunt. Congratulations to Danny Carter and Pete Yeo on completing Ass Cat and to Sam Prin on first solo. Five members attended the successful Expedition Aboyne, winning two Gold heights, and seven went on Expedition Milfield.

**Andy Gibson**

**YORK (RUFFORTH)**

**WWW.YORKGLIDINGCENTRE.CO.UK**

**5357100N 00111332W**

OUR start-to-solo under one fixed payment scheme is still proving popular. The club's spare oddments room has been refurbished by members to be used for briefings, lectures and as a parachute store, completing all our facilities under one roof. The annual dinner and prize presentation evening was held on the top floor at York Racecourse. Top award for the longest cross-country flight (512km) went to Richard Kalin. Congratulations to new solo pilots, Josh Parry and Pawel Zawal.

**Christopher Brayne**

**YORKSHIRE (SUTTON BANK)**

**WWW.YGC.CO.UK**

**541338N 0011249W**

THE wet latter half of 2009 didn't dampen the enthusiasm at Sutton Bank. Andy Wilson flew his newly-acquired Skylark and it was good to see Robin Hutchinson join the ranks of private owners with his French-built Swordfish. Membership increased during 2009 and other pilots joined us to take advantage of our winter membership. Thanks to John Ellis, who tirelessly tries to maintain the infrastructure of the club, and our board for voting in half-hour free flying in the club single-seaters, which helps keep pilots current during the winter.

**John and Sarah Marsh**



Sandhill Farm Airfield looking NNE toward the easy-to-spot Watchfield wind turbines (Jay Myrdal)

## > CLUB FOCUS

### VALE OF WHITE HORSE

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**Private Gliders:**

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1

**Instructors/members:**

9/43

**Types of Lift:**

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**T**HE Vale of White Horse Gliding Centre celebrated its 50th anniversary last year. Originally known as the Swindon Gliding Club, it commenced operation in 1959 at South Marston, an airfield that dates back to WW2 when many aircraft were built there, including the ubiquitous Spitfire. In those early days gliders were launched by a towcar. Nowadays Honda owns the site, but from the air you can still see the original metalled runway, sometimes covered with new cars awaiting delivery.

In 1985, the club leased a grass strip a few miles to the east, near Shrivenham. Our early operations at this site were via the winch, but eventually it was decided to change direction and, in 2003, a Piper Super Cub 150 was purchased, the winch was sold on and we became and remain an aerotow-only club.

The VoWHGC is a small club with an enthusiastic and hard-working core membership. We operate a three-day week, Friday to Sunday inclusive, during the soaring season plus all holidays. On other weekdays when the weather looks promising, members often get together to arrange a day's flying. During the winter our operation is cut to weekends and holidays only.

Our airfield is positioned in a reliably thermic part of south central England. To the south-east is the Ridgeway and the Berkshire Downs, but

being downwind, ridge soaring conditions are not easy to exploit. The Downs do, however, provide frequent thermal triggers, as do the Cotswold Hills to the north. While thermals provide most of our soaring energy, light wave sometimes extends east from the Welsh mountains in windier conditions.

Brize Norton lies to the north with Lynham and Redlands parachute club to the south west, but these can be avoided and don't really present much of a problem. Pilots with radios are often granted permission to cross the Brize Zone on the weekends.

I am pleased to say that membership is on the rise again and at last count stands at 43 including nine instructors, six tug pilots, and three cadets.

The club has a Nissen-style hangar, large enough to house all the club aircraft. Our clubhouse is modest but warm and friendly with all mains services including TV, internet, kitchen, toilets and a pleasant garden with picnic tables. In July we host the now famous VoWHGC Hangar Party and Hog Roast. With good food, bands, dancing and camping, it has become the best value music festival in Britain, with flying to boot.

Visitors are always welcome and our modest launch queues mean that booking for check flights or trial lessons is not usually necessary.

**Jay Myrdal**



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BGA gliding Examiners are appointed on a regional basis and directed by Senior Regional Examiners. SRE's are listed here <http://www.gliding.co.uk/bgainfo/instructors/contacts.htm>

### CAA SLMG Instructors and Examiners

The BGA has approved a number of CAA rated examiners and instructors under the management of the SLMG SRE to support SLMG activity.

Contact details are here  
[www.gliding.co.uk/bgainfo/instructors/motorgliding.htm](http://www.gliding.co.uk/bgainfo/instructors/motorgliding.htm)

### Regional Safety Officers

RSO club allocations are listed here  
[www.gliding.co.uk/bgainfo/safety/documents/rsolist.pdf](http://www.gliding.co.uk/bgainfo/safety/documents/rsolist.pdf)

### Airworthiness Inspectors

There are a number of BGA inspectors across the UK. A proportion of them are approved to issue an EASA ARC. The Regional Technical Officers and the ARC signatory 'Chief Engineers' are listed here by BGA region  
[www.gliding.co.uk/bgainfo/technical/contacts.htm](http://www.gliding.co.uk/bgainfo/technical/contacts.htm)

### Airworthiness Guidance

Guidance for owners of Annex 2 and EASA aircraft is here  
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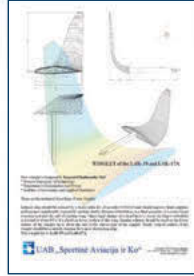
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# BGA accident/incident summaries

AIRCRAFT Ref	Type	Registration	Damage	Date, time	Place	PILOT Age	Injury	P1 hours
144	ASW 19	G-DERP	minor	24/9/09, 13:30	Windrushers GC	48	none	76
Cosmetic damage after running into a hedge during a field landing. Late field selection after pilot rejected two larger fields due to access problems.								
145	Mosquito	G-DDTY	minor	20/9/09, 16:00	Cambridge GC	62	none	595
Glider wheel hit concrete lump at the edge of airfield, damaging undercarriage. Pilot practising short field landings.								
147	PW6	G-CKRU	substantial	26/9/09, 15:20	Cotswold GC	41	none	<1
PIO after a fast approach led to a bounced landing followed by a nose down impact. The early solo pilot got a bit low, rushed the return to the airfield (getting even lower) and made a straight in, downwind approach.								
148	SZD 36	G-DDAC	none	27/9/09, 13:55	The Gliding Centre	50	none	not reported
Undercarriage retracted on landing. The pilot remembers lowering the wheel but does not recall confirming that it was locked down.								
149	ASH 25E	G-DRCS	minor	22/8/09, 16:15	Cambridge GC	50	none	850
Undercarriage retracted on landing. P1 believes that it was locked down and mentions similar events happening to other owners of type.								
151	ASW 20	G-DDST	minor	5/9/09, 14:00	London GC	45	none	1015
In flight flap disconnection led to limited control and a hurried landing in a soft field, damaging underside of fuselage and undercarriage doors. Pilot reports that an interruption when rigging led to him omitting the positive control checks.								
152	Elfe S4d	G-CKPJ	none	20/9/09, 17:35	Eden Soaring	not reported	none	not reported
Wheel up landing. The visiting pilot had also had to be reminded to lower the undercarriage on his site check.								
153	Janus C	G-DEOV	minor	20/9/09, 18:00	Burn GC	78	none	not reported
Glider left runway on landing and struck a pothole. Front wheel displaced and bearings damaged.								
154	ASW 15	G-CKSL	substantial	22/9/09, 14:15	Eden Soaring	65	none	39
Heavy landing damaged tailwheel and rear fuselage. Visiting pilot confused undercarriage lever with airbrakes and made a heavy, sideways, tailwheel first, wheel-up landing								
155	Junior	G-CHOV	none	29/8/09, 15:00	The Gliding Centre	24	none	16
Groundloop after the wingtip caught in long grass at the end of the landing ground run. The pilot landed at the edge of the landing area to avoid another glider.								
156	ASK 21	G-CKEK	minor	19/9/09, 10:00	Devon & Somerset GC	n/a	n/a	n/a
Tow out accident cracked the leading edge close to the wing root. The glider ran away downhill and, with no-one on the nose, the wingtip walker was unable to stop the glider running into a fence post.								
157	ASG 29	not reported	none	18m Nats, 17:00	The Soaring Centre	not reported	not reported	not reported
Groundloop on landing. Trying to avoid a previous finisher, the glider skidded on the soft ground and finished the groundrun going backwards.								
158	Astir CS	G-DDSH	minor	28/8/09, 20:10	Scottish Gliding Centre	61	none	144
Bounced heavy landing after a fast approach with minimal airbrake. Too far downwind on base leg, the pilot had to shut the airbrakes and increase speed to reach the airfield.								
<b>2010</b>								
1	ASK 13	G-DEKD	substantial	5/10/09, 18:10	Midland GC	53/not reported	none/none	2500+
Glider struck a sheep during round-out. The collision left a kink in the fuselage and twisted the fin.								
2	Lak 17	G-CKKK	substantial	1/10/09, 14:30	Cambridge GC	n/a	n/a	n/a
Tow out accident damaged ailerons and fuselage. Wingtip hit a post, swinging the glider round until the other wingtip hit the car.								
3	PA 25 Pawnee	G-BETM	substantial	29/10/09, 10:05	Yorkshire GC	63	none	not reported
Undercarriage collapsed after a normal landing.								
4	Discus	G-CFES	minor	28/10/09, 12:05	Deeside GC	66	none	570
Wheel up landing damaged underside of fuselage and CofG hook.								
5	K6	G-DCHZ	substantial	14/11/09, 02:00	Essex GC	n/a	n/a	n/a
Strong winds collapsed T-hangar onto glider fin. Torsional loads split port fuselage and creased starboard side plywood skin.								
6	n/a	n/a	n/a	12/11/09, 11:10	Buckminster GC	n/a	n/a	n/a
Broken cable released from glider drifted off the airfield and over live electricity cables.								
7	ASK 13	G-DCCF	none	21/11/09, 14:00	Norfolk GC	n/a	n/a	n/a
Buckle malfunction. P2 had to be released by unfastening strap through adjustment buckle.								

**NB: Duplicated reports removed**

## LESSONS TO BE LEARNT

*This is an extract from a club's report of a field landing accident in mid-June in a two-seat glider with airbrakes generally regarded as not particularly effective.*

THE PILOT mentioned to the DCFI in the clubhouse that he intended to go cross-country. He was advised that he needed to get in more current flying practice. He then went onto the airfield, asked permission to fly from the duty instructor and took an aerotow with an inexperienced pilot in the rear seat.

After soaring locally for 20 minutes, he set off on a 120km triangle. After 30km on the first leg he was struggling to find lift. By the time he looked for a field, the choice was limited. There was only one small field with a suitable surface (cut hay) within reach; the remainder under heavy crop. He landed downhill at the upwind end of the cut hay field after approaching at 55kts. The other end had some trees on the boundary. The landing direction was roughly SE, the wind was west about 10kts.

A wingtip caught in a pile of cut hay just after touchdown, causing a groundloop breaking the fuselage in half with some other damage.

The field had multiple slopes; both ends sloped down towards the middle. It was very short. The surface was good but all other aspects, such as size, slope and landing direction, were inconsistent with standard field selection practice. Instructors who examined the field stated that whilst it would have been possible to land an ASW-20 or similar into wind on the only flat area, a landing partially downwind would not have been possible and certainly not in the accident glider.

The pilot was very experienced, but he was barely in flying practice. He had nearly 1,000 hours and numerous field landings, but had only flown once in the previous two months and only five times that year.

### Summary

Leaving it late to look for a suitable place to land is always sticking one's neck out, even more so with the scarcity of good landing fields in early summer when many have tall crops. The discerning reader will glean several additional lessons from this sorry tale.

### Bob Sheffield 1943 - 2009



IT WAS with great sadness that we learned of the death of our dear friend and club member Bob Sheffield. Bob was a founder member of Woodspring Gliding Club (later renamed Mendip GC) back in 1975 and became an instructor in about 1980, giving tireless service until the start of his illness in 2008. Bob joined an Oly 2B syndicate many years ago and spent countless happy hours soaring over the beautiful Mendip hills. He obtained his PPL in 1997 and went on to become a tug pilot.

A mining engineer by profession, Bob worked in Canada before settling down to work in a local Mendip quarry. One of his responsibilities was to carry out blasting and he regaled us with tales of blasts that went slightly wrong, depositing large lumps of rock over the surrounding countryside and causing premature births among some of the local livestock.

Bob was one of life's great gentlemen; nothing was too much trouble and he will be fondly remembered by countless *ab-initios* over the years for his endless patience, quiet manner and very dry sense of humour. He will be greatly missed by all who knew him and the world will be a poorer place for his passing.

Bob leaves a wife Ann, a son Mark and a daughter Laura; our deepest sympathy goes out to the family.

### Barry Hogarth

### Peter Cope 1923 - 2009



PETER COPE had never even sat in a glider until he came to The Mynd for a trial lesson, aged 70. What he chose not to reveal at this time, however, was his considerable flying experience prior to this.

Peter joined the RAF in 1941, gained his wings in 1942 and by 1943 was flying Hurricanes in Burma. In 1944 his squadron moved to Assam and re-equipped with P47 Thunderbolts. His time in Burma involved a long period of extremely tough flying in "the forgotten war".

Afterwards, he returned to England and flew Spitfires for a while before transferring to the Reserve, flying

Vampires. At The Mynd, Peter was an enthusiastic and lively member, never happier than when he was flying.

Almost always there on Wednesdays and Saturdays, if there was any doubt about the weather he rigged the DG-300 in the hope that conditions would improve, which they usually did. He was passionate about The Long Mynd, both as a club and as an outstandingly beautiful area.

He would approach the site from one side and return home to Nantwich down the other in order to enjoy as much of the scenery as possible, often stopping on the way to collect any unsightly rubbish he spotted.

He had his own strongly-held views on many issues. Instructors tried in vain to encourage him to fly a conventional glider circuit, but he stuck resolutely to his "Spitfire" approaches as they became known. He was not quick to talk about the past unless encouraged, but then his stories were fascinating; no one who ever heard his briefing on the correct way to bomb a bridge will forget it.

Peter will be sorely missed for his kindness, his old-fashioned charm and his sense of fun. We extend our condolences to his family and especially his wife Audrey, his daughters Derryn and Suze and his son Jonathan.

### Steven Gunn-Russell

### Derek Phillips 1930 - 2009



DEREK PHILLIPS passed away on 21 December following a prolonged illness.

A very keen pilot, Derek started gliding when he learned to fly on SG8 primary gliders during a course at Nympsfield in 1955. An ex-Aircraft Rigger and Engineer in the RAF during his national service, he was later trained as a BGA inspector in the mid-1960s by Eric Rolph at Moreton-in-Marsh.

During his gliding career, Derek flew as a member of several clubs, including the Midland Gliding Club, the Worcestershire Gliding Club at Bidford - the predecessor of Stratford on Avon Gliding Club - and at Enstone.

Following the Worcestershire's club's reformation as Stratford on Avon GC in 1972, he re-joined and remained a member ever since.



Also a keen and well-respected member of The Vintage Gliding Club, Derek attended rallies at various sites over many years. He spent hours soaring Camphill and Sutton Bank in the Eagle he had rebuilt, sharing his flights with others. Later, he flew the Oly 463, CAT, which he found easier to rig.

Derek was also a member of a Standard Cirrus syndicate based at Stratford on Avon's Snitterfield site.

During a large part of his 37 or so years at Stratford he provided an invaluable service when CofA time came around, charging little or nothing for his services. In addition, he served as technical officer at Stratford for many years.

Derek's work as an Inspector, and later as a senior inspector, on behalf of Stratford members and many others in the gliding movement, especially the Vintage Gliding Club, probably has no equal.

He always had time to help solve problems with gliders, or give good advice, as well as frequently providing access to his workshop for club members.

His efforts on behalf of Stratford on Avon Gliding Club were acknowledged by the club when he was awarded life membership in the late 1980s. Derek also received a BGA Diploma in 2007 in recognition of his contribution to gliding.

Derek had many friends in gliding and will be sadly missed by all.

Our deepest sympathies go to his wife, Pat, and to his son Richard.

**Tony Edlin, Stratford on Avon GC**  
**Jan Forster, Vintage Gliding Club**

#### **Dudley Steynor 1909 - 2009**



**DUDLEY VERNON STEYNOR** died peacefully on 4 December, seven weeks after his 100th Birthday. His centenary was celebrated in fine style with vintage cars and

a steamroller display plus Tiger Moth, glider and Spitfire aerobatic displays involving two of his former pupils.

He will be missed and remembered by anyone privileged to have been taught by him at Booker, from the start of gliding in 1964 until 1993, at the amazing age of 84!

Dudley was an exceptional instructor. He could show his pupils that flying is

simple and not as complex as many instructors make it out to be. He taught handling skills and 'seat-of-the-pants' flying.

His passion was to take on timid or nervous pupils and instruct them to solo and beyond instead of giving up gliding.

These instructing skills did not develop from a BGA Instructor's course. There were none of the well-developed courses that we have today. Dudley's flying skills came from a previous era. He took up flying with his brother Martyn in the mid-1930s.

When WW2 started, the RAF told him he was too old to be a fighter pilot so he was trained as an instructor and flew throughout the war at Booker airfield.

He instructed on Tiger Moths and Magisters with Number 21 Elementary Flying Training School and in 1942 the Glider Pilot Regiment was also trained at Booker, using Tiger Moths. It was during the war, in 1942, that he married Ann Creighton and settled in Lane End, where he stayed for the rest of his life..

Dudley's wartime exploits were many and varied. In one particularly harrowing incident he had a lucky escape when flying a Magister with a pupil. A tethered barrage balloon had become detached and floated across the countryside, trailing 5,000 feet of cable. As the balloon was in cloud they did not see the balloon or cable, which struck the wing and proceeded to cut through it.

Luckily the cable came free at 1,000ft and they flew back to Booker. Investigation showed that half the main spar had been cut through!

He was awarded the AFC in 1944, in recognition of his war effort.

Dudley had a very enquiring mind with a passion for his many interests. Musician, motoring enthusiast (two and four wheels) inventor of many devices, pigeons, flying and instructing.

He had a classical education in music, studying under some of the greatest pre-war pianists and continued to play the piano into his 90s. He had a love of motorbikes, cars and even owned a steamroller!

In the late 1960s he had a share in a K-6CR and a Fournier RF5 Sperber motorglider that he used to fly Ann around the UK, long before touring in motorgliders became fashionable.

For three years he was chairman of

## BGA BADGES

No.	Pilot	Club (place of flight)	Date
<b>DIAMOND HEIGHT</b>			
3-1716	William Chappel	Wyvern (Milfield)	13.10.2008
3-1717	Jeffrey Green	Mendip (Aboyne)	24.9.2009
3-1718	Michael Longhurst	Mendip (Aboyne)	24.9.2009
3-1719	Stephen Riddington	The Gliding Centre (Aboyne)	6.10.2009
<b>DIAMOND DISTANCE</b>			
1-1130	James Clarke	Shalbourne (Rivar Hill)	14.6.2009
<b>DIAMOND GOAL</b>			
2-3271	Jeffrey Green	Mendip (Hus Bos)	14.6.2009
2-3272	Stephen Derwin	SGU (Jaca, Spain)	16.7.2009
2-2374	Mark Player	Bath & Wilts (The Park)	9.8.2009
2-2375	Seth Helstrip	Windrushers (Bicester)	16.6.2009
2-2376	Christopher Lewis	Cambridge (Gransden Lodge)	25.7.2009
2-2377	Simon Urry	Norfolk (Tibeham)	14.6.2009
2-2378	Francesca Aitken	Windrushers (Bicester)	29.5.2009
2-2379	Paula Aitken	Windrushers (Bicester)	2.8.2009
2-2380	Kenneth Powell (Shobden)	Herefordshire	7.8.2009
2-2381	Terence Crow	Windrushers (Bicester)	8.8.2009
2-2382	Gavin Preuss	Shenington (Edgehill)	14.6.2009
2-2383	Vernon Bettle	Essex & Suffolk (Wormingford)	22.8.2009
2-2384	Martin Boulton	Wolds (Pocklington)	14.6.2009
2-2385	Greg O'Hagan	Bristol & Glos (Nympsfield)	7.8.2009
<b>GOLD DISTANCE</b>			
Jeffrey Green Mendip 24.9.2009 Aboyne			
<b>GOLD HEIGHT</b>			
Adrian Long		Derby & Lancs (Aboyne)	8.10.2009
Warwick Horne		Derby & Lancs (Skelling)	22.9.2009
Helen Fraser		Borders (Milfield)	31.10.2009
<b>GOLD BADGE</b>			
2503	Jeffrey Green	Mendip	23.9.2009
2504	Kenneth Singer	Derby & Lancs	22.9.2009
<b>SILVER BADGE</b>			
12057	Robert Johnston	SGU	24.9.2009
12058	Mark Gradley	Trent Valley	22.8.2009
12059	Alan Brownbridge	Burn	8.8.2009
12060	Daniel Goodman	Oxford University	11.4.2009
12061	Mike Crook	Norfolk	31.7.2009
12062	Sam Fisher	Essex	8.8.2009
12063	Roger Shackleton	Bowland Forest	13.9.2009
12064	Matt Woodhouse	Cleveland	26.4.2009
12065	Ian Burgin	Darlington	9.9.2009
<b>UK CROSS COUNTRY DIPLOMA</b>			
1115	Richard Midwinter	Wolds	14.6.2009
1116	Alan Brownbridge	Burn	8.8.2009
1117	Juergen Schaper	Kent	14.6.2009

# OBITUARIES continued

✦ Thames Valley Gliding Club.

Dudley and Ann had three children, William, Linden and James. William learnt to glide in the early 60s and indeed rekindled Dudley's flying ambitions at that time. William then went on to become a commercial pilot.



Booker GC member Dudley Steynor died in December, aged 100

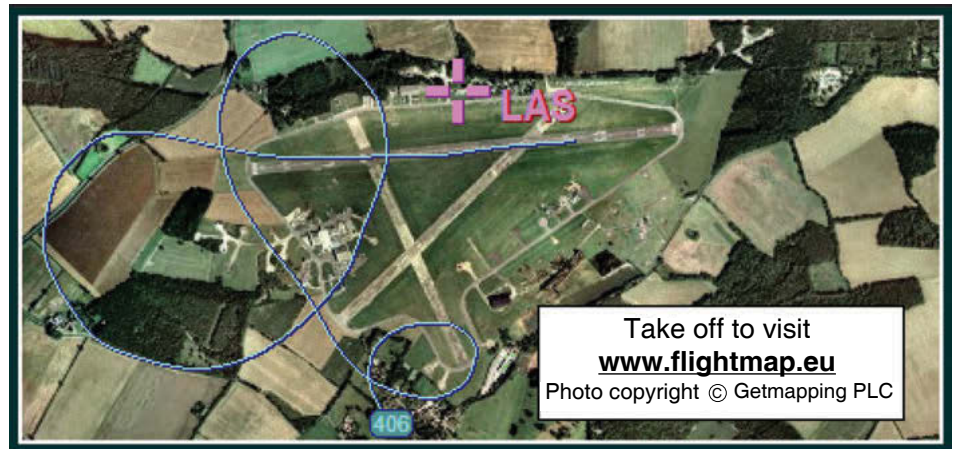
Linden kept gliding as a hobby and has a share in a ASW-15 and James started gliding at a

very young age, going solo at 16, but went on to pursue other active sports.

For many of us, he will be remembered for running the 'Tuesday Evening Gliding Group' at Booker, where his enthusiasm was inspiring and flying only stopped when it was dark. Some of us would then go back to his house, where Ann had cooked us a fantastic meal. Tuesday evenings were special!

For his gliding instructing, the BGA honoured him with a Diploma and Booker Gliding Club made him a lifetime member. Dudley, the gentleman, we will miss you.

**Graham Saw**



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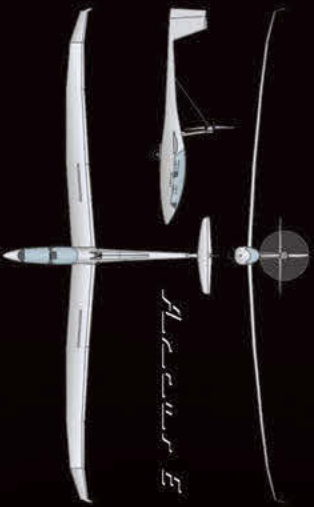


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