NEW ZEALAND'S PREMIER SOARING MAGAZINE

Soaring NZ

SAFETY ISSUE

THREAT AND ERROR MANAGEMENT

• HYPOBARIC CHAMBER

PHOTO CONTEST WINNER

FLYING OVER FRANKFURT • CLUB NEWS

issue 16 june/july 2010

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june/july 2010

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from the editor

june/july 2010

Glider pilots are friendly people, aren't we? We share a sense of community and family. Part of it is because our sport is so small that we know everyone in our club and (by reputation at least) a fair number of other pilots and personalities around the country. It's nice being part of a gliding club isn't it? You know your gliding mates would help you out, they're the nicest people and you'd go out of your way to help them out too, anything they needed, any time.

All right, in the real world where Mary Poppins and Santa Claus don't exist, things aren't quite like that, but by and large the sentiment is true. People you get to know at the gliding club become close mates and we do our best to help our mates. My best mates are members of the gliding community and in making the focus of this issue safety I'm doing my best to look after them. Read the articles, think about them, talk about them with your mates, and then go one step further... If you think your friend, for whatever reason, currency, illness, tiredness, stress, isn't up to flying – call them on it. Be aware of your friends. If you fly with them and near them you get an idea of what they are capable of, what their weaknesses are. Tell them. If you feel you can't, tell an instructor or your CFI. Most post solo pilots only fly with another instructor on their BFR and then they're on their best behaviour. Ordinary everyday flying characteristics might be pointing to a problem long before that. We've lost too many of our friends, let's all work together to look after the ones we have left.

Now let's talk about being friendly. We are friendly people, I'm not disputing that. The welcome I've received as I've visited clubs around the country attests to that. However, that is not always the case when newcomers wander onto our airfields. I know. I've felt this myself. I won't say where but I have arrived on airfields without prior warning and I have been ignored. Once I introduce myself things are fine, but if I was the shy type I'd stand around on the fringes and probably wander off again. Okay, Aimee Dawson's study of Piako Gliding Club (page 37) suggests that, extrapolating her result for that club nationwide, club membership is made up predominantly of males who started flying between the ages of twenty-five and fifty. So as most prospective glider pilots are not women in their forties I can understand a certain lack of enthusiasm for people to rush over and greet me and ask whether I'm interested in gliding. However in talking with a male friend of mine, of a similar age, exactly the same thing happened to him, also at more than one gliding club. He too is quite a well known name in New Zealand gliding and once he introduced himself people were delighted to see him and shake his hand, but until then – nothing.

Photo Josh Money

Come on people. This isn't good enough. If increasing our membership means anything to you and your club, and if it doesn't you're in trouble, you have to greet every stranger that wanders in as a VIP. Every one. All of them. The granny that comes out for her 80th birthday flight is not a prospective member but her children and grandchildren are. Women of a certain age may just have decided that now is the time to do something for themselves; something they've always wanted to do and they've finally got the money and time to do it. They would be a perfect club member.

Do we need to have a national standard for how to greet visitors? Surely not.

Should the clubs roster a meeter and greeter on alongside the duty pilot? I think, since it seems that most club members can't bring themselves to do it otherwise, that it would be a good idea. There needs to be someone who spots a new face, says hello, invites them along to the caravan, finds out what they want out of their visit to the airfield and makes that happen. Make room for visitors in the inner circle, i.e. offer them a chair under the awning, a seat at the picnic table, wherever the regulars sit. Talk to them about what is happening on the field. Explain that there can be a lot of waiting around in gliding but it's a good time to learn from watching others and picking up on the chat. Then make it so.

What say we all make an effort with this too? If you're at the club and you see someone you don't know wandering around looking a bit lost and confused, go and say hello. Yes, it might turn out to be a newish member you've not met before, but they'll probably be pleased to be asked if they need any help anyway.

Let's be friendly and let's be safe.

Jill McCaw

Winning photo. Greg Tucker thermalling over Canterbury. More details page 12

Photo Geoff Soper

next issue

We continue the safety trend with the second of the Threat and Error Management articles. We look at the South African built 18m JS-1.

Deadline for Club News, articles and pictures is 11 July and 22 July for advertising.

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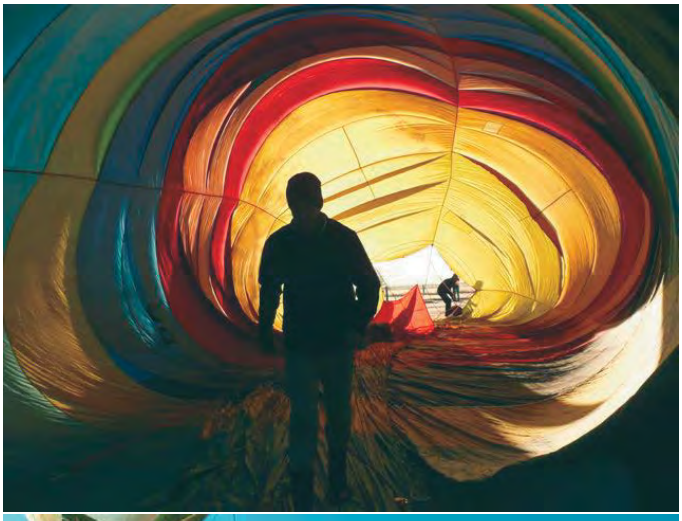

BALLOONING

Nicholas Oakley (17), Venturer Scout, Canterbury Youth Glide member and New Zealand champion balloon pilot showed fellow scouts and Canterbury Gliding Club members what he could do at the recent Aoraki Scouting Aviation Camp at Hororata. Nicholas and other balloonists took scouts for balloon flights, the beginning of a day full of aviation activity. All participants then had a glider flight before travelling to a Wings and Wheels event at Darfield where they had a flight in a DC3. (Nicholas and Abbey Delore in Balloon.)

CENTKA TO FLY AHS 30 MI

The prototype of the ASH 30 Mi may be flown by top rated pilot Janusz Centka of Poland at the next World Championships. Centka is ranked 5th in the world in the 15m class. It will be interesting to see what he can achieve with the 26.5 m wingspan of the ASH 30 Mi.

STUNNING BLANIK STUNT

By now many of you will have seen the video of the Blanik Wing Walking stunts. The link flew through all the gliding newsletters and email groups. Just in case you haven't seen it, it really is worth the effort. It is hard to even conceive of opening the canopy and climbing onto the wing of a glider in flight, let alone then transferring to the wing of another glider, standing up, reaching up to the fin of the original glider, now inverted above you, before parachuting home. While the wing walker deserves congratulations, the piloting skills to put the two gliders in exactly the right position at the right time are just amazing. Hats off to all involved and especially to those who filmed the action so clearly and so well. There is a second video too, talking about how it was done.

Original Video – go to Youtube and search "Redbull Blanik Stunt". One wag commented, 'Chuck Norris does this every day as his own personal warm up each morning before he sits down and has his breakfast.'

For the other search "How we did it – Redbull Glider."

CORRECTION

We incorrectly identified a photo of the Arcus on page 16 of last issue as being taken by Bernd Webber. The photographer was Jacques Noel of Club de Vol à Voile de La Motte du Caire in France. We love the photo and apologise for the mistake.

NEW RULES FOR AIR NEW ZEALAND CROSS COUNTRY CHAMPIONSHIP

To make the competition more attractive and easier to enter, the rules have been simplified.

- Sports Class only (Gold Badge holders are not eligible to enter)
- No Official Observer is necessary to verify the flight.
- .igc file to be e-mailed to the Awards Officer.
- Form OPS 04, first page only, to be submitted.
- "SeeYou" OLC Scoring Script will be used to score the flights.
- Pilots can submit as many flights as they wish, however only the three longest flights will count.
- Two Trophies will be awarded, one Trophy for flights in the South Island and one Trophy for flights in the North Island.

More details and the new rules are on the Gliding New Zealand website.

The Final of the SGP 2010-2011 Series will be hosted at the Wasserkuppe airfield, Germany in July 2011.

As most glider pilots know the Wasserkuppe is regarded as the birthplace of gliding as a sport. The FAI gives the following information. Five pupils of the Secondary School "Ludwig-Georgs-Gymnasium, Darmstadt" aged between 14 and 16 years had been experimenting with gliders (hang-gliders without a seat for the pilot) jumping off stacks of wood. On a hiking trip they discovered the slope of the Wasserkuppe and organised a gliding camp using their FSV VIII glider between the 15th and 30th of July 1911. At this first camp they succeeded in flying distances up to 330 metres. The SGP Final will, therefore, coincide with the 100th anniversary of gliding at the Wasserkuppe and will be the focal point of all the other celebrations.

The Wasserkuppe is in a region designated as a Biosphere, which is equivalent to a nature reserve area, making this an excellent venue to demonstrate that gliding is a "green sport".

If you are planning to travel to Europe next year, this event would be well worth attending. The qualifying GP rounds are:

Approved Qualifying Grand Prix Races for 2010 - 2011

Location	Dates - 2010	Class	Contact Person
Zar (Poland)	30 Apr - 9 May	Club	Jacek Dankowski j.dankowski@wp.pl
St Moritz (Switzerland)	23 - 28 Aug	15m & Std	Bruno Minder bruno.minder@swiss-jet.ch
Nitra (Slovakia)	11 -18 Sep	18m	Vladimir Foltin info@pribinacup.sk
Boonah (Australia)	26 Sep - 2 Oct	Std	Michael Maddock mike@maddogcomposites.com.au

Location	Dates - 2011	Class	Contact Person
Santiago (Chile)	15 - 22 Jan	15m & Std	Rene Vidal Urbina rvidal@bombatek.cl
Saint Auban (France)	1 - 7 May	15m	Brigitte Fontin webmaster@cnvv.net
Ghimbav-Brasov (Romania)	1 - 8 May	Std	Catalin Porumbu glidingteam@yahoo.com
La Cerdanya (Spain)	9 - 15 May	15m	Jové Borras xavijove@gmail.com
Nummela (Finland)	22 - 28 May	Std	Visa Matti Leinikki visa-matti.leinikki@abako.fi
Calcinate Del Pesce (Italy)	28 May - 5 Jun	18m	Marina Vigoroto marina_vigorito@yahoo.it

Note: The dates for QGP races in May 2011 are subject to change so that only one event happens at a time.

SUNRISE OVER OMARAMA

Georgeous sunrise photographed by Terry Delore while up helping award-hunting pilots prepare to fly at Omarama at Easter.

new zealand EVENTS CALENDAR

Tauranga Aerobatic Competitions	October 30-31, 2010 David Jensen email david@puketiro.co.nz
Jerry O'Neill's Cross Country Course	November 7-12, 2010
South Island Regional Gliding Championship	November 13-20, 2010 Omarama
New Zealand Junior Development Squad	December 12-20, 2010 Omarama
New Zealand National Gliding Championships	January 2-14, 2011 Omarama

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Email your news snippets to:
soaringnz@mccawmedia.co.nz.
Please put "logbook" in the subject line.

SOARING OVER THE 9TH BUSIEST AIRPORT OF THE WORLD – FRANKFURT RHEIN-MAIN

By Hanns-H. Lisy

Hanns-H. Lisy is a Lufthansa pilot flying the Airbus A340. He is a keen glider pilot and partner in a Stemme. When a volcano caused large scale disruption to European air traffic it also provided an opportunity a glider pilot couldn't resist. Hanns describes his flight over Frankfurt Rhein-Main for SoaringNZ.

L) Torston Uhe, R) the author Hanns-H Lisy.

In mid January the Icelandic volcano Eyjafjallajoekull erupted for the first time. At that time nobody had any idea how that small volcano could cause the shutdown of nearly all aviation in Europe. On Thursday the 15 April the ash cloud of Eyjafjallajoekull's eruption began to be a threat to the European airspace. Great Britain began to close its airspace in the north until by Thursday evening it was completely closed due to the ash cloud arriving from Iceland. Later that evening all northern European states followed with the closure.

On Friday morning I got a call from a friend and colleague who is also a pilot on Airbus A340 for Lufthansa. He said that the German airspace was closed just after his arrival from Boston. It gave me an idea. Since we had nice weather with sun and a few CU clouds, I called my friend Torsten Uhe, co-owner of our Stemme S 10VT, and told him that he had to take a day's leave to go flying into FRA-airspace.

Our Stemme is based at Limburg-Elz, which is about 50 km north of Frankfurt. Normally if the thermal forecast is good for the southern German region, the shortest flight around Frankfurt class C airspace would be around 400 km – even with transponder. You are never allowed to enter the airspace with a glider.

So we headed due south and soon we heard the first warning from our PDA – "attention airspace". I ignored it and switched to Frankfurt approach frequency, which is my favourite one, because it's my coming-home frequency when I´m flying on Lufthansa's Airbus A340. We stated that we




were a glider, coming from the Taunus Mountains north of Frankfurt and that we requested a clearance to enter airspace C.

To our surprise the controller gave us immediate clearance with a transponder squawk. For the first time ever the controller said, we could head anywhere we wanted to, as long as we stayed above 3000 ft. The thermals were around 1 m/s average and reached up 4000 ft at that time, which gave us only a small but adequate altitude window for soaring.

So we went over the airport and began to enjoy one of the most fascinating views that I have ever had in my flying career. Unfortunately it was so distracting, that we began to lose altitude. I called the controller and told him that we needed to descend below 3000 directly above the 9th busiest airport in the world.

He said, 'No problem.' We are cleared to do so, but we had to stay above 1500 ft, the upper limit of the CTR, which was surprisingly closed for all traffic. So here we were, in a glider in one of the most frequented airspaces of the world, completely legally. Since we had our engine shut down, all other sightseeing and crossing traffic had to circumnavigate us. I bet that there were some guys, trying to get the same spectacular view, really getting angry that they couldn´t cross midfield. Perhaps they were considering shutting down their engine too.

After taking a lot of pictures and that youtube video (Soaring above Rhein-Main), we headed back home.

There were two more days of airspace closure, but we have been the only glider above Frankfurt Rhein/Main since about 1957. The next days were so busy with sightseeing flights and crossing traffic, that a lot of requests to enter airspace C were denied (on regular days you can get a midfield crossing, but only at low traffic hours and via the shortest way. There is absolutely no flying over the approach or departure end of the runways).

If it wasn´t my job to fly people to and from Frankfurt, I would be looking forward for the next eruption....

SoaringNZ nationwide photo contest

The results are in for the inaugural SoaringNZ photo contest. After extending the deadline to take in the whole summer we ended up with a great selection of photos from all around the country. Thank you so much to all entrants. The contest was judged by press photographer Martin Hunter. Martin is a several times winner of the Qantas Media Awards Photographer of the Year. One of his winning photographs was entitled 'Captain McCaw', a photograph of All Black Captain Richie McCaw flying a glider. Martin was assisted by a selection panel made up of John and Jill McCaw but the choice of winner was Martin's alone. Martin had so many useful comments to make about the photos we reviewed; we have included some of them here to inspire all those gliding photographers out there.

THE WINNER

Contest winner Geoff Soper of Canterbury Gliding Club wins the Nikon Coolpix S10 camera donated by Photo and Video International with a photo of his friend Greg Tucker thermalling over the Canterbury Plains. Well done Geoff. Taken from through the back seat side window Martin says of the winning photo, "It has it all. It is clear, sharp, well composed and shows a pilot in his element. The subject is confident and enjoying himself." The photo is so clear in fact that you can see that the glider is in 9 kts of lift as Greg Tucker holds it in a thermal. The photo was taken on a Canon Digital Ixus 500 with an f stop of 7.1 and a 1/250 sec exposure.

There are two runners up.

Murray Wilson took the photo of Bronwyn Torrie and Ross Anderson while on assignment for the Manawatu Standard. Martin thought Bronwyn's face was wonderful. "You can't tell if she is laughing with delight or absolutely terrified." While this photo is great in itself Martin felt it could have been better if the red roof

RUNNER UP

RUNNER UP

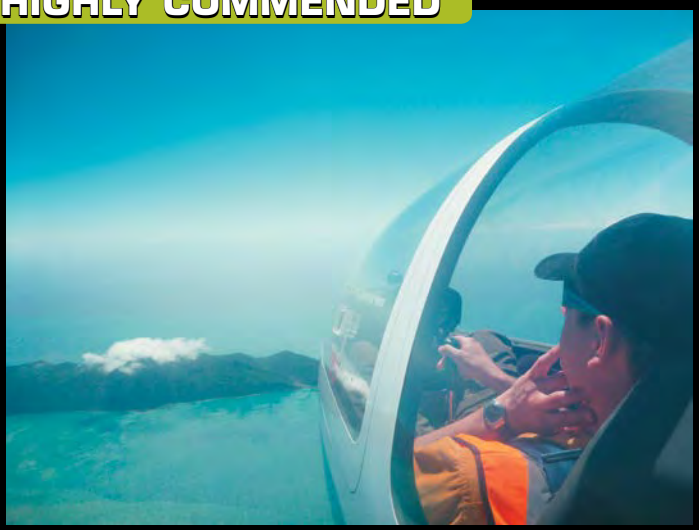
was removed. Obviously you can't always pick your background but if you can you need to avoid glaring contrasts that draw the eye away from your subject. Careful use of Photoshop could help here.

Darren Day's 'Glory Bow' is just a lovely picture. Glory bows are a rare phenomenon caused by light backscattered across a cloud. They are very hard to photograph.

Darren also had two photos highly commended. His self portrait was a very strong picture (and also a good advert for Canteen) and his picture of a student flying towards Kapiti Island was stunning. Martin commented that this would have been a much stronger photo if this had been framed better and the whole of the island had been captured in the picture. He felt the student's pose suggested he was focussed on flying to a goal while being relaxed about it. The colours in the picture are lovely.

HIGHLY COMMENDED

HIGHLY COMMENDED



HIGHLY COMMENDED

"Athena" by Oliver Winkler

DG400 Nick Wisnewski

Highly commended:

Oliver Winkler's picture of Terry Delore flying his ASH 25 'Athena' (with John McCaw in the back seat). This photo uses motion blur to show speed well.

Two of Daniel Farley's stitched pictures entitled 'Morning' and 'Night' made the shortlist. He gave us a nice and different view of his airfield and put in a lot of work to make these excellent images. We felt that a little more foreground might have balanced them better. The 'Night' picture may have been better as a single image with the sun and gliders in the centre.

Nick Wisnewski took an eye catching photo of a DG400 taking off. Martin felt that this picture didn't quite make it because it needed more blur to show motion or conversely should have had the background sharp. He said it falls in between being not quite blurred enough or not being sharp enough however it was a very credible effort. It is nicely framed and well focussed on the cockpit and pilot.

Bob Martin gave us what we assume to be a self portrait. Unfortunately the stick poking up distractingly under the wing spoils this picture. Martin liked the different angle and the interesting sky. The exposure is not quite right in this picture either.

There were several pictures that caught our attention but for one reason or another weren't winners. Darren Day's shot of November Kilo approaching Titahi Bay has glare from the canopy in the corner. Simply cropping the picture would remove this and tighten the composition.

Self Portrait Bob Martin

Night Daniel Farley

Morning Daniel Farley

ORIGINAL

November Kilo **Darren Day**

CROPPED

Nick Wisnewski has two photos which are almost brilliant. The photo of the glider posed with Mt Taranaki behind it needed to include the top of the mountain. The rest of the composition is excellent, right down to the interesting trees and the cattle in the background. If you are taking pictures where you have time to stand still and look, then check what you are seeing through the viewfinder. Simply lifting the lens or turning the camera on its side and taking a photo in portrait mode would have made all the difference to the shot. The other thing to remember is that we are now working with digital cameras. You don't have to take just the one picture. Take several. Be like John McCaw and take hundreds. It doesn't matter and it gives you more chances that one of them will turn out to be excellent.

Mt Taranaki **Nick Wisnewski**

Nick's photo of the Blanik flying past the mountain is great, but it is white on white and that makes it quite flat. You can't do anything to change the colour of the mountain or the glider, but if the photographer had been able to take a sequence of shots it is possible he might have got one in another few seconds that put the glider against a contrasting background of the farmland, still beside the mountain and with the sea included as well. This would have been a brilliant photo.

We liked Adrian Faulkner's picture of a Grob landing at Nelson Lakes but unfortunately it is not high enough resolution for us to use for anything other than a small illustration. If you are considering taking pictures to print or to be used as illustrations for magazines, for instance to go with your brilliant story of your marvellous flight for SoaringNZ, then set your camera to its highest resolution. These days you can get memory chips that will let you take hundreds of high res pictures on one card. If you're worried carry extra cards.

Blanik and Mountain **Nick Wisnewski**

Grob at Nelson **Adrian Faulkner**

Thank you to all our contestants. We will be doing this again. Thank you to Photo and Video International for the Nikon Coolpix S10 and an especial thank you to Martin Hunter for his judging skills.

SAFETY FIRST

Many of us have lost gliding friends in the past few years. What is dreadful is that we have lost people to what quite possibly have been preventable accidents. The fact that several of these fatal accidents have involved experienced pilots with many hours of successful flying behind them is very worrying. The Civil Aviation Authority, the coroners who have dealt with the investigations, Gliding New Zealand and ourselves, the gliding pilot friends and acquaintances of those who have died, are very concerned. As a consequence of this concern, this issue of SoaringNZ has a strong focus on safety issues ...

We have an 'official' story by Arthur Gatland. George Rogers, President of GNZ says this about the article.

"GNZ is working with contributors to develop advisory articles aimed at improving understandings of some of the untoward factors which have come to light in recent accidents. The articles will be published in SoaringNZ, and the first is in this issue.

Arthur Gatland, well known in gliding and aviation circles, has developed a series of articles on Threat and Error Management (TEM). These provide models and practical guidance glider pilots can adopt to enhance TEM in gliding and consequently safety. The techniques, if employed, will minimise the risks of repeating some of the unfortunate factors outlined in the safety recommendations noted in the Safety Corner of this issue. It is fantastic that Arthur has developed these articles, and I express a great vote of thanks to Arthur.

The articles are essential reading for all pilots."

In this issue we also have a wonderful international article on the dangers of Complacency by Stanford University's Professor Martin Hellman, one on Landout Safety by Northern Operations Officer Steve Care, and an interesting piece on the dangers of high altitude flight experienced safely in a hypobaric chamber by Roger Read.

We hope that these articles will help people think, assess and work harder at keeping themselves safe.

PART ONE OF THREE PART SERIES

GLIDING – THREAT AND ERROR MANAGEMENT

– OR HOW TO REDUCE MISTAKES AND FLY SAFELY

Arthur Gatland

Arthur Gatland started flying in 1963 at age 13 and has accumulated 17,000 flying hours including 2,500 hours in RAF fighters such as Harriers, Hunters, Hawks. He is currently a Boeing 777 Captain and instructor, and for ten years was Manager of Training and Flight Standards for Air New Zealand. He is an A Cat glider instructor, with a Gold C and 3 Diamonds, and was a previous CFI of the Auckland Gliding Club.

In Soaring NZ issue 15, George Rogers asked why our gliding accident rate has been so bad over recent years. The fact is that on average we have one fatality a year with all the tragedy that this brings to families and friends, not to mention the huge cost in damaged and destroyed gliders and associated increase in insurance costs etc. Yet gliding is inherently a relatively safe sport, and historically has been second only to airline flying as one of the safest types of aviation. To my knowledge, none of our spate of accidents has been the result of structural or mechanical defects – all have resulted from pilots unnecessarily putting themselves in a situation that for various reasons have resulted in a crash. Ridges, rocks and trees do not suddenly leap out and hit gliders – yet we manage to collide with them on a regular basis. And despite the fact that gliders are safer, have better handling and performance, better airbrakes, more comfort, and better visibility than those of 30-odd years ago, our accident rate is worse.

Why is this – and more importantly, what can we do about it?

yourself, then you can replace those descriptions with "arrogant / overconfident / unrealistic / unaware" (delete where applicable).

This series of articles applies to every glider pilot in New Zealand, regardless of experience.

I believe that, like many accidents where contributing causes are often small but multiple, there has been a lowering of our flight standards for a number of reasons. These include:

- lower average flying hours due to less leisure time and financial constraints.
- higher performance gliders that create an unrealistic expectation that we always get home from cross-country flights.
- changes to national culture where people think they have the right to be more independent which leads to less discipline, reluctance to ask for on-going training, less time to talk to and listen to more experienced pilots, and unfortunately a lowering of instructing discipline and standards.

And despite the fact that gliders are safer, have better handling and performance, better airbrakes, more comfort, and better visibility than those of 30-odd years ago, our accident rate is worse.

Already, I can see a number of pilots losing interest in this discussion – because "This doesn't apply to me – I'm experienced / skilled / smarter / an above average pilot (delete where applicable) and I don't make those mistakes." If you really believe this of

We all – individually and collectively – need to look at ourselves and see where we can attack these issues and reverse the slide in our flying standards and safety.

One technique we can all use to improve our flying safety is the

If someone talks to you when you are halfway through your pre-takeoff checklist, recognise that this threat is likely to result in your forgetting something, and start again from the beginning.

use of Threat and Error Management, which I will describe in this and following articles. This is a simple technique of understanding the type of situation where we are more likely to make a mistake and to prevent making errors which might lead to disaster.

"To err is human." (Cicero, 50 BC)

In other words, we ALL make mistakes. Accepting this is an important step to understanding when and where errors occur, and therefore how to prevent errors. Pilots who think they don't make mistakes are (a) seriously mistaken (b) dangerously over-confident (c) have a limited life expectancy!

Errors are most likely to occur when we are faced with a THREAT, that is, something that presents a change to what we are used to, or what we are comfortable with. To understand what constitutes a Threat, I will introduce the concept of a Pristine Flight (courtesy of Continental Airlines). In this first article, I will concentrate on a local soaring flight and discuss possible threats, and in part 2 and 3 we will expand this to cross-country flights, and competition and other specialised flights.

Pristine Flight

This is a simple gliding flight where everything goes exactly to plan. You arrive at the airfield and the club glider you want to fly is available, already DI'd and at the launch point. Helpers are readily available to pull it out for you, and a towplane is waiting. You are current on type and an instructor is happy to authorise your local flight. There is no wind and no lift or associated sink. There are no other gliders flying and no delay to your takeoff. The weather is pleasant; not too hot. You aerotow to 2000 feet and glide gracefully back to the circuit, practising a few turns and speed control. Your well-planned circuit is uninterrupted by other gliders or crosswinds and landing is uneventful. This is a Pristine Flight – arguably a bit boring, but with no real interruptions to your simple plan.

Now let's talk about likely variations – many of them very common – that can upset your plan. You planned to be at the airfield by 11.00am but you are annoyed that you are late because your partner was late getting back from shopping. No-one has bothered to get the glider out of the hangar and it hasn't been DI'd. You are short of time so you must hurry these processes. The only instructor is flying, and you haven't flown for two months so although you think you might need authorisation, you decide it'll be OK to go without. There is only one other person to help push the glider on to the start line, an inexperienced student who you need to brief. After the exertion of pushing you are hot before you even get into the glider. You strap in and as you are doing your pre-takeoff checks, someone interrupts you to ask for your tow tickets. It's a bit windy and you haven't briefed the towpilot, so after takeoff he annoyingly takes you downwind to what he probably thinks is a good looking cloud. You don't find lift, but you practice a few turns, then head back to the airfield, encountering unexpected sink on the way. Your circuit is lower than you would have liked and you are concerned about another glider on circuit at the same time. Your circuit is a bit rushed, and with a short finals, you don't quite sort out the crosswind so the landing is a bit untidy. After landing the next pilot points out that the DI hasn't been signed today.

All of these variations to the Pristine Flight constitute Threats that will increase the likelihood of you making a small slip, or an

A race to the finish and other traffic has created a change from pristine flight. The lead glider is about to land with his wheel up.

error in judgement, or forgetting something – regardless of your experience. Let's review what these Threats might include:

Time pressure	Frustration
Impatience	Procedural uncertainty
Heat discomfort	Interruptions
Weather changes	Poor preparation
Unexpected sink	Outside interference
Inexperience	Lack of currency
Fatigue	Other traffic
Poor training	Poor health
Inexperienced crew	Launch delay
Turbulence	Unfamiliar airfield
ATC / airspace	Technical issue
Dehydration	Hunger

Cross-country introduces an additional list of threats which we will discuss in the next article.

Note that many Threats are normal and some even desirable. For example a moderate wind might be appreciated for ridge soaring, but results in a crosswind takeoff and landing, and results in a headwind when returning to the airfield. Good thermals can also cause unwanted sink on the downwind leg in the circuit. You may be aiming for your 5-hour endurance, but this will raise threats of thirst, hunger, fatigue, etc.

Threats

All threats increase your likelihood of making an error. A proficient pilot can easily recognise all threats, and implement a strategy to prevent an error resulting. Some examples might include:

Interruptions

If someone talks to you when you are halfway through your pre-takeoff checklist, recognise that this threat is likely to result in your forgetting something, and start again from the beginning.

Procedural uncertainty

Any time you hear that nagging voice questioning something (are we clear for takeoff, did I do my checks, did I sign that DI, do I need instructor authorisation, did I remove the tail dolly) – then STOP and double-check. Observers always respect someone who acts professionally and questions some small detail, in stark contrast to someone who makes an assumption and is proven to be an idiot.

Time pressure

Any time you feel pressure to hurry – for whatever reason – you should be aware that this is a major cause of errors, through forgetting processes (tail dolly removed?), forgetting to take essential equipment (maps, drinks, hat etc.), ignoring procedures (takeoff checklist) etc.

Other traffic

A good pilot will always join the circuit assuming there will be other gliders rejoining, and have sufficient height to give way to a

Heavy landing.

lower performance glider. He/she will also know the rules regarding landing if there is a glider ahead on final approach – where to land etc.

Unexpected sink

Always anticipate sink in the circuit. However if a circuit is flown using correct techniques this should be self-correcting – don't rely on the altimeter, or ground features for turn-in points, but assess your angle to landing point. Any unexpected sink can easily be corrected by adjusting distance out and turn-in point – if a pilot is alert to the possibility of unexpected sink.

Inexperience and Instructor Responsibility

Early solo pilots cannot be expected to recognise all threats existing on any particular day. This is why an instructor must authorise and brief early solo pilots. It is the instructor's responsibility to assess all threats and brief an early solo pilot accordingly. The brief might be along the following lines (abbreviated):

I have checked your logbook and confirmed you are current on this glider type. Your aim of today's flight is to search for lift and practice thermalling. There are several other gliders airborne, so let's review how you join a thermal if another glider is there first. Remember when you are concentrating on thermalling and speed control that lookout is actually more important. There is a moderate northerly wind today, so stay upwind of the airfield. Always keep the airfield in sight and have a plan on how to rejoin circuit if you don't find lift. Be aware of the likelihood of sink in the circuit area. Where will you land if another glider has landed ahead of you? It's hot today – have you got a sunhat and sunglasses? Now make sure you take your time getting comfortable in the cockpit and doing your checks – don't let anyone rush you. Any questions – anything you have any doubts about?

The main ways that new pilots can gain experience and knowledge is by instructors or experienced pilots passing on these thoughts, OR learning by making mistakes! Which method is better??!!

Any time you hear that nagging voice questioning something (are we clear for takeoff, did I do my checks, did I sign that DI, do I need instructor authorisation, did I remove the tail dolly) – then STOP and double-check.

COMPLACENCY: WHAT

Martin Hellman

This is taken from the American Pacific Soaring Council (PASCO) Soaring Safety Seminar in November 2007. Martin Hellman is a Professor Emeritus of Electrical Engineering at Stanford University, was involved in the birth of internet security and has a deep interest in the ethics of technological development. He is a glider pilot in his spare time flying his Stemme out of Hayward California. Google his name for an interesting look at "Soaring, Cryptography and Nuclear Weapons" and the connections between these seemingly unrelated subjects. We also recommend that you take the time to go on line and check out the articles mentioned in the text.-Ed

We all know that complacency is our enemy. But probably none of us think of ourselves as complacent because once we recognize our complacency, we do something to change it. So, in a sense, the real enemy is complacency about complacency.

None of us think of ourselves as resembling Alfred E. Newman, the "What me worry?" Mad Magazine character – until after an accident, when we rigorously review what we could have done differently and often see ourselves looking just like him: stupidly happy and oblivious to danger. But that only seems to occur in hindsight. The goal of this article is to try and help us see complacency before it causes an accident, when it can make a difference.

To do that, I will focus on three areas. The first I'll call the 99.9% safe manoeuvre. This is one that you can execute safely 999 times out of a thousand. But one time in a thousand, there will be an accident, possibly fatal. If we execute such a manoeuvre only once in our flying careers, there's a small risk. But, if we execute it a hundred times, there's a good chance we'll get bitten. Worse, the fear level that we felt the first few times evaporates as we become comfortable with the manoeuvre. But that's just complacency masquerading as confidence in our skill level.

Of course, there's nothing magic about 99.9% and the danger also applies to a 99% safe manoeuvre or a 95% safe manoeuvre. Each success still builds more false confidence – complacency – but we tend to get bitten earlier. This was the case in the loss of two of the world's most expensive gliders, the Challenger space shuttle in 1986 and Columbia in 2003.

The original design for the shuttle booster rocket did not allow for any O-ring erosion, but a number of otherwise successful flights with some O-ring erosion produced a mentality that there was nothing to worry about in spite of this unpredicted behaviour. In such a "What, me worry?" environment those who expressed concern were ignored. The Thiokol engineers who tried to delay the launch due to the cold weather were seen as overly cautious ninnies – with catastrophic results. Escaping the grim reaper time after time led to complacency instead of a design review and modification. Those steps only occurred after the disaster.

Similarly, a number of shuttles had experienced loss of some heat shield tiles due to fuel tank foam and ice hitting the shuttle during liftoff, but the level of concern only reached appropriate levels after Columbia was lost to this failure mechanism.

Returning to our more normal gliders and altitudes, here's a list of manoeuvres I'm proposing for examination in this session – and I emphasize the word proposed:

ME WORRY?

Photo courtesy of Bret Willat, Sky Sailing, Warner Springs, CA

High speed low passes
Crossing ridges at low altitude
Close-in ridge flight
Becoming enveloped in clouds
Landing out – especially in difficult circumstances

I am not saying that you shouldn't do these things. But we have experienced fatalities among experienced pilots in all five categories, so they warrant some examination.

Considering high speed low passes (technically a missed approach), as most of you know, you start this manoeuvre from altitude and dive to convert height into speed. You skim a few feet over the runway, near the glider's maximum speed and then pull up, reconverting most of that speed into altitude. This gets you to an altitude of about 500 feet, from which you can fly an abbreviated pattern. It's an entrancing manoeuvre to watch, as you can see from the picture above.

While beautiful to watch, low passes entail added risk. Kempton Izuno is known to most of us for his superb piloting on long distance soaring adventures. When I spoke with Kemp about this session and low passes, he told me he no longer skims the runway because of a scare he had:

"I got a good scare from attempting this in my Libelle at Minden a number of years ago. It was the end of a long triangle flight and I was well ahead of my crew. So I got relaxed and hadn't noticed that a waving action had set up. On the long dive, I didn't notice that the speed wasn't picking up as it should. I was diving in sink, and by the time I reached the runway I only had about 100 knots and then was pulling up into sinking air. I had at best, 300 ft on the downwind leg and barely made the runway. Only on final did I notice puffs of dust blowing off the side of the runway indicating the rotor touching down. I was lucky it didn't turn out worse."

Am I saying you shouldn't do low passes, or that the pilot in the picture is taking an unacceptable risk? Absolutely not!

What happened to Kemp on this particular day? He hit unusually strong sink during the dive – one of those rare situations that made this a 99.9% unsafe manoeuvre for him. So he ended up close to the ground much earlier in the process than he should have, and he had no warning of the problem until it was too late – there was no easy way to monitor his total energy and note that it was dissipating more rapidly than normal, plus he was preoccupied with a number of other variables. While he pulled off the landing with no damage to himself or his ship, he decided it was a risk to which he didn't want to expose himself again. So now, if he does a low pass, it's two to three hundred feet above the runway, not right on the deck. That extra safety margin makes the pass a lot less risky.

Am I saying you shouldn't do low passes, or that the pilot in the picture is taking an unacceptable risk? Absolutely not! That's an individual decision, based on skill, the conditions (stable air would have removed the possibility of Kemp's particular problem), and more. What I am saying is that low passes entail extra risk that we need to take into account both in our decision making process and when we talk about them to others whose skill level we don't know. For example, the pilot shown above has over 16,000 flight hours, has been doing this manoeuvre at air shows for over 30 years. He will not do them in turbulent conditions, ensures that he has radio contact with a trusted spotter on the ground who is watching for traffic, and usually does them downwind so that he only has to turn around in a 'tear drop' to land. The fact that someone with that kind of experience exercises that much caution should say something to the rest of us.

Taking ridge crossings at low altitude as the next example, let's look at Bruno Gantenbrink's famous 1993 talk debunking the statement that the most dangerous part of soaring is the drive to the airport. It's available at DG's web site in the Safety section.

Gantenbrink exposes that foolish statement for what it is, calling it "the dumbest, most ignorant saying that has found a home in our sport." He also notes that in the 1985 world comps, when he was flying with Klaus Holighaus, they were about a mile from a pass with only a couple of hundred feet of extra altitude, and did not know the wind direction. Holighaus crossed the pass while Gantenbink turned back into bad weather, and a loss. Gantenbrink states, "There was a 99% chance that I could have made it through the pass. Klaus was a little higher and made it. I would have made it if nothing unforeseen had happened. However, only the smallest thing needed to have gone wrong, such as flying a little to the right or left of Klaus' path. That can make a big difference in a pass."

In August 1994, a year after this talk was given, Holighaus was killed, apparently attempting to fly through a small pass. Was this

a case of a 99.9% safe manoeuvre gone bad? I can't say for sure, but it seems to have some of the earmarks.

Close-in ridge flying is a manoeuvre that kills experienced pilots at a too regular rate as noted by JJ Sinclair in his safety article, "Don't Smack the Mountain 101", also available on the DG website. There's also an excellent discussion in the September 1984 issue of Soaring magazine, by Henry Combs, entitled "That Beautiful Mountain and Her Sinister Trap: A Possible Explanation for Some Unexplained Ridge-Soaring Crashes". http://ee.stanford.edu/~hellman/soaring/Combs.pdf

Both of these articles note that it only takes about 500 fpm differential lift on the wings of a glider to totally overpower the ailerons. Most of us have experienced such 'bullet thermals' that hit one wing and bank the plane uncontrollably. At altitude, they're usually just a nuisance, but if you're close to the ridge and it's your outboard wing that has the extra lift, it's a recipe for disaster – you're banked into the ridge and can hit it within a second, leaving no time to recover. That combination of events doesn't happen often, which is what puts it in the 99.9% safe category. But it seems to happen often enough to kill some very good pilots on a regular basis.

We glider pilots love clouds, or more accurately, the lift that is often associated with them. They're like big road signs in the sky saying, "Come here for a great ride." But, like anything else, too much of a good thing can become big trouble in an amazingly short period of time. And sometimes we don't realize that a good thing is going bad until it's too late. Kempton Izuno's "Into the Bowels of Darkness" (www.pacificsoaring.org/westwind/2005_12_WestWind.pdf) describes such an encounter that could easily have been fatal, but fortunately turned out fine for him and his ship. While reading his complete description is best, here's a short summary:

The day had been much weaker than predicted, and Kemp was ecstatic when he finally found a cloud with strong lift. But the lift became unusually strong as he got near cloudbase, accelerating so rapidly from about 10 kts to almost 30, that he didn't have time to retreat. Suddenly, he found himself in the cloud. Without the horizon to cue him as to what was up and what was down, Kemp became spatially disoriented and, as is usual in that situation, found himself in a high-g dive. Kemp maintained his cool, remembered a recovery technique that he'd read about in Soaring (see his article for a description), and was able to utilize it to escape before the wings were torn off the glider – but not before he found himself flying backward! Kemp now maintains a larger safety margin when flying near clouds and is alert to the fact that the feeling of ecstasy when you find strong lift can turn sour almost instantly. Note that the 'unusually strong lift' he encountered was what turned a 99.9% safe manoeuvre into an almost fatal one.

Witnesses with whom I talked soon afterward called it a fluke that the fence was in just the wrong place – again signs of a 99.9% safe manoeuvre.

Not all attempts to get out of clouds end so well. Several years ago, I lost a friend in an accident that probably involved becoming enveloped in clouds. Since he didn't survive and there were no

witnesses, we don't know for sure, but the evidence points that way. He was flying in wave and appears to have been caught on top of the clouds as either the gap between them closed or as he was blown over a cloud by the strong winds and then got sucked down into the cloud when he hit the sink portion of the wave.

As to the danger involved in landing out, most glider pilots who routinely land out are rightfully proud of their ability to put their glider down in a farmer's field, a dry lake, or similar. While almost all landouts are uneventful, or involve at most minor damage to the ship, to avoid complacency it is necessary to remember that occasionally they can go terribly wrong. I've heard a number of pilots talk about coming close to hitting barbed wire fences or other obstacles that could not be seen from the air, and which could have resulted in disaster. While a fatal landout accident at Minden in May 2000 had other causal factors, he would have survived if he hadn't hit a barbed wire fence. Witnesses with whom I talked soon afterward called it a fluke that the fence was in just the wrong place – again signs of a 99.9% safe manoeuvre.

The second theme of this article is that new pilots need to be careful in imitating what they see more experienced pilots do – and that experienced pilots need to add cautions when describing exciting exploits that should not be imitated by newer pilots. Next time you hear someone describe close-in ridge soaring, high speed low passes, and similar manoeuvres that should not be attempted by newbies (or by anyone without recognizing the risk involved), notice whether they talk about the risk or just the thrill. In my experience, the risk is rarely mentioned.

On June 11, 2005, a student pilot was killed in what was almost surely a ridge flying accident. The NTSB accident report states that the glider "impacted terrain ... The student pilot ... was fatally injured [and] ... had approximately 12 hours of flight experience over 18 training flights ... this was the student pilot's first flight in this make and model of aircraft. ... A search airplane found the glider on the back side of a mountain ridge ... The tow-pilot stated ... that the 'ridge lift' just northeast of the airport was 'very good.'" As in most accidents, there were a number of factors, but I think you can see why I suspect inadequate caution when describing the thrill of ridge soaring to new pilots may have been one of them.

There's one last theme that I hope will help us see problems before they evolve into accidents or fatalities. Many years ago, I heard an expert on industrial safety give a talk in which he noted that for every fatality, there were roughly ten injury accidents; for every injury accident, there were roughly ten property damage accidents; and for every property damage accident, there were about ten "scares" or near accidents.

He then argued, and I heartily agree, that to avoid fatalities, we should try to treat an injury accident with as much concern as if it did result in a fatality. To avoid injury accidents, we should try to treat a property damage accident as if an injury did occur. And to avoid property damage accidents (we do love our ships, right?), we should try to treat scares as if an accident had resulted – and certainly not as if cheating fate means we have the skills needed to try a stupid manoeuvre again! That's called complacency and that's when we end up looking like Mad Magazine's Alfred E. Neuman.

PADDOCK LAND

By Steve Care, Northern ROO

Steve Care is the Northern Regional Operations Officer. He has 1800 hours gliding and 130 hours hang gliding. He has been instructing since 1984.
Like a lot of others he is passionate about gliding and particularly cross country flying. Steve is keen to see our safety record improve and New Zealand gliding grow rather than go backwards.

There have been 18 gliding accidents since January last year and nine of them involved paddock landings – that is 50%. We need to find some of the causes and do our best to reduce them. It appears that the guys that have been around a while are featuring far more than they should. Approx 52% of the total accidents involved pilots with more than 1,000 hrs.

Additionally if we look back over the statistics, there seems to be a common theme of seemingly non-normal decision making at very low altitude, however they all have very human factors that led the pilot to that point.

Skill

There is no question that with more experience comes more skill, but there is a point where all the skill in the world is not going to get you out of trouble. There is an old saying "A superior pilot is one who uses his superior judgment to avoid having to use his superior skills." We often don't know where our skill level is, until we make a mistake and have to use it. If you underestimate it you might not achieve your goals and if you overestimate it, you might end up having an accident. It's always better to lean slightly toward the side of caution. Keep in mind that your goal will still be there another time.

Knowledge

I chaired a short workshop at the Taupo Nationals on paddock landings and how we should be teaching them. Most participants thought training was an unusual topic at the Nationals, but what I wanted to get across was a discussion on the basics, as well as means to improve our training. If you have been around a while, you can end up forgetting the basics and just making up your own idea of what is important and what is not. In a group situation it's harder to go against a clear consensus of safe practices. Some very good ideas came out of this session that are going to be very worthwhile for future paddock landing training.

Rules

I am referring to self imposed rules and rules that are generally accepted when landing in paddocks. If you have set up your paddock landing and you throw a 360 degree turn at 300ft agl, in my view you are stretching the boundaries of safe flying. If you have left your decision making until you are very low on the basis that you are experienced, you can end up making decisions that you would not make if you were doing a circuit and landing at your home airfield. Quite a few of the recent accidents have come

It's really important to be both physically and mentally prepared. Remember the acronym "IM SAFE" and don't compromise. Stress and fatigue can have a huge effect on your decision-making, as can that insidious enemy, dehydration.

ING DECISIONS

about by pilots doing these things and then running into problems. Perhaps you have done it before and you have got away with it, leading you to believe that it is okay. Over time, it can change your whole attitude to what is safe, without you really being aware of it.

It's also human nature to want to tell others if you have had a low scrape and your superior flying skills got you out of trouble. This can lead others to also think it's okay. It's not.

Planning

In some ways cross country gliding is very much like a game of chess. You are trying to think a half a dozen moves ahead all the time. This means thinking about the 'what if's' as well as your planned strategies. It's very easy to become so focused on a particular task that it becomes too much effort to think of the possibility of any change in your situation. If you haven't thought of it ahead of time and your situation does change, it's then hard for you to then change your focus to a safer option. Time can then work against you to make rushed decisions that don't work.

Preparation

It's really important to be both physically and mentally prepared. Remember the acronym "IM SAFE" and don't compromise. Stress and fatigue can have a huge effect on your decision-making, as can that insidious enemy, dehydration. Have everything prepared: equipment, crew, task well before the flight and avoid taking any additional emotional baggage with you, such as job or family stress. Make sure you are current enough to tackle the task.

Stress

If you are doing a paddock landing, there should be a moderate but not a large amount of stress involved, and you should be nowhere near the point of being in terror. If you are experiencing large amounts of stress when you are doing paddock landings, then it could be a lack of preparation, technique or a past bad experience. Stress can rob you of clear thought processes, so it is important to keep on top of it. FDR said, 'We have nothing to fear but fear itself.'

He is right, but it is also important that you don't end up so casual that you don't consider the 'what if's'. A complete lack of stress will blind you to the possibility of anything going wrong, until it is too late to react.

Summary

Cross country flying is unbelievably satisfying and rewarding. For me it is what gliding is all about and I am sure we all want to promote and support it as much as we can. It doesn't need to be dangerous if you remember the basics and keep thinking all the time. None of us are immune from having an accident, but we can minimize the risk with good preparation, knowledge, planning and understanding of how our emotions and attitudes can affect the decisions we make.

Soaring NZ

David Jensen displays his Discus CS at the Tauranga Airshow.

Photo April Stark

HYPOXIA

By Roger Read

Roger Read's flight history spans 39 years, with 20,000 hours in a variety of military fast jets, commercial jets and gliders, to over 36,000 ft. Current holder of the National two seat glider altitude records, he has experienced first hand the potentially hostile environment at high altitudes. His extensive background in Human Factors training and general instructional experience in both gliders and aeroplanes, along with numerous sessions in the hypobaric chamber, has allowed him to establish an excellent working relationship with the RNZAF team who operate the chamber. He has been instrumental in getting them to once again allow limited access for civilian hypoxia training.

In November last year, a team of twelve keen glider pilots joined me in a visit to the RNZAF's Aviation Medicine Unit (AMU) at Hobsonville, Auckland. This facility, under the command of Dr Ben Johnson, has a staff of specialists in various medical fields that offer training and operational knowledge to assist aircrew in achieving safe flight operations. Their focus is on the human factors that apply to flying operations, topics like fitness for flight, vision, illusions, orientation, spatial disorientation, judgement, decision making, resource management and the effects of flying at high altitudes above 10,000 feet where hypoxia becomes a threat to our safety. We were there to experience this hypoxia in a controlled environment as AMU is the home of NZ's largest hypo baric chamber which is used to simulate being in an unpressurised aircraft, like a glider, at high altitude. In the chamber, we would be exposed to the real effects of the reduced pressure that occurs as we gain height using the wave systems we are so fortunate to have access to at many soaring sites in NZ. After the chamber run, we would also take the opportunity to look at disorientation and how easily we could lose control if we end up in cloud without the instruments and skills to use them properly.

The chamber is like a huge tank that has pumps to draw the air out to lower the pressure within. It is fitted with oxygen systems, safety equipment and communications gear for 15 people; 12 'students' and 3 medical staff/instructors. The chamber is a complex piece of kit and was recently subject to an extensive refit to extend its service life. Prior to this, access for civilian use had been restricted and our party of glider pilots was to be the

Just the attention to detail with ensuring showed how serious this needed to be.

TRAINING

first such training for over 15 years so we were very pleased to be able to get back in there. Why? Well, there is just no substitute for actually experiencing and witnessing the dangers of hypoxia in a controlled situation. It really hits home the absolute need to understand the reasons for ensuring all operations at altitude are well planned and safely executed if we are to enjoy the potentially hostile environment we have access to in our gliders.

Prior to meeting at Hobsonville, attendees were given a power point based training package to help them prepare for the chamber run and disorientation trainer. The material has been tailored to provide the theory a glider pilot needs to be aware of so they understand what is happening and the dangers associated with high altitude operations. It also provides information on our human balance system and looks at why we are so easily and rapidly disorientated when we lose the visual cues provided by a clear horizon.

Armed with all this good gen, our keen gang of twelve arrived at AMU ready to have an enjoyable and exciting learning experience. The flying experience of our group ranged from early post solo Youth Glide pilots to World Record breaking experienced wave flyers. We had pilots from Auckland, Tauranga, Matamata and Canterbury and after brief introductions to staff and an explanation of what lay ahead, all were kitted out in flying overalls and oxygen masks. Just the attention to detail with ensuring the proper fitting of each pilot's mask showed how serious this needed to be. One attendee had to shave off his beard to ensure a good seal for his mask ... something easily overlooked when using a system that requires a mask rather than a cannula.

The chamber run commenced with getting settled in and briefed on the oxygen equipment before twenty minutes of pre-breathing 100% oxygen to help purge 'nuisance' nitrogen from our bodies. This reduces the possibility of Decompression Sickness (commonly called the Bends) which is caused by Nitrogen coming out of solution and forming bubbles when operating in a reduced pressure environment ... in flying, this is possible above 18,000 ft. It sounds nasty – and it potentially is – but as we learnt, sensible precautions will greatly reduce the risk of this happening to us as glider pilots. We then 'climbed' rapidly to 18,000 ft. We even had cloud form as we passed through the dew point level for the day! Once at 18,000 ft, pilots were taken off oxygen four at a time so they slowly went hypoxic while the rest of us observed the changes in appearance and behaviour. Simple co-ordination and mental tasks were given to those off oxygen and it was easy for the observers to see many of the classic symptoms of hypoxia in their fellow pilots ... euphoria, giggles, over confidence, loss of coordination, slurring of speech, forgetfulness, task and

the proper fitting of each pilot's mask

target fixation, fine tremors, lethargy ... aren't some of us often like this?! Without letting individuals get too hypoxic, they were asked to go back on oxygen and report how they felt. All noticed they had slipped into a state of not worrying about how they were and how they would probably be unable to fly a glider in that state, how their vision had become tunnelled, dimmed and lacked colour; and that they were quite happy with all this. Now that is a worry!!

Once all had had a turn at this height, we climbed on up to 25,000 ft so we could see just how much faster the onset of hypoxia is. This is a height we may well go to on a Diamond Height gain so it was an excellent opportunity to see the increased dangers of operating up here for longer than necessary. This time, only two at a time were taken off oxygen so the staff could closely monitor their state of consciousness. We had been briefed that one's time of useful consciousness (TUC) would be reduced from the 20-30 minutes at 18,000 ft to just 2 to 3 minutes at this altitude. TUC is significant because if we have an oxygen system failure, first we have to recognise it and then deal with it while we still have the mental ability to do so. What we saw was all participants drifted rapidly through into a state of fearless lack of concern! Some were able to put their masks back on when told to; others were not and if not assisted by staff, would have drifted blissfully on into unconsciousness ... hardly a good state for flying a glider! Once on oxygen, some showed the classic signs of oxygen paradox, when symptoms and feelings temporarily worsen for about 20 seconds which can fool an individual into thinking they have not gone back onto oxygen and try switching it the other way (off!) with potentially disastrous results.

We had some time to try out an EDS oxygen system in the chamber and while not a comprehensive trial, it did show that the system is good at 18,000 ft with a cannula (this is its certified limit). However, it was leaving us partially hypoxic above this altitude so a proper EDS mask would be a must for safe use any higher.

Once all had experienced and observed hypoxia at 25,000, we rapidly made our way back down to ground. This is probably the hardest part of the chamber run; the rates of descent are high so it is important to keep up with the pressure changes and it is common, as it was with our group, to have to make a few stops to allow students to clear a blocked ear or relieve any tension in the sinuses. The staff have some "magic spray" for this! The team were full of chatter as we made our way back to the classroom for the debrief. All had learnt heaps and noted just how insidious the onset of hypoxia had been for them and how debilitating it was ... and thankfully, how they fully recovered when back on oxygen ... although most said they felt a little tired from it all which is understandable as the whole experience is quite stressful.

Those who got a try on the chair experienced just how easy it is to have our senses fooled and how rapidly we become disorientated when we have our vision blindfolded to simulate being in cloud.

The day finished with a session on the disorientation trainer. Those who got a try on the chair experienced just how easy it is to have our senses fooled and how rapidly we become disorientated when we have our vision blindfolded to simulate being in cloud. It was an entertaining session with a very important message ... stay out of cloud unless you know how to use and fly on instruments; a skill few glider pilots have.

All up, the day was a huge success and set the scene for others to follow with this valuable training. Shortly after we were there, Terry Delore went on to do his 2500km flight which really had the team at AMU in awe as to just what glider pilots are able to do! We have two more courses planned this year so if you are interested in attending one, please contact me for more details at reads@paradise.net.nz

GEORGE ROGERS NATIONAL OPERATIONS OFFICER, ACTING

SAFETY RECOMMENDATIONS

CAA and / or GNZ and Coroners have the unfortunate task of investigating serious accidents and incidents involving gliders, and developing safety recommendations flowing from the assessment of factors contributing to the accident.

The Safety recommendations and GNZ Actions from recent accidents / incidents are;

- Increase the awareness of glider pilots that they can lose control of gliders during low level manoeuvres as a result of illusory ground reference clues.

This risk is most apparent in seeking to gain a climb at low level to either "get away" or "get home". Pilots need to understand their competency levels and set themselves prudent limits as to when to terminate soaring flight and achieve safe landing. Clubs and instructors should support pilots in determining what "prudent limits" are sensible for individual pilots. BFR's are a useful opportunity to collaborate in identifying these prudent limits.

- Increase awareness amongst glider pilots as to the influence competition flying can have on decision making and risk taking.

We have to manage any natural drive to compete against colleagues with evidence of success measured on competition class results. The risk is that we extend or put aside personal "prudent limits" and increase risk taking. Pilots need to acknowledge the competitive urges and discipline themselves to operate with safety in mind. The reality is that if we have damaged ourselves or our gliders then our ability to achieve future points is compromised.

- Increase awareness amongst glider pilots as to the importance of ensuring that the glider is operated within the Flight Manual weight and balance limits.

This responsibility falls clearly on the pilot to ensure the glider is operated within the parameters in the Flight Manual. The consequences of operating outside Flight Manual parameters take the pilot into unproven situations with attendant risks.

- Heighten awareness of pilots of the need to maintain appropriate hydration levels at all times while flying.

It is well recognised that dehydration can significantly impact on pilots. It is not only the mental and physical energy expended in flight that must be catered for but also lifestyle or IMSAFE factors. The Gliding Kiwi Feb/March 2006, page 23 published a good article on rehydration fluids in gliding and is worth re-reading.

- Low level launch failure training is a key safety exercise in the training syllabus. The first exposure for a student should be a demonstration flown by the Instructor.

This recommendation is intended to ensure both the student and instructor are clear on what is expected and to avoid the rapid onset of "non normal' situations.

GNZ accepts the recommendation and will review the Training and Instructors Manuals.

- Instructors over the age of 70 should carry out annual competency checks with an A Cat Instructor or Approved Instructor Trainer from another Club.

GNZ accepts the intent of the recommendation and has published an Advisory Circular on Instructor Competency Checks. See GNZ website.

- The Regional Operations Officer should be advised of who will be instructing at ATC Camps.

GNZ is liaising with ATCANZ regarding their requirements for operation of ATC camps.

The MOAP has been amended to require notification to Regional Operations Officer of any multi-Club camp or activity so that clear lines of responsibility are established and communicated.

Pilots and clubs are asked to bear the recommendations and responses in mind.

Airspace Incident

CAA and GNZ have had to investigate an incident in the vicinity of a provincial airport where a commercial airliner had to take significant evasive action to avoid a collision with what was thought to be a glider. It has not been clearly established that the "intruder" was a glider operated under the jurisdiction of one of our member Clubs. Never-the-less GNZ had to put effort into measures to prevent similar occurrences.

The airliner flight recorder clearly established that the airliner was in an MBZ which was Transponder Mandatory at the point of the evasive manoeuvres.

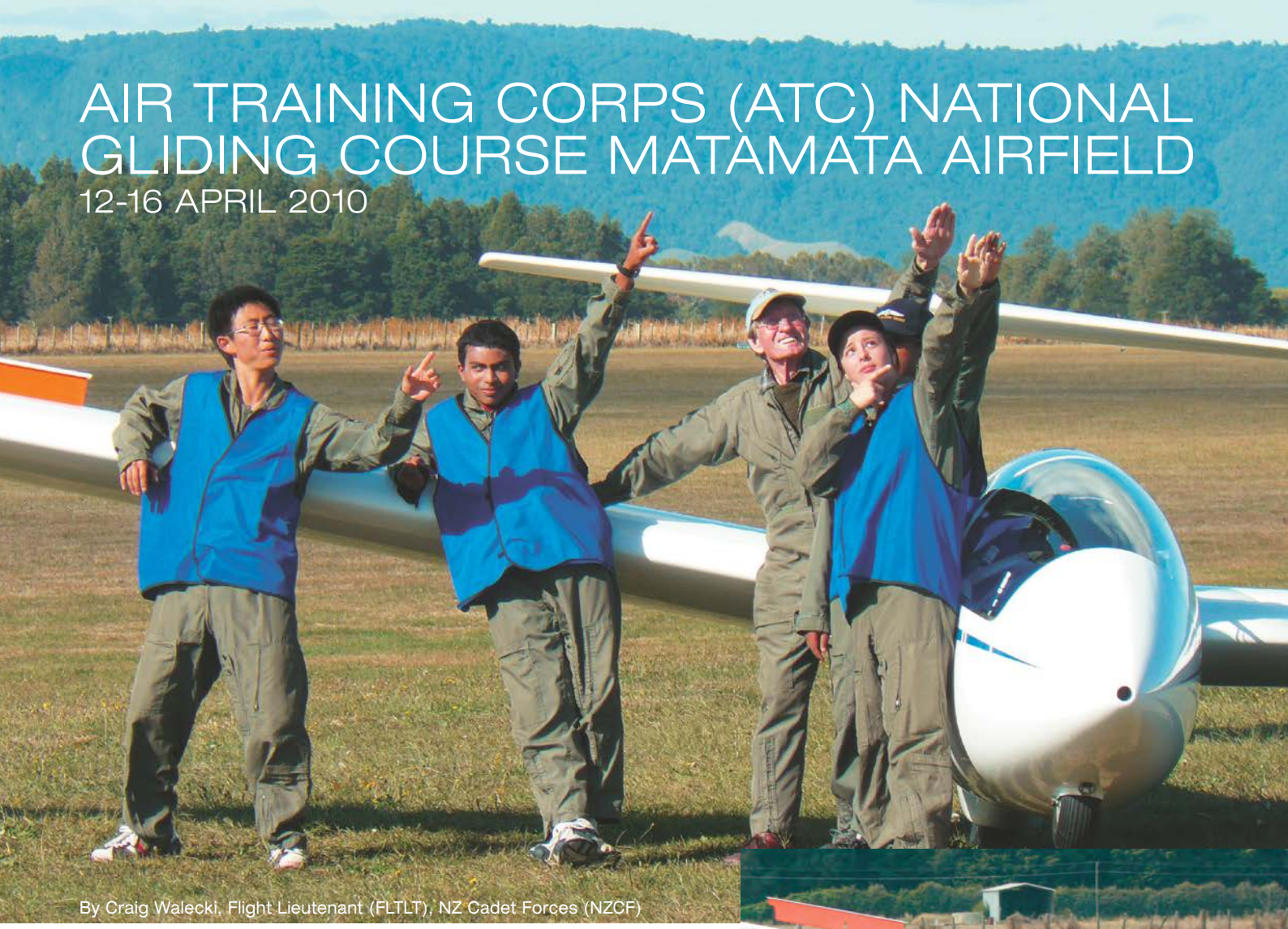
There was no evidence the "intruder" was observing the radio broadcast requirements of the particular MBZ or had a Transponder on any mode. The requirement was to squawk Mode C. Consequently the airliner crew had no prior warning of the proximity of the "intruder" aircraft.

GNZ's policy and position on use of Airspace is quite clear (section 2-6 and 2-7 of MOAP). The requirement is that pilots must be aware of Airspace requirements. Current maps are to be carried in gliders on cross-country flights.

MBZ and Transponder Mandatory requirements are to be observed. Our pilots are asked to ensure they comply with these requirements.

AIR TRAINING CORPS (ATC) NATIONAL GLIDING COURSE MATAMATA AIRFIELD

12-16 APRIL 2010



By Craig Walecki, Flight Lieutenant (FLTLT), NZ Cadet Forces (NZCF)

The second ATC National Gliding course for 2010 was held at Matamata in the second week of the April school holidays. Twenty Air Cadets from around the country attended the twice yearly course and were superbly supported by the local gliding fraternity with gliders and instructors from the Piako, Tauranga and Taupo Gliding clubs. The week got off to a great start with a third of the budgeted flying programme used up on the first day of five. Unfortunately the weather didn't sustain and the rest of the week was hampered by low cloud or strong sou-west winds, although down time wasn't wasted Bill Mace provided extra tutelage with the Matamata Soaring Centre's glider simulator. No first solo's were achieved on this course although a couple of cadets went close but for the sou-west crosswinds.

For those interested in ATC Craig can be contacted at:
Craig Walecki: craig.walecki@18squadronatc.com mobile 0274 793 515

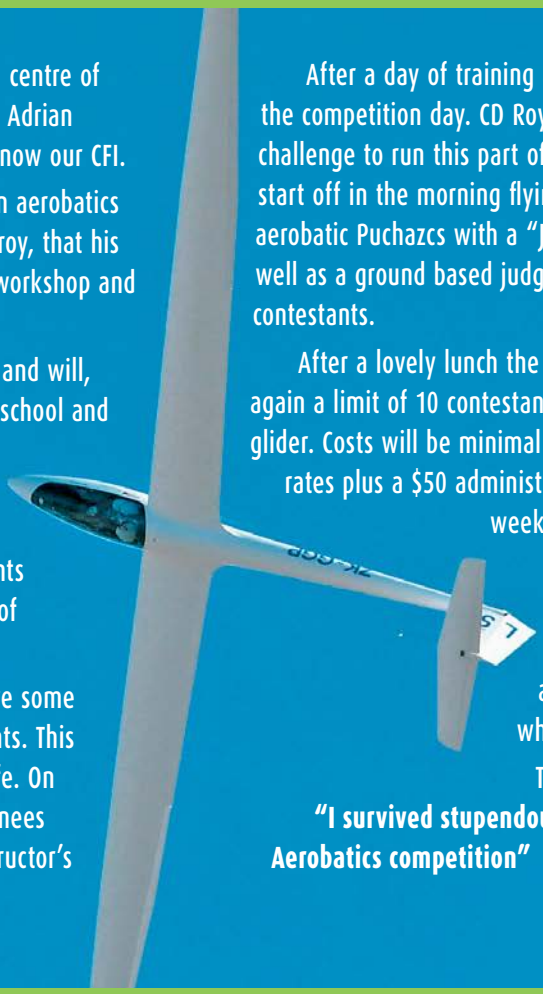
TAURANGA AEROBATICS COMPETITION
30-31 OCTOBER 2010

Tauranga gliding club has for many years been a centre of activity with Aerobatic addicts Brian Chesterman and Adrian Cable. Mark Arundel, a power aerobatic champion is now our CFI.

It is of no surprise then that when the idea of an aerobatics competition was mooted by club member, Keith McIlroy, that his germ of an idea has grown into a proposal to run a workshop and competition weekend.

Adrian has taken on the role as chief enthusiast and will, with help from other aerobatic nuts, provide ground school and flight training on some basic manoeuvres as used by the British Gliding Assoc in their comps. Arriving Friday night for an introduction and dinner (did I mention we have bunkrooms) participants will be fully briefed and instructed on the noble art of pfaffing about in the sky.

We have arranged with the local tower to reserve some local airspace close to the airfield for our daring stunts. This will keep the noisy machines away and everyone safe. On the Saturday training flights will be videoed and trainees debriefed with the help of moving pictures (and instructor's in-flight comments).



After a day of training and learning, Sunday will be the competition day. CD Roy Edwards has taken on the challenge to run this part of the weekend. Novices will start off in the morning flying in one of the club's fully aerobatic Puchazcs with a "Judge" in the back seat as well as a ground based judge. This field is limited to 10 contestants.

After a lovely lunch the "Open" Class will be run, again a limit of 10 contestants who may bring their own glider. Costs will be minimal with tows and gliders at club rates plus a $50 administration charge for the weekend.

Mid afternoon will see the crowning of the winners with tea and medals as well as acknowledgement of all who participated.

The certificate will read **"I survived stupendous fun in the Tauranga Aerobatics competition"**

For more information contact David Jensen email david@puketiro.co.nz

NEW ZEALAND JUNIOR DEVELOPMENT SQUAD
OMARAMA 12-20 DECEMBER 2010

WAVE AND RACING CAMP

Learn wave flying and glider racing from the masters!
Be prepared for the first New Zealand Juniors contest in 2011!

NZ Junior glider pilots are invited to attend a mountain wave and racing camp directed by Gavin Wills of GlideOmarama.com and assisted by top racing instructors from around the country. To join the squad Junior Pilots should be 25 years or under and hold at least a B certificate.

With about eight high performance two seaters and six single seaters a wide range of experience levels can be catered for. A parallel training programme for interested pre solo and post solo pilots is to be held at the same time.

Organised by junior pilots for junior pilots this awesome event is hoped to be the biggest gathering of young pilots ever seen in New Zealand.

BE THERE! For more information contact abbeydelore@gmail.com

Sponsors include New Zealand Gliding Clubs and GlideOmarama.com.
The GNZ Georgeson Trust will be awarding four scholarships for Junior applicants.

DOUBTFUL SOU

by Chris Garton

Chris Garton and his wife Annabel are English commercial pilots. Each year they spend a considerable amount of time flying gliders in Omarama. Fiordland is not somewhere gliders usually manage to get to, as landout options are extremely limited. They did not take a camera on this flight, so we've had to find pictures indicative of the area.

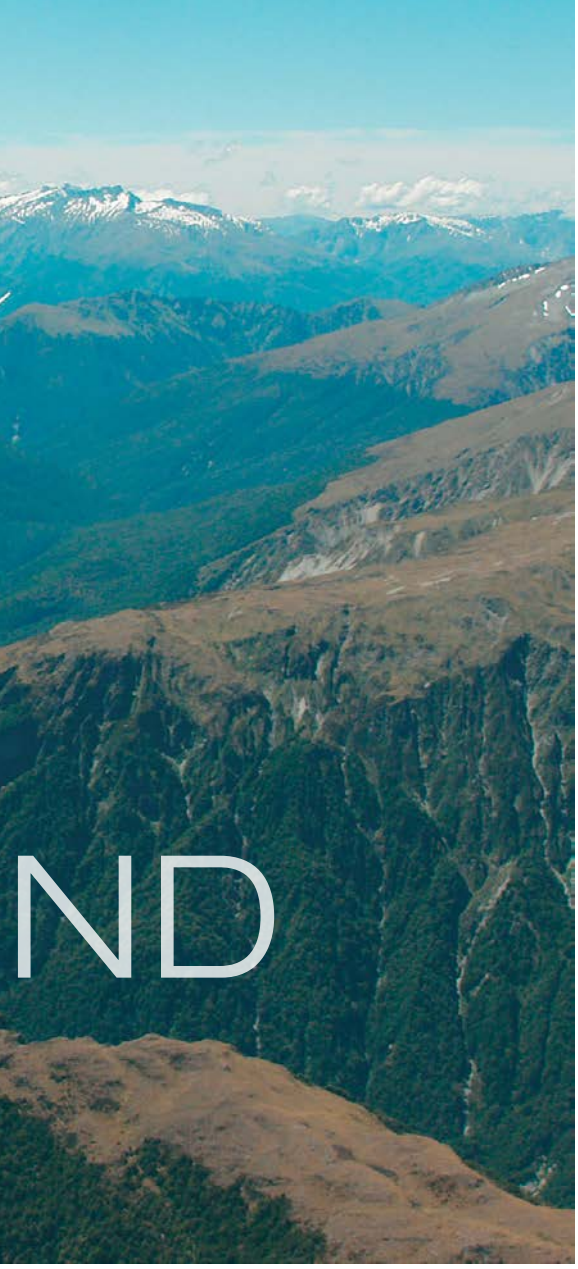
The sudden change of weather patterns at the end of January transformed what had been a dreary season for thermal soaring. January saw an outstanding period of good weather leading to a number of excellent flights from Omarama, one of the best days being January 26 when my wife Annabel and I flew to Doubtful Sound and back in ASH25 ZK GTF.

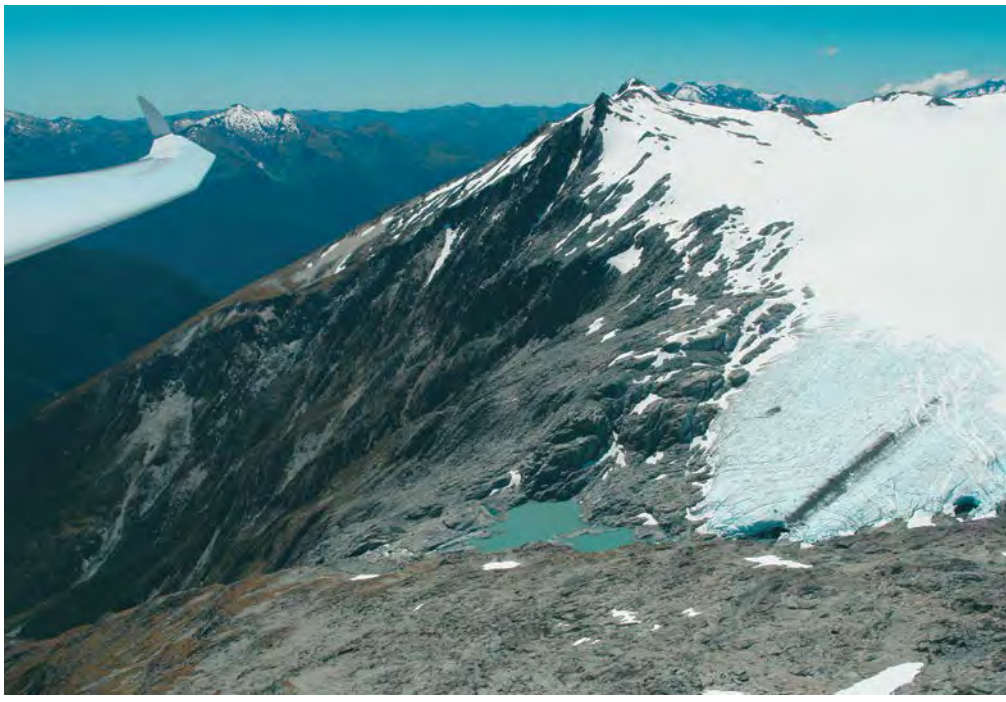
We launched to Little Ben at midday, which seemed to be the earliest practicable time. The tops of the main Benmore range were still in cloud, but 5500 ft was obtainable at Little Ben. Further cumulus over the basin enabled us to reach and climb at the Ribbonwood gap, cross the Ahuriri and access the higher cloud base over the Dingle Ridge. From this vantage point there seemed to be low cloud in all directions and most significantly it was too early in the day for a direct glide to Glendhu Bay and the Motatapu Ridge.

This meant our route to the south had to be the longer route via the McKerrows, the Wilkin River and the Matukituki east branch. Despite the unpromising cloudbase this worked well and soon we were able to slip out of the Matukituki across a low saddle into the Upper Shotover. Here, after some ridge running below the tops, we quickly found a good climb to 9400 ft which was the greatest height of the flight and only matched on our way back north later in the day again in the same location.

From here we crossed the shoulder of Mount Earnslaw, the top of which was still in cloud, to a series of cumulus at Lake Unknown. 7800 ft here enabled a direct glide across the Hollyford to Lake Adelaide from where there is a view directly down into Milford Sound and Milford itself. But the peaks around Adelaide Saddle were not generating any usable lift, nor was there any sign of cumulus formation above any of the ridge lines in the Milford area, so we decided to conserve height and set off southwest in search of more interesting prospects. The Fiordland cloudscape looked exceptionally promising, with higher cloudbases than on the eastern side of Lake Te Anau.

The route was clearly delineated for us by a series of cumulus which looked both higher and stronger than the neighbouring clouds. It led us in effect along the main divide, looking down the Sounds on our right towards the West Coast, and down the Fiords on our left towards Lake Te Anau. More usually over Fiordland the highest cloudbase is over the ranges immediately adjoining the Lake, but today conditions were drawing us further and further west. The cloudbase varied between 7200 and 7500 ft and one climb gave us 8000 ft, but most importantly the climbs were reliable so we could proceed with confidence despite the increasing distance from our landout options. The options are Te Anau Downs microlight strip and Manapouri airfield. The old Te Anau airfield has not only been closed but rendered unusable by obstructions.





It was unfamiliar territory with unfamiliar names. Worsley Stream, Mt Henry, Mt Irene, Coronation Peak. Doubtful Sound duly appeared as a major terrain break feature. The cloudbase was now 7000 ft and we amused ourselves watching two cruise ships below us. Thermal conditions looked good all the way to the south coast, but there was clearly moist air ingress from the east over Manapouri and the Hunter Mountains, while further north the incoming westerly looked likely to produce difficulties later in the afternoon. So with some reluctance we decided to turn back to avoid any risk of problems in areas remote from safe landing places. We were already nearly 60 km from Manapouri.

The return flight was straightforward. Cloudbase was indeed lowering over Fiordland with the advancing westerly and our track took us further east, crossing the northern end of Lake Te Anau to Lake Gunn, Glenorchy and the Shotover, where the 9400 ft cloudbase enabled a comfortable return to Omarama.

MOTHER & DAUGHTER LEARN TO FLY

A few months ago we put out a call to women pilots to ask them to share their experiences. Manda Connor was happy to oblige.

My daughter Aimee and I joined Piako Gliding Club a little over a year ago after an exhilarating trial flight and loop. Then the intention was to do some serious mother/daughter bonding in a year when empty nest syndrome loomed ever closer for both of us. And if we learned to fly along the way ... all the better!

We enrolled in the A Cert course and promptly memorised the phonetic alphabet.

Over the next few weeks we learned some principles of flight, the importance of removing guano from a glider, which foot to use on the left rudder pedal, aero-tow in the correct position (and several other more traumatic positions), the joy of crosswind landings, ridge soaring and that "Houston, we have a problem" is not an appropriate radio call during simulated emergencies.

We practiced spinning without squealing. We prepared for spiral dives and incipient spins with scary YouTube footage that nearly made one of us barf over the keyboard. We recognised and avoided all kinds of stalls.

When it all got too hard for us and we felt like giving up, we cried. Then we built strength of character. We learned the art of perseverance, while our instructors applied patience and self-preservation techniques to all lessons.

We ballooned, bounced and baulked our approaches to a captive audience of more experienced pilots.

Then finally, we achieved solo flight – a pilot in command!

We would like to thank all the instructors who give up their weekends to share near death experiences with novice flyers, committee members who organise courses for advanced students, duty pilots who share their knowledge and tow pilots who quite literally take students under their wing and help them to fly.

We can all fly as high as we dare to dream ... unless we are a chicken!

– Manda Connor and Aimee Dawson

FOCUS ON **RECRUITMENT** AND **RETENTION** AT PIAKO GLIDING CLUB

By Aimee Dawson

Upon learning to fly with the Piako Gliding Club Aimee decided to turn the focus of her university studies on the club. For her it provided an interesting study. What she learnt has the potential to help Piako and all clubs with recruitment and retention of members. *SoaringNZ* thanks Aimee for sharing her findings with us.

As part of my university studies I recently conducted an investigation into consumer motivations for learning to fly and belonging to Piako Gliding Club. The investigation focused on recruitment and retention in an effort to better understand the decrease in the number of new and existing club members and determine appropriate promotional methods to recruit and retain club members for Piako Gliding Club. The investigation largely focused on existing literature, and information collected from current members of Piako Gliding Club.

Piako Gliding Club consists predominantly of males who reside within a one hour drive of the airfield, began gliding between the age of twenty-five and fifty and have been gliding for more than five years. Initial motivations for joining included an interest in aviation, friends or family that glide, the club website, observation of a static display or a glider in flight; with Piako being selected for its optimal location, club members and resources. Members currently enjoy various aspects of gliding at Matamata airfield, ranging from the challenge and freedom of gliding to the camaraderie and excitement.

Piako Gliding Club's main competitors and reasons for resignation are other flight related activities, extreme sports and other commitments: time, financial and family; although patience and loss of interest in the sport are commonly cited as reasons for resignation worldwide.

I recommend that to aid retention of existing members the club include maintaining club members' enjoyment of gliding and emphasising the opportunities that advanced courses provide. Things such as small club competitions, introducing a mentoring/ buddy system, and informal transitions through courses would be useful.

The introduction of a mentoring system would encourage social bonding and build loyalty with the club, through an informal environment where new and experienced pilots could occasionally fly together and discuss gliding issues, techniques and achievements.

Due to practical reasons, including time commitments, it is unlikely that students will attend formally structured continuous courses (B Certificate and above); however, it is possible to create a smooth transition through the courses by ticking items off the more advanced syllabi as they are achieved; thus retaining students' interest and creating a strong incentive to continue to the next level and complete the more advanced courses that the club offers.

Based on my investigation, the ideal club member has the time and financial resources that gliding requires, an interest in aviation and/or extreme sports, and is intelligent, responsible, reliable, and willing to learn and help others. Past sales of trial flights reveal similar geographic locations to club members' residences, suggesting that the ideal club member resides within an hour of the airfield.

Club members who do recruit new members would like their efforts to be recognised at the club annual awards dinner and the chance to win a free aerotow.

New club members should be targeted through the effective and relatively inexpensive media of word-of-mouth, t-shirt advertising (portable static displays), and social networking websites. All advertising should in some way promote the idea that gliding is fun, challenging, and encourage consumers to enrol in the learn-to-fly course at Piako Gliding Club.

The major advantages of a word-of-mouth campaign are the minimal financial commitment, and the ease of updating information. The main issue with word-of-mouth is the initial contact; however, primary research and past sales of trial flights advocate static displays as a desirable and effective method of establishing awareness. T-shirts would provide an inexpensive and effective means of increasing awareness of gliding, exposing the club website, and providing a conversation starter for an introduction to gliding. These could be sold as part of the trial flight experience as well as to club members.

The majority of trial flight sales in the past resulted from the club website and static displays, therefore it is recommended that the club direct interested consumers to the club website as well as advertising through free social networking websites such as MySpace and Facebook. This media would reach a different demographic to traditional media and create a direct link to the club's website – allowing fast communication while building a sense of community.

Unfortunately I have not discovered a magical formula to increase recruitment and retention; I have simply provided a small insight into one club's perspective and if the ideas can be adapted to increase gliding membership then it has been well worth the effort! Thank you to everyone at Piako Gliding Club who has contributed and made this study a success.

VIVIENNE'S LIFE IN GLIDING

Vivienne Brynner

New Zealand pilot Vivienne Brynner was practically brought up on a gliding field. In the last couple of years she has travelled to some interesting places to support her partner Michael Sommer, German World Champion pilot, but her favourite gliding place is Benalla in Victoria, Australia.

In the front seat of the Duo flying out of Benalla.

I was first introduced to gliders as a baby and was never far from them as a child and teenager. I have had some long times away from them since. I am just another one of the many people who make up the world's gliding family. I'll never be a legendary glider pilot and I don't aspire to be but I've had some of the best times of my life on and around gliding fields.

Some time before the Worlds were held at Benalla in '87 my father gave me a poster. There were no posters of bands or muscly hunks on my teenage bedroom walls. But there was this one poster on the back of my door. It was there for years, visible as I woke every morning. It was mostly blue with a view from outer space of the moon, and a slogan that read "We can't promise you the moon, but you'll certainly have a ball at Benalla."

And I certainly did – I 'had a ball' at the Worlds in '87, and again when I went back there in '08/'09, getting to know people from all round the world who share the love of gliding. For me, the gliding highlight of 2008 was finally gaining my Silver C – from Benalla. (It only took me 23 years from when I first gained my 5 hours in a K8 over Drury to completing the badge!)

That flight at Benalla was my first solo cross-country flight in 20 years – an 'all in one' silver height gain and distance flight with a sit around above the airfield at the end to make sure I really truly 'nailed' the duration again also – 5 hrs 59 mins is making sure, right?

It was 31 December – a great way to end the year!

2008 had seen my return to gliding after a 4-year break. During 2008 I had some 'cameo' two-seater flights in NZ, as well as the more mundane training to re-solo, updating my C Cert theory and taking the PPL radio exam to gain my QGP from my 'home' club in Alexandra.

My re-solo saw me embarrassingly require an immediate re-light (I even beat the tow-plane down) but I think I redeemed myself with the subsequent 2-hour flight. Regaining my passenger rating meant the opportunity to take my son and daughter for their first glider flights – perhaps only those who've taken their own children flying will understand how special this is.

A particular personal challenge and triumph of '08 was overcoming my fear of winching. (This was helped significantly by the fact that the Alexandra winch uses Dynema and not the metal wires that I still see in my mind coiled and covered in sand alongside the wreck of my Dad's glider in '81 – but that's another story.)

I want to recognise here the dedicated group of guys from the Central Otago Flying Club who are there week after week unfailingly keeping the small club and the possibility of gliding from Alex alive; John, Phil, Pete, Doug, Al – you're wonderful – thanks for all the hours you've spent getting me in the air!

Another dimension to the complete gliding experience for me

Flying with my son Leigh in Alexandra

In Nimbus 3 on a different sort of game drive in the Kalahari.

is crewing and helping out at competitions. It is a chance to see how things are done at other airfields, to absorb and learn from attending briefings and listening to the pilots of an evening. And it's unusual not to find at least one opportunity to get a 'back-seat ride'; to see more of the world's wonderfully diverse landscapes and experience a range of flying styles, methods, tactics that different pilots employ successfully.

November 2008 saw me at the Australian Gliding Grand Prix. Being around at the Australian Multi-Class Nationals at Benalla in January 2009 – such fun; it took me back to happy teenage days at Waharoa at various NZ Nationals.

I think those men and women who confidently head out in the 40+°C heat and dust day after day to race around the sky are amazing. I don't at all mind running wings and cleaning gliders – I just love being part of it. The ultimate treat though, was getting to accompany Dion Weston in his ASH25 on one of the competition days. It was my longest flight in a glider – 7.5 hours. Yes, I know, it's sad but true, I was 'ill' the whole way round the 500km task – but I still loved it, absolutely relished the experience! Flying over the dusty-brown barrenness – one of those memories that will never fade.

There's nothing like begging one's way into a two-seater with an experienced pilot on a long task to give you the skills and confidence to go cross-country yourself. It was through that flight with Dion that I gained the courage to truly 'break the umbilical cord' myself.

The next day, with the ever so much appreciated support of Bruce Cooper (visiting British instructor) and Max Kirschner I headed off on my first cross country attempt of 2009 in IKE, an Astir CS77. My first 300km attempt ever. My goal – Benalla-Rand-Finley-Benalla – 319km. My first ever experience in 'the blue'.

In retrospect I suppose it was good there were no clouds – nothing to entice me off-course except some rocks or a darker field. But while flying in the blue helped me stay pretty much dead on track my average speed didn't look any the healthier for it! Determined to get round I took every darn climb. A sigh of relief met each 10 km I could mentally tick off. I didn't see another glider the whole day. Making a promise to myself along the way to investigate better arrangements in the plumbing department that might help prevent distractions in future in the Aussie heat I needed all of the three litres of water I took with me. The highest point of the day was 9700 ft, 80 km out, at 7 pm. An over-cautious final glide saw me back at the airfield at 3000 ft, and yes, I know 71% of my thermalling was right hand – 'See You' exposes all one's bad habits! I have far more to learn about gliding than I already know.

But wow! Gold Distance and Diamond Goal on my second solo cross country flight in 20 years.

The summer and its heat pressed on.

I ran over a snake with the tractor towing IKE out one morning. I ran wings and ran ropes for the competition pilots in the severe heat, then consequently wasn't overly enthusiastic about flying myself until I realised that it's cooler under the clouds than on the ground. A near landout, and then the next big treat – some of the wonderfully high Benalla cloud bases, and the chance to easily successfully 'knock-off' my Gold height gain too.

Another day, later to become known as Black Saturday, it was 45°C and very windy and only a few gliders launched. The sky was eerily hazy with dust, and I slept rather a lot of the way around a 600 km flight in the Duo. I got woken up to put the gear down. It was the day of the fires. Summer turned to autumn. I'd obviously been at least partially forgiven for sleeping on the aforementioned flight, and one of my last flights of the season at Benalla was again in the Duo GCV – south to the mountains (photo with hat). This is me, that day (Reproduced with the permission of the photographer, Michael Sommer, whose passion for life and gliding, encouragement and support made so much of my last two years' gliding possible.)

And now before I end, a little extra bit – from South Africa in March last year. Not far from the border with Botswana, near the aptly named Black Rock and Hotazel, the airfield at Tswalu has a fence round it to keep the lions out!

One of the most amazing days of my life started with a walk with a wild cheetah – but the best part was flying over the Kalahari

2010 started with a wave flight off the winch at Alexandra on New Year's Day. There is much more gliding in my future. To all of you, my 'old' gliding friends, and those I have yet to meet somewhere, sometime, I wish you many years filled with special gliding moments.

Soaring over the Kalahari, one of the most amazing days of my life.

The Victorian countryside doesn't have many landmarks. Coolamon-Morundah.

FLYING HALF AN AIRCRAFT

by Ian Dunkley

Peter Pan had problems, some very reprehensible in my view, but his biggest one was how to persuade the Darling children that they could fly. His solution, perhaps aided by LSD, was simple: "Believe you can fly, and you will. Doubt it and you are a statistic." This then is my alternative answer for those who do not believe that 'flying wings' are the most successful solution to the problems of flight. Birds, aided and abetted by Bats, Pterodactyls, Archaeopteryx and Zanonia seeds, all prove it. Like it or not, birds do not have 'tails', they have feathers they use as landing flaps, a bit of rudder, and a means of sexual attraction. True, early prototypes had a 'tail' for waving around, but then so did you and that's a digression anyway.

A 'conventional' glider has an unstable wing and to provide stability a tail, or horizontal stabiliser, is shoved on the end of a moment arm or pole if you prefer. Not unlike the chap holding the handles of an otherwise unstable vehicle, a wheel barrow. So how does the whole thing work (the 'conventional' glider, not the wheel barrow)? You should already know this, but the key is the angle that the tail is set at on the pole. In simple terms it points down whilst the wing points up. So when the unstable wing or the wheelbarrow's dubious equilibrium is disturbed, the man on the end of the pole/s provides an opposing force. (He also compensates for the wheelbarrow's lack of dihedral.)

The size of the horizontal stabiliser is dictated by the length of the moment arm. Shorten it, and the tail gets bigger. Keep shortening the pole, the tail gets bigger, until it eventually collides with the wings' trailing edge resulting in a wing section with an upturned trailing edge, or reflex. We have just invented the 'flying plank' and a critical c of g problem.

There is another way of doing all this, and it's a bit prettier. It is called sweepback and you can see it on the Hortens and SB13 'Arcus'. Sweep the wings back and you don't have to shorten the pole much before the 'tail' is level with the tips. Split it in two and stick it on the tips and you have a lot of washout and a 'pure' flying wing; pure because it also does not need a rudder. Translate all the above into the shape of birds' wings and you will find feathered planks, and sweepback. Only man has a tailplane. If you prefer mathematics to all this bird and wheelbarrow stuff see the references at the end.

I have flown three different flying wing models, all of the plank type which has so far been the most successful, if not beautiful, of the two alternative planforms. Two of them are Fauvels. The other, a Genesis, is a flying wing mucked up by the marketing boys, with an elevator on the fin.

What is flying 'half an aircraft' like? Very few people, apart from some hang glider pilots, have flown pure flying wings and I

Favel AV 22 'Plank' and Swift, foot launched 'pure'

The Wasserkuppe comes to grips with the size of the AV 22.

Favel AV 36 'Plank'

am unfortunately not one of them. They may or may not be similar.

The most critical thing about a flying wing is the C of G. In the case of the two seater Fauvel AV 22 the wing is swept forward preventing the rear pilot from making things a bit hairy. The front seat is adjustable fore and aft which gives rise to the most complicated loading set of graphs and tables I have ever seen, and they are all in French. Thus I always fly from the front seat so the only variable is my increasing BMI. Aerotows are quite normal although I must say that in rough conditions or at speed near the top limit it is not the most pleasant aircraft to fly. Winch launching (mine is the only AV 22 with this option, designed in consultation with the BGA and Fauvel, although it is standard on the AV 36) utilises a bridle and hooks from a Blanik and is really no different to any other glider on the launch.

In the air both the AV 22 and AV 36 feature a 'stick' that trembles slightly when the elevator is not in the neutral position. You soon get used to this but pilots on their first, and generally only, flight find it rather disconcerting, confirming their worst fears. The gliders can be stalled in the normal way but I have never been able to spin the AV 22, it just spiral dives. The very light Polish test pilot tried and also failed in its post restoration flight in Poland.

Both gliders thermal well and in the case of the AV 22 when flown in quite steeply banked turns is much slower than you would expect. I can only explain this as possibly due to the very deep fuselage and fin contributing to the lift. Due to the self stabilising wing, as the stall is approached the glider automatically pitches down in recovery and this at first is rather disconcerting. Charles Fauvel recommended that in rotor conditions the best thing was to trim the glider and then sit back and watch developments. For the technical, the centre of pressure moves in the opposite direction than on a conventional wing as the angle of attack increases, thus providing stability. If you don't follow this, stick to wheelbarrows.

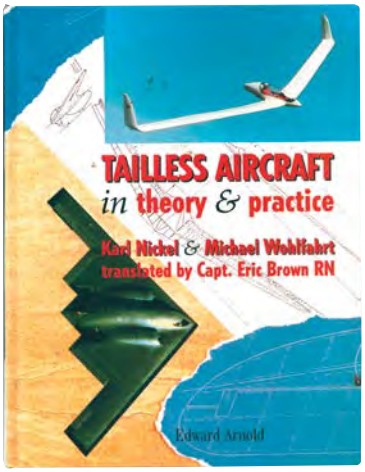
My first flight in the AV 22 back in the '70s was on a just workable ridge day but with the wind steadily increasing to the extent that I was soon the only glider who had not bolted for home. I was frankly not at all happy, translate as scared, with the idea of the approach in these conditions and decided to 'sit it out'. Things however got worse and I had to bite the bullet and come in. To my relief it flew as if it were 'on rails' much to the disappointment of club members who had streamed out of the bar ready to draft the accident report

Performance, never mind the graphs etc., I rate it as similar to the Ka13 – on wave flights I could generally both out climb and penetrate. Charles Fauvel claimed its L/D was better than a Standard Austria, I can only assume the Austria must have stalled a few minutes earlier. The AV 36 I would rate as similar to an Olympia. Gordon Hookings' report on his AV 36 flight in 1956 will be in the next issue of Vintage Kiwi News.

If everything appears innocuous so far, do not think everything is a bed of roses when flying an AV 22 or AV 36, for we have not discussed landing, an event that may suggest that long flights are best. Fauvel's advice was to "Land it in the keep flying mode, like a Super Cub." In other words a fully held off landing; anything else can be disastrous. I have let only two people land the AV 22,

Genesis 2, 'Plank' with displaced elevator.

Al Backstom 'Plank', and that was his naming.



All you want to know & a lot more you don't. Plus 2 'pure' wings.

Derek Piggott, and the chap who broke the skid and collapsed the undercarriage.

The worst conditions are light headwind, changing the brake settings late in the approach, and flying it onto the ground. Back in the 1960's a cine film was taken of an AV 36 landing going very wrong. It proceeded down the runway in a series of kangaroo hops increasing in amplitude to eventually fall backwards onto the ground. Why?

My explanation is an exponential version of Sod's Law. The aircraft lands with flying speed, a large wing close to the ground discovers ground effect at the same time as the springy undercarriage goes "whoopee" and stretches its legs. The wing then remembers that it's self stabilising and pitches down, and the whole cycle starts again. At some point the pilot decides that he is supposed to be in charge and shoves the nose down just when the wing does it for him, and so everything becomes horribly divergent and sceptics say, "Flying wings are very twitchy," as they sweep up the bits which is a bit difficult if another variable was rough ground.

So how do you land it? Properly! Select the brake setting you want and stick to it. Round out in good time and then keep it flying for as long as you can. If you do bounce, sit it out, it will damp out if you keep your panic under control. With practice it all becomes easy; you just have to remember to land correctly, and avoid a tail-wind like the plague.

All the above drama applies to the Fauvels, I have only flown the Genesis once and frankly there was nothing about it that suggested that I was not flying a Discus. In fact I negotiated the purchase of a second hand Genesis but the BGA would not issue a C of A as it did not meet 'JAR' cockpit crash test requirements. So how did it get Swedish and Lithuanian, and I understand Canadian, Cs of A? That is another story of intrigue and rumour and political economics not of BGA's making.

That all leaves one big question, if flying wings are the most popular form of flight why do we persist in putting tails on gliders? One reason is pure marketing, people expect a tail, which is why I think Genesis has an elevator on the top of the fin. The glider from which it was developed did not and the designer Jim Marske did not think it provided any advantage.

There is no simple answer but I think Schleicher's designers came up with the best one when I asked them the question. The modern sailplane is the result of 80 years of development of a basic design. If early development of flying wings had continued perhaps we would all be flying them now.

GNZ AWARDS & CERTIFICATES
APRIL – MAY 2010

QGP No	Pilot's Name	Club	Date	Glider
3088	Stuart N. Anderson	Gliding Manawatu		18. 4. 2010
3089	Alexander W. Marshall	Glide Omarama		5. 5. 2010
3090	Roy C. Whitby	Auckland ASC		17 5 2010

SILVER DISTANCE

	Clinton G. Steele	Norfolk GC	19.4.2010	ASW 15

SILVER BADGE

1145	Clinton G. Steele	Norfolk GC	18.5.2010

NEW ZEALAND RECORD

400 km, O&R, Speed

Roger Sparks	Ventus 2ct	26. 3. 2010	166.88km/h

AIR NZ CROSS COUNTRY CHAMPIONSHIPS

		Glider	Distance	Points
North Island				
	Clinton G. Steele	ASW 15	135.59km	150.41
South Island				
	No Claimants so far			

GNZ FIRST COMPETITION AWARD

015	Clinton G. Steele	Norfolk GC	18.5.2010

OFFICIAL OBSERVERS PLEASE NOTE:
If you have not revalidated your Official Observer Certificate (92/) and would like to remain an OO (which I hope you will), you have until the 1 September to do so.
I suggest that you see your Club's CFI to organise a revalidation clinic.

GNZ Awards Officer
Edouard Devenoges
gnzawards@xtra.co.nz
40 Eversham Road, Mt Maunganui 3116.

VINTAGE KIWI

The full size version of Vintage Kiwi is available to download from the GNZ website.

CLUB DIRECTORY

Link for club info www.gliding.co.nz/Clubs/Clubs.htm

Auckland Aviation Sports Club
Club Website www.ascgliding.org
Club Contact Peter Thorpe
pbthorpe@xtra.co.nz Ph 09 413-8384
Base RNZAF Base Auckland (Whenuapai) 021 146 4288
Flying Weekends, Public Holidays

Auckland Gliding Club
Club Website www.glidingauckland.co.nz
Club Ph (09) 294 8881, 0276 942 942
Club Contact Ed Gray airsailor@xtra.co.nz
Ph (09) 237 8151 (027) 608 4156
Base Appleby Rd, Drury
Flying Weekends, Wednesdays, Public Holidays

Canterbury Gliding Club
Club Website www.glidingcanterbury.co.nz
Club Contact Kevin Bethwaite kevin.bethwaite@airways.co.nz
Ph (03) 384 3196
Base Hororata Road, Hororata
Flying Weekends, Public Holidays

Central Otago Flying Club (Inc)
Club Website www.cofc.co.nz
Club Contact Phil Sumser phil.sumser@xtra.co.nz
Base Alexandra Airport
Flying Sundays, and by arrangement

Glide Omarama.com
Website www.GlideOmarama.com
Contact Gavin Wills gtmwills@xtra.co.nz
Base Omarama Airfield
Flying October through April 7 days per week

Gliding Hutt Valley (Upper Valley Gliding Club)
Club Contact Wayne Fisk wayne_fisk@xtra.co.nz
Ph (04) 567-3069
Base Kaitoke Airfield, (04) 526-7336
Flying Weekends, Public Hols., Mid week by arrangement

Gliding Manawatu
Club Website http://sites.ourregion.co.nz/glidingmanawatu/home.html
Club Contact Ron Sanders Resanders@xtra.co.nz
Base Feilding Aerodrome
Flying Weekends, Public holidays

Gliding South
Club Contact Bob Martin bob.martin@clear.net.nz
Phone 0274 828 611
Base Rouse Airstrip, Five Rivers, Southland
Flying Weekends and Public Holidays

Gliding Wairarapa
Club Website http://www.glidingwairarapa.co.nz/
Club Contact Diana Braithwaite Ph (06) 308-9101
Base Papawai Airfield, 5 km east of Greytown
Ph (06) 308-8452 or (025) 445 701
Flying Weekends, or by arrangement

Hauraki Aero Club
Club Website www.flyhac.co.nz
Club Contact Ron Bergersen d.rbergersen@xtra.co.nz
Ph (027) 277 4238
Base Thames Airfield
Flying Weekends and Public Holidays

Hawkes Bay and Waipukurau Gliding Club
Club Website www.skyhigh-photography.com/Main/Aviation_and_Spaceflight/HB_Gliding_Club.php
Club Contact David Davidson Dhcd@clear.net.nz
Ph (06) 876-9355
Base Bridge Pa Airfield, Hastings 0272887522
Flying Sundays. Other days by arrangement

Kaikohe Gliding Club
Club Contact Peter Fiske, (09) 407-8454
Email Keith Falla keith@falla.co.nz
Base Kaikohe Airfield, Mangakahia Road, Kaikohe
Flying Sundays, Thursdays and Public Holidays

Marlborough Gliding Club
Club Website http://glide_marl.tripod.com
Club Contact bmog@paradise.net.nz
Base Omaka Airfield, Blenheim
Flying Sundays and other days by arrangement

Nelson Lakes Gliding Club
Club Website www.glidingnelson.co.nz
Club Contact Frank Saxton franksaxton@gmail.com
Ph (03) 546-6098
Base Lake Station Airfield, St.Arnaud Ph (03) 521-1870
Flying Weekends and Public Holidays

Norfolk Aviation Sports Club
Club Website http://www.geocities.com/norfolkgliding/
Club Contact Kevin Wisnewski wizzbang@xtra.co.nz
Ph (06) 756-8289
Base Norfolk Rd
Flying Weekends and by appointment

Omarama Gliding Club
Club Website http://www.omarama.com
Club Contact Yvonne Loader loaders@clear.net.nz
Ph (03) 358-3251
Base Omarama
Flying 7 days a week by arrangement

Otago/Youth Glide Omarama
Club Website www.youthglideomarama.org.nz
Club Contact Tom Shields tom.shields@century21.co.nz
Ph (03) 473 1721
Base Omarama and Dunedin
Flying By arrangement

Piako Gliding Club
Club Website www.glidingmatamata.co.nz
Club Contact Steve Care s.care@xtra.co.nz
Ph (07) 843-7654 (027) 349-1180
Base Matamata Airfield, Ph (07) 888-5972
Flying Weekends, Wednesdays and Public Holidays

Rotorua Gliding Club
Club Website http://www.geocities.com/rotoruagc/RotoruaGlidingClub.html
Club Contact Mike Foley
roseandmikefoley@clear.net.nz
Ph (07) 347-2927
Base Rotorua Airport
Flying Sundays

South Canterbury Gliding Club
Club Website www.glidingsouthcanterbury.co.nz
Club Contact John Eggers johneggers@xtra.co.nz
33 Barnes St Timaru
Base Levels Timaru & Omarama Wardell Field
Flying Weekends, Public Holidays & by arrangement

Southern Soaring
Club Website www.soaring.co.nz
Club Contact Chris Rudge chris.rudge@soaring.co.nz
Ph (03) 438 9600 M 027 248 8800
Base The Soaring Centre, Omarama Airfield
Ph (03) 438-9600
Flying September-April: 7 days a week (except Xmas Day)

Taranaki Gliding Club
Club Website www.glidingtaranaki.com
Club Contact Peter Williams peter.williams@xtra.co.nz
Ph (06) 278 4292
Base Stratford
Flying Weekends and Public Holidays

Taupo Gliding Club
Club Website www.taupoglidingclub.co.nz
Club Contact Tom Anderson Tomolo@xtra.co.nz
PO Box 296, Taupo 2730 Ph (07) 378-5506
M 0274 939 272
Base Centennial Park, Taupo
Flying 7 days a week

Tauranga Gliding Club
Club Website www.glidingtauranga.co.nz
Club Contact Roy Edwards royedw@wave.co.nz
Ph (07) 578-0324
Base Tauranga Airport
Flying Weekends and Public Holidays, Wednesday afternoons and other times on request

Wellington Gliding Club
Club Website http://www.soar.co.nz
President Warwick Walbran wwarwiknz@yahoo.co.nz
Base Paraparaumu Airport
Bookings Ph 04 297 1341 (clubhouse)
Ph 027 618 9845 (operations)
Flying Weekends and Public Holidays 7 days a week December through to March

Whangarei District Gliding Club
Club Website www.igrin.co.nz/~peter/gliding.htm
Club Contact Paul Rockell rockelkaym@xtra.co.nz
Base Rockelkaym Ridge, Gibbs Road, Puhi Puhi
Flying Weekends and Public Holidays

GLIDING NEW ZEALAND CLUB NEWS

Deadline for club news for the next issue 10 July 2010.

AUCKLAND

As the rains start to resolve our drought crisis in the north, the airfield is holding up well to a late season flourish. Recently, we enjoyed a double solo day, with many members present in the late afternoon and evening in the clubhouse as well. Ian Cossar had joined the club after a long period working in the US. He credited his solo milestone to concentrated flying at Matamata camps under the tutelage of Norm Duke. Ian Cossar shall be recorded as the first pilot to complete the inaugural first solo on type (in NZ) in the club's new ASK21 trainer. Vadim Shegay has joined the club after immigrating from Russia. He has experience as an aerodynamicist and enjoys the freedom that the club training offers. He soloed in the PW6 (XY) under CFI Seamus Breen.

On the same day, many club cross country pilots took the opportunity of an exciting sky, flying south to meet their Piako colleagues over the Hauraki Plains. Rae Kerr flying his favourite Ka8B (LE) managed a return trip from Drury to the 'Golf Ball' officially known as Te Weraiti, the secondary surveillance radar site (SSR) on the Kaimai Ranges, no mean feat in this steed so late in the season.

We enjoyed a visit from Gavin Wills from Glide Omarama who hopes that the club will gather together 'flat earth' pilots to visit the big mountains we believe exist a little south of the Bombay Hills.

The usual QGP winter lecture series is due to commence at Drury about 19th June and these popular lectures are offered to all pilots, both Ab-initio

Auckland: Auckland Club pilots at the 'post solo' function of Ian Cossar and Vadim Shegay, seated in the middle at front.

Auckland: From Left Grant Nelson (Instructor), Ian Cossar, Vadim Shegay, Seamus Breen (CFI) celebrate two first solos at Drury.

Canterbury: the grass coming away on our new Springfield airstrip.

and experienced, especially with the addition to the syllabus of Radio Technique and Transponder procedures. DCFI John Baylis is co-ordinating the course.

Former Auckland club President and CFI, Arthur Gatland is to make a presentation on Threat and Error Management to club instructors and we look forward to his articles on this important human factors topic in this magazine. BTW unlike the farmers, we will not be disappointed by the extension of the summer drought into the winter flying season.

RT

CANTERBURY

During the April school holidays the Aoraki Aviation Scout camp was again held at the Hororata Scout den and all had flights in a glider. Club members also showed the young folk how to DI the glider and they were lectured on other aspects of flying. They finished their weekend with a flight in a DC3 from the Darfield airstrip. A few weekends later there was a fundraising Wings and Wheels event held at the same site. Terry Delore and Mike Oakley flew two Ash 25's into the show, generating many inquiries regarding gliding.

The Air Training Corps groups that fly with us are to start doing some winch flights during the last weekends in May and June. Several of these young ones have joined Canterbury Youth Glide and are not only flying but helping to run the airfield as well. Also a couple of our Youth Glide members are about to start instructor training. Both have Gold Cs and Diamonds. Great.

Our clubhouse now sports new carpet supplied by Terry Delore Carpets, making the place quite cosy looking.

The strips at our Springfield site have been graded and rolled and a good strike of new grass is showing. Rangi de Abaffy and Scott Ostermann have spent many hours working at the site and Greg Tucker transported his machinery from near Christchurch to sow down the strips. Where would clubs be without people like this? Mike Oakley's tractor has come in handy as well.

Stewart

GLIDING SOUTH

Autumn is here with the first frosts. Flight-ops have been active. Three weekends in a row can't be bad, even with one being circuits only. Five enthusiastic pilots clocked up 3 to 4 circuits apiece, the winch ran sweet, and the tow car even started first time.

Locals Al 'Digger' and Edna, at last got airtime after numerous texts and postponed ops over 'summer'. Al 'had a go' some years ago, then went golfing, maybe the next hole is for his g.clubs. There have been some interesting challenging flights scratching on Woody's ridge. Hanging in rewarded with improving conditions, broken wave, convergence and getting away.

Matt in MO showed the way late last Saturday afternoon with the first soaring flight of the day. Prompting me to launch again (no wind on

Gliding South:

the ground all day) and explore this late bonus lift. It got easier once above the tops and ZP was soon cruising at 5000 ft but with no time before dark to go anywhere. A well earned beer with the Five Rivers team and Pete McKenzie, from Central Otago, who joined us for the day.

The following day looked promising. ZP took another no wind, launch. (Yes we do fly at Five Rivers Sat/Sundays + midweek as desired.) 900 ft off the winch, Woody's was working, a couple of beats to the 3000 ft top, ridging north to Mid-Dome. At 5000 ft I topped up before heading west on the ridges. 20 km into the Ayre Mts I was below the tops heading home. Saved by the last/only thermal of the day climbing to 4000 ft, a hawk joined me briefly, then was promptly gone when I got the camera out. Needless to say, the camera work lost me the lift but spurred on with the climb, I turned West again soon to be sinking out with a three knot southerly. Scraped home for an early tea, lining up landout paddocks all the way ... brilliant green Southern paddocks.

BM

GLIDING WAIRARAPA

As our club gears up for its AGM it is timely to take a look at how operations have progressed this past year.

Firstly, and I suspect this is a universal comment, we have had fewer soaring days than in previous years due to inclement weather.

That's a bad thing for obvious reasons. Secondly, club membership has grown to an all time high, particularly due to pilots from other clubs seeking associate membership. Some of these pilots are immensely capable instructors. That's a very good thing.

The plant and equipment is in good order (despite the odd hiccup) and our running costs are probably some of the lowest in the country. That is a really good thing.

Our youth training scheme proved very successful and this continues on in 2010 with a number of those in the scheme very close to solo.

Club member Graeme Moffatt has made a DVD of the club's activities and this met with much acclaimation on its release in a Wellington theatre. The positive publicity received by the club from this venture has been encouraging and the whole project has raised awareness of local gliding but also gliding within New Zealand. As a part of the production of this DVD, titled "Upwind – where eagles dare to soar," Jim, our president, attached his video camera to the starboard wingtip of our K13 (FN) and captured some incredible in-flight material, including the workings of a fully developed spin. Another clip from this camera has been posted on YouTube and has scored numerous hits. Jim and I have been working with ATTTO and NZQA, writing the unit standards which will assess against the GNZ A, B and QGP licences and these units, which are mostly at level 4 on the curriculum framework, should be ready for assessing against quite soon. There are runway extensions in the pipeline.

There is never a dull moment down at the club.

GVG

Piako Gliding CLub:

PIAKO GLIDING CLUB

The safety briefing I mentioned last month has come and gone and I hope it will have left a lasting impression on the attendees. The power point presentations by Rainer Kunnemeyer, Allan Belworthy, and Steven Care were very professional, and the two hour session didn't go over time. The committee was concerned that we were asking pilots to attend this mandatory briefing, but the feed back has been very positive. It all helps foster the attitude of safe practices that Piako is endeavouring to develop. The day turned into a social occasion after the free lunch, with some going flying and some catching up with friends in the clubhouse.

Sadly our Pawnee suffered an accident when its undercarriage broke. Fortunately it happened sufficiently after touchdown when the speed had dropped off and so the damage was limited to the left wing. Bad enough though. I hasten to say this was not the fault of the tow-pilots, who treat it very well.

It is the season for AGM's. A lot of work has been put into reviewing Piako's charges and fees. This year it will be hard to have to tell members of impending increases, but it is the responsibility of the committee to make sound financial decisions. Hopefully some new committee members will be appointed, bringing new enthusiasm, and a fresh perspective. Members feeling they have limited time to help with club affairs can be of great value by offering a perspective and a will to make good decisions and move on. It has to be remembered that the reluctance to be on committees can be related to inefficient running of meetings. The satisfaction is gained from the making of good decisions.

I believe AGM's are the members chance to support the committee for their past efforts, or to get involved for the improvements you may like to see. Don't hesitate to attend yours.

Oh and yes, we did have some good flying days.

Bill

TAUPO GLIDING CLUB

The New Zealand Nationals have been and gone and a couple of articles appeared in SoaringNZ last issue. We were gratified that the feedback from the contestants was very favourable. They enjoyed their time in Taupo, thought we ran a good competition and that the Central Plateau is a worthy addition to the competition landscape.

The club is indebted to all the people who gave so generously of their time. Many were club members and we thank them for their time but perhaps more generous were the efforts by a number of wives, partners and associates of the club who are not members but are willing to contribute anyway. Meals, sponsorship and prizes, cleaning and on field operations were all facets enabled by these people and we make a special thank you to them.

The Club now has a very good setup for future competitions with a new large campground kitchen, overhead video projector, new water storage tank and a refurbished and enlarged, comfortable and well appointed office to house the task setters, scorers and weathermen.

Our 'Solo in a week' course continues to be very successful with a steady flow of ab initio pilots experiencing the benefits of a concentrated live-in course. A recent graduate Adrian Faulkner from the Nelson Lakes Gliding Club has written a report on his experience, posted on our web site for those interested in coming to Taupo. Go to www.taupoglidingclub.co.nz and click the 'Solo in a week' banner to read his and two other testimonials. Why not give us a try?

Other recent first solos were made by James Allen, Stewart Campbell and Lee Middleton. Congratulations. We look forward to presenting you with other achievement awards.

TN

WELLINGTON

It's amazing how short the days become after daylight savings switches off. The weather at Paraparaumu has been very dry, and judging from Vaughan Ruddick's logbook there were five cross country weekend days in April, which is not too bad considering the summer. Although good westerlies have been rare, we continue to get plenty of unstable air masses from southerlies (pictured) over the ranges. These make for great 3-4 hour runs up and down the Tararua and Rimutaka ranges.

The saga of selling our Janus and a PW5 had a happy ending, but what a mission it was. The gliders were on the market for at least 2 years, and finally in Sept '09 a deal was struck with a club in Argentina, which appeared to be a pot of gold. Unfortunately, obtaining CAA export

Wellington: Top: May Day cumulus over the Tararua's. Left: Argentines check their purchase. Right: Martyn and Tony repair the Haybarn doors

certificates became an unforeseen and costly exercise. Speak with Martyn Cook before committing to sell a plane overseas. Finally in mid-March, ten weeks after we shipped them, the Argentines opened the container (pictured) and were extremely happy with their purchase.

For a number of years the doors to one of our hangars were well rusted and beyond sliding. After numerous quotes and backseat solutions, Tony Passmore finally took charge and ordered new railings. It took Tony and Cookie (pictured) only a few hours to replace the railings and get the doors sliding as they had 27 yrs ago. Apart from trailer storage, the re-found hangar space may also come in handy for keeping parts of our retired Pawnee. This winter we start a project to re-build the wings and fuse of the retired plane and transfer into it the new engine of the plane in current use. This will hopefully give the club a low maintenance tow plane for the next 10 years. At present we have about ten active students in various stages on their way to a QGP and we feel that they are one of our best investments for future prosperity.

Warren Dickinson

Taranaki Wave

Gliding Taranaki sent these wonderful photos of wave over the mountain on the 24 April.

SoaringNZ and the GNZ Website Classifieds are now linked. Members are allowed one free non-commercial classified advert per issue. Ads may be submitted to the GNZ website or directly to SoaringNZ. They will be displayed in both places until notified that they are no longer required. Adverts that are obviously old and no longer in effect will be removed. Please notify us when your item has sold.

GLIDERS

DG 400, with 15m/17m tips • fully equipped and ready to fly. Including A8A oxygen regulator with quick connect, Cambridge M Nav with Averager and Winter Mechanical varios. Terra transponder, Dittel FSG60M radio, boom microphone and headset, tow out gear, wing, canopy and tailplane covers. Trailer has Cobra fittings and can charge batteries with glider in trailer. Contact Mark 027 450 8505, mda.308@xtra.co.nz

Blanik-for sale or lease • We have a spare Blanik that is not being utilised. We are willing to sell or lease it (long or short term). Aircraft based in Taranaki. Contact Kevin on 06 756 8289 or Grant on grantw@xnet.co.nz for details

ASH25M GYJ • Immediate delivery, 3 sets winglets, wing covers, tow out gear, rigging gear, motor- total 35 hrs. Fully instrumented, Ilec computer. Cobra Trailer, Oxygen and parachutes. $275,000. D Speight. Phone 03 409 8380. Email david.mairi@xtra.co.nz

Libelle 201B • much pre-loved GID for sale, all Annual paper work complete July 09, ready to fly. Complete with robust trailer, tow out gear, O2, good radio, transponder mode a/c, Borgelt audio and winter varios. $17k. Based in Blenheim, give me a call on 03 577 9002 or 0274 786 332. Ross Menzies.

ZK-GIU Libelle 201 b #579 • Good condition approx 1600 launches and 2300 hours. Basic panel, transponder, B40 vario, O2, Chute. $18K Contact Paul 021 331 838

TesT-10-M • self launching motor glider for sale GVV, better than new condition. Polyurethane finish. 40:1 15mtr, 30 KW engine. Winglets, tinted canopy, digital avionics, radio, transponder mode C; Live your soaring independence dream. email:gerald@resco.co.nz NZ$98,000

ASW 15. #15069 • Recent re-finish inside and out carried out at Sailplane Services. 1600 hours TT. This glider comes with 2 options. First option sports a new Cambridge 302 with 303 nav screen, new Microair transponder and Microair radio! Option 1 $22,500. Second option comes with Cambridge M nav and no transponder but still with Microair radio $16,000. Trailer tows nicely. Phone Geoff Gaddes 027 497 2723 Email g_gaddes@xtra.co.nz

LS-6b ZK-GVS • comes with LNAV, Cambridge GPS, 1x O2 system, Winter Vario, Becker radio, etc, Komet trailer with modified axle on parabolic leaf spring (higher ground clearance and softer ride) and tow out equipment, based at Drury - NZ$80,000. Due to business opportunity, Vincent: vnv@worldskip.com phone 021 035 7182

Sagitta ZK-GDO • The only one flying on the Southern Hemisphere! Repainted 2007. Panel with standard instruments, plus Borgelt vario. Comes with refurbished trailer (new axle, floor, rigging rails etc). Details at www.sagitta.smits.co.nz Make me an offer!

LS 8, ZK-GXS • complete with trailer. Fully equipped. Refinished in urethane paint. NZ$150,000. Contact: Graham White, e-mail: g-p-white@xtra.co.nz, phone: (64) (06) 877 6073

ASH25M, ZK-GRJ • Schleicher self launching two seat motor glider, complete with German trailer. Fully equipped, re-finished by Sailplane Services in Autocryl, in very good condition. Contact: Brian Kelly, e-mail: Erinpac@xtra.co.nz, phone: (64) (06) 876-7437.

LS6c • fully equipped, Cobra trailer $130,000 Phone Ivan Evans 03 539 6232 email:ivan@ts.co.nz

2 Gliders for Sale • RONLERCHE K4, SKYLARK 2. Both hangared at Norfolk aviation sports club. Phone John Schicker 06 758 2953 day or night

ASH-25E, ZK GZZ • 1100 hrs total time NDH. Refinished in polyurethane .2 sets Maughmer wing tip extensions & winglets to near 27m. Ilec SN10B front & rear. Cambridge 302A Mode C transponder. Flarm front & rear. EDS oxygen system. Leather seat cushions. Parachutes. Motor reconditioned to operational standard. Jaxida covers. Cobra trailer. Many spares. $215,000. Omarama hangar also available. Phone Theo Newfield 027 432 6015

Discus-2cT 2007 • 18m. Every option. PU paint finish. Avionics include LX8000 computer with FLARM & remote stick, Becker radio & transponder, Tru-trak turn & slip. Cobra trailer with SL package. Jaxida hangar covers. Brand new condition. Brett Hunter hunter.b@ihug.co.nz

ASW 20C - GTC TT~1900 hrs • One of the last of these great machines to come off the production line in 1985. Tinted canopy, excellent and reliable avionics, good oxygen system, plenty of batteries. Additional storage pockets for storing all the gear for those long flights. Ordinary trailer but it works well and is sound. Plenty of ground support gear. $59,500 Finance available. Contact John Ahearn 021 2234 911.

ASW 20 ZK-GDF 20s • (widely known as THE best value for money) Recent cockpit refurbishment. New Home Built Trailer M-Nav, Oxygen, New Annuals TT 2118 hours, 1980 German Made 15 and 16.6m, Blue Tinted Canopy Price $48,000. A great glider for syndicate. Email: Delio Fagundes - delio.fagundes@gmail.com

Ventus Ct SW • In good condition with Cobra Trailer. Won the Nationals in 2006. Hard to beat for price versus competitiveness with the get home convenience of the turbo. $120,000. Julian Elder email julian@elder.net.nz.

Nimbus 2b • GKI Priced for a quick sale $38,000 ono. Phone either John 027 499 4375 or Ben 027 555 5485 for all info

Technoflug 'PICCOLO' ZK-GOU • $34,000. 1989. Total time airframe 475hrs with 218hrs on motor. Engine is Solo 2350b. Usual instruments incl. Ilec SC-7 elec.vario, Icom IC-A5 transceiver and (new 08) Microair transponder with mode C encoder. Navman GPS cradle for iPaq PDA fitted. Aircraft was refinished (08) with Sikkens 2-pot paint by Sailplane Services Ltd. Drury and is in pristine condition. Fully fitted alum.clad trailer with rigging aid, (one man rigging sys. available). Contact Neville Swan. Phone 09 416 7125 or nswan@xtra.co.nz

Pipistrel Sinus motor glider ZK-GIM 2004 • 80hp Rotax 912 UL3 (non cert) twin magnetos in perfect cond. Short take off & landing. VNE 121 knts. 100 litre fuel, 10.4 litres/hr. feathering prop., Brauniger glass panel with vario,flight recorder, engine monitoring etc. Microair T2000 SFL transponder, Xcom760 VHF transceiver, PLBGPS, Elec soaring vario, GPS map296 colour with terrain warning, airframe 550 hrs,engine376 hrs. See photo *SoaringNZ* AUG/SEPT 2009 p44. $145,000. Hangar freehold with concrete floor available at Drury $12,000. malinsi@vodafone.co.nz

GNZ members are eligible for one free non-commercial classified advertisement per issue.
Deadline for receipt of advertising for our August issue is 22 July 2010.

GLIDERS WANTED

Serious pilot staying in Omarama for next 12 months looking to lease glider for the 2010-2011 season, entering NZ competitions and training all season. Two highly reputable references available upon request. Looking for ASW20 or better. Contact: omarama.lease@gmail.com or phone 021 0 251 8316

I`m looking for a libelle or asw15 glider • e-mail: fernando.maxigiro@hotmail.com

HANGARS

Omarama Hanger for rent. 15m western side. 12$ per day, 300$ per month contact annlaylee@aol.com for longer term rates.

A 20m hangar space in Omarama is looking for a long term tenant Negotiable price, contact Nigel 0800 438 453

Omarama Hangar - 20m space in Sailplane Hangars Ltd eastern most hangar on the west side (Unit S), comprised of 20,000 shares in Sailplane Hangars Ltd and Licence to Occupy. $40,000 plus GST; Contact: Garry Wakefield, E: garry@walaw.co.nz - phone 03 348 9246.

Hangar space Omarama for sale. Top slot in new private lock-up hangar. Secure, convenient, water, power, painted floor. Great neighbors. Regret not available to syndicates nor commercial operators. Contact:- David Laing:- laing.braeview@xtra.co.nz or phone 027 434 0074

Drury airfield hangar position for sale. Concrete floor, water, power. Plan ahead for next season....Why rig each day when you can have a hangar spot for half the cost of a new trailer? Phone Roger Sparks 027 495 6560

Drury 18m Hangar Space. For Sale Quarter Share in the first hanger. Details therms@xtra.co.nz or Bernie Mb 021 244 4405

TRAILERS

Solid well built metal plate construction glider trailer • Was used for LS3 and then LS8, so should fit similar gliders. Current rego and wof. $2k ono. Hadleigh - hadleigh@gliderpilot.co.nz

Glider trailer • good condition, new bearings and repaint at the start of the season. Suit 15m/17m glider. Currently at Taupo. $2,000. Email martinlindley@xtra.co.nz or phone 021 623 202

OTHER

LX 160 • Flight computer and speed-to-fly vario $995.00 ono. Contact: loaders@clear.net.nz

Volkslogger IGC / FAI approved GNSS Flight recoder • $995.00 ono Contact: loaders@clear.net.nz

Replogle barograph complete with charts • $250. Phone Don Spencer, 09 537 5964

SPOT GPS TRACKER • Good condition – only used a couple of times. Good for cross country and competition flying. Retails for $425 -asking $250 (requires subscription to service provider) Contact c-jackson@xtra.co.nz

EDIATEC Flarm display • Imported from manufacturer but never installed. Details in: http://www.ediatec.ch/pdf/Operating_Manual_V_5_0e.pdf Contact Alain in Omarama at urubu35@hotmail.com

Borgelt B50 Vario • I Need a Digital Data Mudule for it. Would buy a damaged/broken complete B50 as I can't buy the module new. Contact peter.mckenzie@contactenergy.co.nz

Aviation oxygen cylinder • steel with valve measures approx 560mm x 100mm including valve. Offers - contact ggreen@vodafone.net.nz

Cambridge 302 + 303 + Ipaq 4700 + Ipaq holder + Winpilot Pro software. With all connections & wiring. About 3 years old. Would cost $6,500 to replace. $4,000 Brett Hunter hunter.b@ihug.co.nz

Cambridge L-Nav + GPS Nav + Wiring + connections. Price $3,800.00 Delio Fagundes - delio.fagundes@gmail.com

Yaesu Vertex VXA-150 Airband transceiver for sale • Hardly used unit. Complete with hand held speaker/microphone, headset adaptor, plug-in ear piece and user manual. Still in original packaging. $350. Phone 03 443 6135

Winter ASI AS-3-20 • Marked up for ASW20a http://www.trademe.co.nz/Browse/Listing.aspx?id=271678560

ILEC SN-10B Flight Computer plus Vario Meter • 3 years old - in "as new" condition. $3,200. Contact Mike Tucker or mike.tucker@xtra.co.nz.

Christmas gift for glider pilots • The perfect gift for any Omarama fanatic - a painting of Omarama scenery / buildings. See www.wildconcepts.co.nz

Parachute wanted • Thinback or similar a real plus. Contact Jacopo 021 269 5404 detti@ihug.co.nz

WORK WANTED

Canadian commercial pilot/glider instructor looking for any reason to go back to New Zealand. 400TT, 275 single engine, 125 glider, 75 hour towing. Looking to head down around late October 2010 and stay through until March-April. Would really appreciate any opportunities! Thanks! Kyle Tiessen kyletiessen933@msn.com

For Sale

Ventus 2c 18m ZK-GYD

2002 Model. Serial Number #76.
Total Airframe approximately 465hrs.
This aircraft is in immaculate condition.
Equipped with normal instrumentation as pictured.

Including:
– Ilec SN10 Vario/Flight Computer with remote.
– Flarm with Swiss Bat external display
– Transponder (to be fitted)
– Dittel FSG 71M Com Disc Brake
– Tinted Canopy
– Carbon/Kevlar cockpit
– Oxygen with MH regulator
– Cobra trailer with carpeted floor and full SL special options
– Tow out gear.

$175,000 including GST

Contact Ross Gaddes, Sailplane Services.
Wk: (+64) 09 294 7324
Mob: (+64) 0274 789 123
E: sailplaneservices@xtra.co.nz

Sailplane Services (2005) Ltd