

Soaring AUSTRALIA



September 2005



**Away at
Aargalong**



**Software Review:
Condor**



**Powered Paragliding
in Tunisia**

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Photo: Courtesy Soaring Wave Camp Patagonia 2005

Soaring AUSTRALIA



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GARDENWARE

Emilis Prelgauskas

TRADITIONALLY, THE SPORT OF GLIDING INVOLVED NOT ONLY FLYING BUT ALSO PERIODS WITH ONE'S ARMS BURIED IN THE GREASY INNARDS OF A WINCH, OR LYING IN THE DUST UNDER A GLIDER'S BELLY AT THE LAUNCH POINT. IN PREPARATION, THE PILOT WORE CLOTHES WHICH NO LONGER 'CUT IT' FOR THE FAMILY'S FRONT GARDEN MANICURING EXPEDITIONS.

Gliding has, like society, moved on. As launch points have grown grass, and grotty maintenance has been outsourced, the pilot has moved into clothing that reflects recreational rather than survival aspects of the sport. Interested outside observers, too, bring their own attitudes about how the sport should present itself to today's community.

At the same time commentators note a decline in the vigour of society (gliding included); of social structures, having peaked, now declining like past world empires, and of an 'orgy in the penthouse' with no-one left in the engine room.

In modern terms, they say, we can see this in the endless minutes produced by ever more numerous committees working in the

rarefied heights rather than at the coal face. And so the sport draws on fewer and fewer spanner-wielders to prop up the casual Sunday gentleman pilot. Meanwhile, the sport's market forces sell windcheaters to the larger market segment represented by the latter.

Lost in that transaction are innovation, excitement, and satisfying the broad base that is the sport's origins and foundations. As a result, innovation and excitement today rise up from specific interest groups within the core of the sport, while the galleon of reports and minutes sails majestically on.

Alongside today's politically correct and 'upwardly mobile' view of gliding, there is space, and a need, for the tinkerers and specialists whose interests are focused at local level. It is unlikely that they will meet the accreditation standards or hierarchical rules set by the fixed minds at the top of the sport.

Using this as a reason to separate the specialists (in their garden wear) from the mainstream definition of the sport only accelerates the impoverishment of gliding. The challenge is on for the powerbrokers in gliding to embrace these resources, which continue to evolve while the main branch withers.



THE HANDSHAKE

Emilis Prelgauskas

STRANGE OUTCOMES SOMETIMES EMANATE FROM ACTIONS
– IN GLIDING AS IN OTHER LIFE ARENAS.

Fifteen years ago, I received one in a succession of federal trophies handed out to people over the decades for notably doing 'stuff within the system', rather than for high scores in the contest sphere.

It was, I guess, intended as a 'thank you' in a system which, on the one hand, leans heavily on people to use their own time and enthusiasm to produce the sport's underpinning resources (manuals, handbooks, standards and so on); while on the other hand the federal coterie behaves like a service industry with its enthusiasm in sending out accounts (including to those who developed the resource in the first place). They say no good deed ever goes unpunished.

Many years later I was leant on again – this time to dust off the gong and provide it as the pattern for a new generation of replicas to be made. There was some fuss at the other end about me arriving at an incon-

venient time, but it got sorted. Which might have been the end of it. Yet several months later, I receive a call accusing me of not following up on the arrangements. Tracking back, it turned out the new replica cast had been lost. So I was leant on to repeat the process, once again, for the benefit of the gliding system. The only element that seems to have been missed in this seesaw is that I was giving up a working day each time and ended up travelling 400km delivering and retrieving the artefact. At my own cost, of course.

This small 'snafu' was at about the same time as (in the same region) a federal Life Member, awarded the year before, was puzzling over the demand for membership payment sent to him by the federal office. I guess there are times in amateurism when the individual simply can't afford the benefaction awarded by the system.



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BASIC SAILPLANE AERODYNAMICS

Colin Vassarotti

HOW DID YOU REACT TO PART 1 IN THE JULY EDITION? DO YOU THINK WINGS SUCK, PUSH OR PUMP, OR ALL OF THESE AND MORE?

Still unconvinced? Maybe you are clinging to the Bernoulli-based theory that the majority of lift comes from suction created by the airflow over the top of the wing. If so, think about this: how is sustained inverted flight possible? Perhaps there is something to Coanda and the 'wing as a pump' theory after all...

No matter. Two things are certain: Wings produce lift, and the aerofoil shape of the wing has a profound influence on sailplane performance.

Part 2

LIFT (CONTINUED)

This article looks further at sailplane LIFT and wing aerodynamics. It also deals with DRAG – the fourth of the forces acting on a sailplane in flight. You will remember from the previous article that the others are LIFT, WEIGHT and THRUST.

Aerofoils

The main progress in sailplane performance over the years has come from refinement in aerofoils and the strength, lightness and design flexibility allowed by modern airframe materials.

An aerofoil is any shape designed to produce lift. It has a leading edge, a trailing edge, a chord and camber (see Figure 8 and 9). Aerofoils have infinitely superior lifting properties and much less drag compared to the flat plate design of early wings. As well as superior lift-over-drag performance, aerofoils produce greater lift when the speed of the airflow is increased. The curvature of the top and bottom surfaces of a wing defines the shape of the aerofoil.

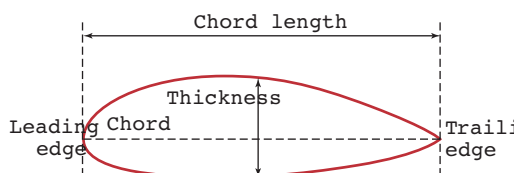
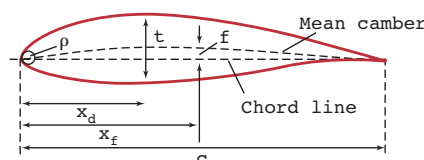


Figure 8: Basic aerofoil

An aerofoil's characteristics can be defined by the following parameters: chord, maximum thickness, position of maximum thickness, mean camber (line equidistant between the upper and lower surfaces), point of maximum camber, and the leading edge radius.



t	Thickness
x_d	Point of maximum thickness
f	Camber
x_f	Location of maximum camber
p	Leading edge radius
c	Chord

Figure 9: Aerofoil parameters

Glider aerofoils

Early glider designs used simple aerofoils shaped to produce a high lifting force at low speeds – well suited to slope soaring and climbing in weak thermals. Better understanding of the atmosphere's soaring potential, and the desire for high speed flight over long distances, stimulated a shift towards more sophisticated aerofoils.

Low speed performance naturally remained a priority, and modern sailplanes are capable of exploiting very weak lift – although generally at higher airspeeds than their pioneering counterparts. The real gains have been at the high speed end.

Here are some examples of this evolution:



Göttingen 652 (minimum drag and high lift co-efficient – designed for slow speed flight)
Göttingen 549 (less cambered and maximum thickness)



further aft – good high speed performance and pleasant stalling characteristics)



Wortmann FX 62 K 153 (low drag – designed to maximise the laminar flow effect in the boundary layer) [see Part 3 for boundary layer]

Figure 10: Examples of glider aerofoil sections
Source: Welch and Irving, *New Soaring Pilot*

Wings and the boundary layer Flow around a wing

When air flows over a solid body such as a wing, viscosity causes the air closest to the wing to slow. In fact, the air actually in contact with the wing is stationary relative to it. The air in the layer just clear of the surface is moving slowly, and the next layer a bit faster. Eventually, at some distance from the wing, the effects of viscosity are so slight that the air is all moving at the same speed. The air near the wing which has been slowed by viscosity is called the *boundary layer*.

The boundary layer

The boundary layer is the sandwiched zone containing all the air between the wing surface and the point where the layer reaches 99% of its potential free stream velocity. Boundary layers can be laminar, turbulent or separated.

In general, a laminar boundary layer will be thinner than a turbulent boundary layer. In laminar airflow each layer of air slides smoothly over the layer below, even to the point at which it is in contact with the viscous layer sticking to the surface.

If the flow is turbulent, friction results in a sheet of rolling eddies, or vortices, in the flow along the surface. The result is a thicker boundary layer.

Airflow over a wing up to its thickest point is generally laminar. Beyond that point the airflow in the boundary layer generally becomes turbulent. In modern glider design, the trend is towards aerofoil sections which have their thickest point well aft. This is to maximise the area of laminar flow.

Turbulent or separated (as opposed to laminar) flow in the boundary layer wastes energy in generating eddies, causing extra drag. However, while a turbulent boundary layer is thicker and causes more drag than a laminar boundary layer, it has one important advantage. Because of the eddies in a turbulent boundary layer, it is more energetic, and tends to stick to a surface longer than a laminar boundary layer.

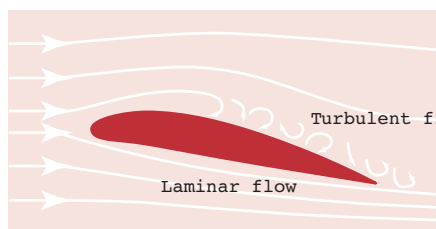


Figure 11: Exaggerated depiction of turbulence in the boundary layer. The boundary layer is actually very thin. Eddies can also form in the boundary layer under the wing

Maximising laminar flow

The extent to which laminar airflow can be maintained around the wing's surface is a key factor in improving aerofoil performance. Modern sailplanes employ elegant, highly-refined aerofoils designed to maximise laminar flow. This is particularly evident in FAI 15m Racing Class and Open Class where very thin aerofoils are used. Most have a maximum thickness of 12.7% of the chord.

A good example is the ETA – the world's longest-spanned sailplane. The fundamental objective behind the design of the ETA was to maximise extraction of energy from the air with the absolute minimum of lift-related drag. This incredible aircraft has a six-piece 30.9m wing and reputedly delivers a best glide ratio of more than 60:1, possibly as much as 70:1. It uses three different aerofoil sections – root (HQR 1), main span (HQR 2), and outer span (HQR 3).



Figure 12: ETA sailplane aerofoil section HQR 2 (Source: Simons M, Sailplanes 1965-2000)

Laminar separation

Laminar flow is very sensitive to disturbances and changes in velocity. It breaks down when the flow velocity starts to slow down, usually around the point of maximum thickness on the upper wing surface and further aft on the lower surface. Even with the most refined aerofoil, airflow tends to break away at some point from the wing's surface. Generally, the further aft the point of maximum thickness the greater is the likelihood of the flow separating from the surface. In some cases the flow may re-attach to the surface, creating a laminar separation 'bubble', and in other cases the separation may be complete.

Laminar separation happens without transition to turbulent flow, but it does create very high drag with associated loss of lift. Designers work hard to prevent laminar separation. Typically, this is achieved by creating a forced transition to a turbulent boundary layer by using turbulators to disturb the airflow at the point where the separation bubble would otherwise form.

Turbulators will be covered in more detail in a later article.

Stalling

Most sailplane aerofoils stall at roughly the same angle of attack of between 15 and 16 degrees. Airflow at less than the stalling angle generally remains attached, reflecting the laminar flow characteristics of the particular aerofoil section. Beyond the critical angle of attack, air cannot flow effectively around the leading edge and over the wing's top surface without separating. The wing consequently loses much of its ability to produce lift, and a wild turbulence of eddies creates considerable drag. On a well-designed aerofoil, the separation starts near the trailing edge and progressively moves forward as the angle of attack increases. This gives predictable and manageable stalling characteristics.

When the stall occurs, the airflow around the wing looks like this:

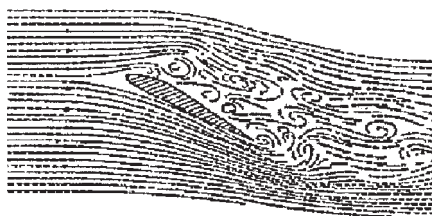
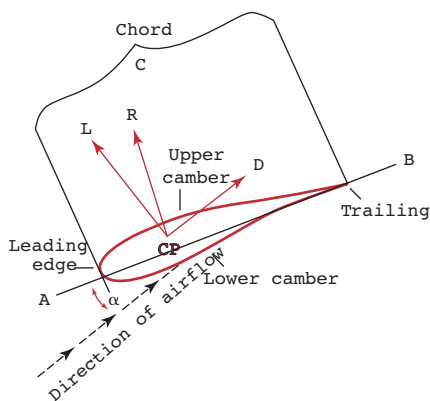


Figure 13: Airflow around a stalled aerofoil (Source: GFA Instructor's Flight Reference Cards)

Wing language

Wing terminology has remained virtually unchanged over the years.



- A-B Chord line
- C Chord
- a Angle of attack (angle between chord line and airflow direction)
- R: Force resulting from air striking chord line (exact position of "R" is variable depending on angle of attack)
- D: Drag (parallel to airflow direction)
- L: Lift (at right angles to airflow direction)
- CP: Centre of Pressure

Figure 14: Basic wing terminology

Some key concepts

In addition to aerofoils, laminar flow, boundary layer and stalling, there are some other key concepts that make it easier to under-

stand wing aerodynamics. These are: centre of pressure, Reynolds numbers, wing loading, chord, aspect ratio, taper, twist and incidence. At some risk of oversimplification, they can be summarised along the following lines.

Centre of pressure

The point of the aerofoil on which the combined forces of lift and drag acts is called the centre of pressure. The CP shifts according to the angle of attack at any given time. Consequently, it needs to be factored in when examining issues of stability and control. (The CP is an abstract point, calculated mathematically to represent the pitching moment, which at high enough airspeed is behind the wing – Ed)

Reynolds number

Reynolds number is a dimensionless quantity expressing the ratio of inertial forces to viscous forces in fluid flow. It is an important factor in measuring boundary layer and aerofoil behaviour. You could say that the Reynolds number is a measure of the way that viscosity and the size and airspeed of an aerofoil interact.

Glider aerofoil sections can be fairly sensitive to Reynolds numbers. Because of this, when comparing the characteristics of glider wing sections, it is important to do so at the correct Reynolds number corresponding to the airspeed and size of each wing.

Wing loading

Wing loading is calculated by dividing the weight of the glider into the area of the wing. It is usually expressed in kilograms per square metre, or pounds per square foot. For any given aerofoil and wing area, a higher wing loading means that the minimum sinking performance of the glider is degraded; but, at the same time, the best glide performance is obtained at a higher speed. A high wing loading is a distinct advantage for speed flying in strong lift conditions.

Chord

As shown in Figure 14, the chord of a wing is the straight line distance between the leading and trailing edges. For sailplanes, as for most aircraft, the chord is wider at the wing root and tapers towards the wing tip.

Aspect ratio and taper

The aspect ratio is the ratio between the wingspan and the average chord of the wing. The long slender wings of sailplanes result in high aspect ratios. The higher the aspect ratio of an aircraft of given weight and wing span, the higher will be the wing loading. Taper reflects the change in chord from wing root to wing tip.

Twist

Wing tip twist is used by designers to improve handling characteristics near the stall, and to reduce drag. The angle of attack at the wing tip is designed to be less than at the wing root. This ensures that the wing tips operate at a lower angle of attack and are more lightly loaded than the inner wing. Consequently they will stall only after the inner part of the wing has stalled. This reduces the likelihood of entering into an inadvertent spin.

Incidence

The angle between the chord line of the wing and the longitudinal axis of the sailplane (or some other reference line) is called the rigger's angle of incidence. Most aircraft have a slightly positive rigger's angle of incidence, so that the wing sits at a positive angle of attack when the aircraft is flying close to level. In the vast majority of sailplanes, this is not adjustable without major structural work.

The angle between the incoming airflow and the wing's chord line is called the angle of attack.

Wings in summary

For sailplane pilots, the main aerodynamic considerations of wings are:

- *Wings work because air has resistance and is a viscous fluid*
- *Aerofoils deflect air downwards, resulting in the wing being pushed upwards. They also accelerate airflow over their top surface, thus decreasing pressure and creating upward suction.*
- *The more extensive the laminar flow, the more efficient the wing*
- *The lifting effectiveness of an aerofoil increases with its angle of attack, until a point is reached (about 15 degrees) when the aerofoil stalls.*

DRAG

Any lifting surface moving through air will encounter resistance called drag. To achieve flight, it is necessary not only to overcome the weight but also the drag of the flying object.

Let's not forget Newton's laws. For steady flight in a straight line (equilibrium) the laws of motion dictate that there must be forces which exactly balance both the WEIGHT and DRAG of the aircraft. LIFT balances WEIGHT. THRUST balances DRAG.

OK, that's all very well you might say – but so what? Well, remember, THRUST comes from converting hard-won height (potential energy) into distance and speed (kinetic energy). So, the less thrust needed to overcome drag, the more energy there will be available for glide performance. The essential

message is: minimise the energy loss caused by DRAG.

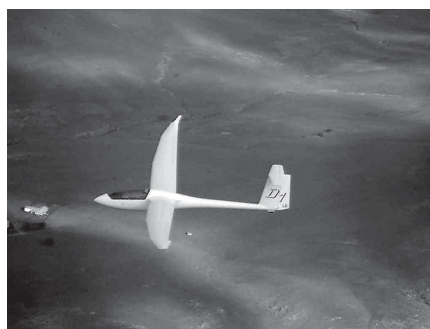
Sailplane drag falls into two main categories: induced and profile.

Induced drag

Induced drag is a result of the wing 'pushing' air downwards in order to produce lift. Near the wingtip, the air tends to flow outward from the high pressure zone below the wing into the low pressure zone above. This flow creates a rotation which forms a trailing vortex behind the wing. More than 70% of the total drag generated by a modern sailplane in slow flight comes from wing tip vortices. At higher speeds the proportion is far lower.

Induced drag is inversely proportional to the square of the airspeed and density of the air. In simple non-mathematical terms, lift generates induced drag, and the greater the angle of attack the greater will be the drag. Other considerations aside, the larger the aircraft and the denser the air, the higher will be the induced drag.

The theoretical best wing design for minimal induced drag comes from elliptical spanwise distribution of lift. Unfortunately, this is not always compatible with other desirable characteristics such as simple construction, good handling near the stall, and minimal profile drag. The Discus and SZD 55 sailplanes are examples of the efforts of sailplane designers to achieve as near an elliptical wing shape as possible. Wing twist can also be employed for the same purpose, but is not as obvious to the unaided eye.



The elliptical Discus wing
Photo: Rick Agnew

Some aerodynamicists consider it possible to reduce induced drag with an elliptical form of dihedral which can be achieved by curving or bending the wings upwards. This also has the effect of reducing vortex drag. Some sailplanes, particularly those with large wingspans or very flexible wings like the ASW 20, do this naturally in response to increasing flight loads. The Discus 2 is an example of using polyhedral wing design to attain the same result in a Standard Class sailplane with a fairly rigid wing.

Without doubt, the most popular advance in reducing wingtip vortex drag lies in the use of winglets. Not only do they reduce energy loss through drag, but they also generally improve flight handling characteristics at low speeds. And, of course, they look great! Winglets will be dealt with in more detail in a later article.



Pilot's View of Discus leading edge and winglet
Photo: Col Vassarotti

Profile drag

Profile drag is essentially skin friction. It occurs because of air viscosity and the fact that a sailplane can never be so perfectly streamlined as to completely eliminate air resistance. The aircraft literally drags air along with it in flight. Profile drag is proportional to the square of the speed of the aircraft. So the faster you go, the greater the profile drag penalty.

Glider designers strive mightily to minimise profile drag. Improvements in extending the laminar boundary layer, not only over the wings, but the entire airframe, have been the main source of enhanced glider performance over the last 30 years or so. Modern glider construction materials and technology have allowed the achievement of extremely smooth surfaces, very accurate wing profiles, elegant fairings of airframe joints and minimal control surface gaps, including around airbrakes.

The fuselage is a significant generator of profile drag; but there is very little scope for reduction beyond what has been achieved so far. Pilot comfort sometimes suffers in the search for the narrowest possible fuselage profile. There is room for improvement in the design and positioning of the wing-to-fuselage and fin-to-horizontal stabiliser joints. Another possibility is to eliminate the horizontal stabiliser and/or the fin, although past attempts to build sailplanes without these have met with limited success.

An additional component to profile drag is called form drag. This occurs because the airflow around an aircraft does not close in neatly behind the tail and trailing edges of the horizontal surfaces. Rather, it separates and forms a wake. The more streamlined and thinner the aerofoil and front end

profile of the glider, the lower will be the form and profile drag.

Total drag

The total drag on an aircraft is the sum of induced drag, form drag and profile drag. Induced drag is inversely proportional to the square of the airspeed, and profile and form drag are directly proportional to the square of airspeed. Hence, at low speed, induced drag will dominate, while at higher speed, form and profile drag will be the dominant form. At some speed, the two forms of drag will be equal, and this just happens to be the point of minimum drag.

As lift has to equal weight, the lift produced by a glider in steady flight does not change, so the lift over drag ratio (L/D) is at a maximum when drag is at a minimum. Figure 15 shows how graphing the drag curves produces a shape called the 'drag bucket'.

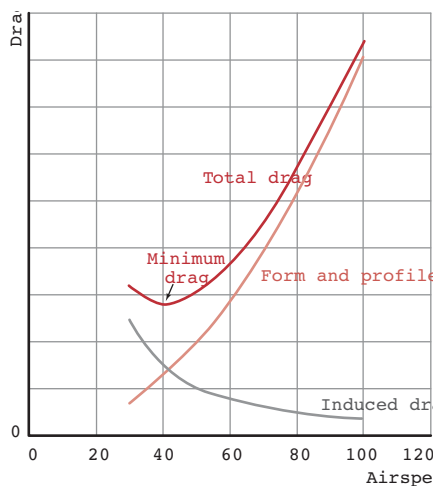


Figure 15: The 'drag bucket', in this example illustrating best lift/drag ratio at 42kt

More on aerofoils

Variable aerofoil shapes

The camber and performance of an aerofoil can be varied by the use of flaps. Some flaps simply change wing shape to create more lift, allowing better low-speed performance. Flaps of this type have the potential to vary wing area and, consequently, wing loading. The Fowler flaps of the L13 Blanik allow excellent handling at quite low airspeeds, which is one of the reasons that the type (first flown in 1956) has remained a popular trainer for half a century.

A high performance example is the SB-11 sailplane, in which Helmut Reichmann won the 1978 World Championships at Chateauroux. This aircraft used large Wortmann flaps which could change the wing area from 10.56 to 13.2 square metres. The concept has not been taken much further, probably because the gain in performance was only marginal compared to other, and less expensive, 15m Racing Class aircraft.

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'Reflex' flaps, ie, simple trailing-edge camber-changing flaps, give the best of both worlds. They allow the aerofoil profile of a wing to change from high lift at positive flap settings, to a high speed profile at negative flap settings. For slow, circling flight the wing assumes a deeper camber, producing high lift (and increased drag). For cruise, a negative flap setting changes the lifting characteristics of the wing and decreases drag.

Reflex flaps change the pressure distribution around the wing, reducing significantly the tendency of a wing to pitch nose-down. Reducing this tendency means that less 'downwards lift' is needed from the tailplane, which in turn reduces the lift the wing has to produce. This lighter load on the wing and tail results in less drag and higher performance.

Some pilots add weight to the tail to reduce the horizontal stabiliser drag at higher speeds. This is because shifting the CG aft brings it closer to the CP, thus reducing the length of the moment arm of the pitching force. The net effect is that less lift and, accordingly, less drag is produced by the tailplane, increasing performance overall. A note of caution, though: flying with an aft CG potentially involves serious risks; some sailplanes, for example the Standard Cirrus, should never be flown at maximum aft CG.



Figure 16: Reflex flaps illustrated

The next article in this series will examine stability and control.

Correction to Part 1:

The missing figure from paragraph 9 of Article 1 is 15 (pounds per square inch).

Acknowledgments and further reading:

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DALBY BIG AIR 2005

Adam Parer

THE DALBY HANG GLIDING CLUB HOSTED ANOTHER WELL ORGANISED AEROTOW COMPETITION THIS YEAR, DECIDING ON THE ANZAC DAY LONG WEEKEND FOR THE START OF THE SIX DAY EVENT. ANY CONCERNS REGARDING THE TIMING BEING TOO LATE IN AUTUMN WERE LONG GONE BY THE END OF THE WEEK.

We were blessed with spectacular soaring conditions that allowed for different tasks every day. Blue conditions, overdeveloped conditions, patchy rain, we got it all, including plenty of the best cumulus and cloud streeting you're ever likely to see.

The competition started off on a high and ended the same way. Following is a day by day account of what would have to be one of the best competitions this year.

DAY ONE

With a steady ESE breeze and a stunning array of cloud streets it came as no surprise when the task committee called an open distance course that included one turnpoint.

This flight would cover the same ground Jon Jnr used recently to set the new Australian distance record of 497km.

In the air it was surprising to find the lift not what the magnificent looking clouds suggested. The 77km to the turnpoint was a fast leg, but from there it slowed. While base stayed at 8,000ft, the clouds thinned and became less frequent and pilots were soon working the haze domes before it was totally 'blue' flying conditions. A number of competitors broke the 100 mile mark and Dave Seib won the day with 257.1km. Many pilots touched down at sunset and packed up under the light of a spectacular full moon.

DAY ONE RESULTS

1	Dave Seib	Moyes Litespeed	257.1km
2	Adam Parer	Airborne C4	243.7km
3	Al Daniels	Airborne C2	203.3km
4	Peter Ebling	Airborne C2	183.0km
5	Phil Schroder	Airborne C4	181.4km

DAY TWO

With very similar conditions to the previous day, the task was a 180km course that included three turnpoints, with goal opposite the town pub. Again the task started out fast along some great looking cu's with 600 to 800ft/min climbs, but once past the first leg of 44.2km it started to blue-up.

The glides became longer between thermals and successive climb rates got less and less. The odd 500ft/min climb was still to be



Launch Marshals Daron and Jay organise the early starters

Photo: Don Cramer

had and with the 20km/h ESE tailwind the task was still possible.

Dave Seib set a blistering pace to win the day, with Adam Parer and Rick Duncan the other two competitors to make goal.

DAY TWO RESULTS

1	Dave Seib	Moyes Litespeed	3:10:49
2	Adam Parer	Airborne C4	4:13:33
3	Rick Duncan	Airborne C4	4:07:32
4	Phil Schroder	Airborne C2	
5	Trevor Kee	Moyes Litespeed	

DAY THREE

A 95.9km triangle was called, with the clouds looking superb and promising great climbs and a fast pace even with the 30km/h headwind on the last leg. The clouds lived up to expectations and some 1,000ft/min climbs were enjoyed on the first and second legs. Many cu's cycled through to overdevelop, and square kilometres of shade had pilots diving for sunny ground way off course.

As competitors progressed through the course, the ESE drift picked up and it was obvious the last leg to Dalby Airport was not going to be easy. Here the last turnpoint claimed some big names, including Al Daniels, Peter Aitken, Rick Duncan and eventually Dave Seib. Adam Parer drifted kilometres downwind at a few hundred feet to eventually climb back to cloudbase in 600ft/min. He finally made goal against a 40km/h headwind.

Dalby Hang Gliding Club President, Daron Hodder, used local knowledge and left ahead of the first start to get around before the final headwind picked up. Adam and Daron were the only ones in goal and got to leave their gliders set up in Dalby's carpet-lined hangar.

DAY THREE RESULTS

1	Adam Parer	Airborne C4	3:19:51
2	Daron Hodder	Airborne C2	3:42:01
3	Gabor Sippos	Moyes Litespeed	
4	Dave Seib	Moyes Litespeed	
5	Rick Duncan	Airborne C4	

DAY FOUR

Does the weather ever change here in Dalby? ESE wind, by 10am a deck of phenomenal looking cloud streets lined up from horizon to horizon, and this is one month before winter!

The task is called, a 121km dogleg that seems too easy as we watch the clouds going off, and it's only 10:30am. We are all keen to get in the air as we wait for the trike and Dragonfly to fire up.

Once on course the clouds cycle to overdevelop and proceed to dump rain. It is now a flight of avoiding the rain cells and working the shower fronts or the small patches of sunlight. Many competitors succumb to the early leg of the course.

Dave Seib gets very low with Dalby Senior Safety Officer, Rod Flockhart, and they spend the first 30-odd kilometres under 2,000ft, drifting in the strong quartering tailwind. Eventually they start to push harder as they move away from the rain and into much better air. Unfortunately they land 25km short of goal, with Rick Duncan just three kilometres wide of the mark. 18km out Adam Parer and Phil Schroder begin their race into goal after climbing in their last thermal with a huge wedge-tailed eagle. They cross the goal to see one other pilot landing, Peter Aitken.

DAY FOUR RESULTS

1	Phil Schroder	Airborne C4	2:07:35
2	Adam Parer	Airborne C2	2:10:38
3	Peter Aitken	Moyes Litespeed	2:15:08
4	Rick Duncan	Moyes Litespeed	
5	Rod Flockhart	Moyes Litespeed	

DAY FIVE

Groundhog Day – ESE, cu's streeting... The task committee wants more competitors in goal and calls a shorter 77km straight line to goal at Chinchilla airstrip.

The clouds don't get any better than this and it becomes a mad zigzag flight crossing to upwind streets that provide many competitors with up to 2,000ft/min averages. Columns of crop waste from the wheat fields 8,000ft below paint the thermals, much to the appreciation of the pilots.

Rick, Rod and Dave fly the whole course together, while Adam and Al Daniels set a fast pace starting at the first clock. Unfortunately for Al he accepts Adam's decision to take one more upwind street before a screaming charge into goal. Alas they wallow in light lift, low, 23km out, until they drift close enough to make it in.

Dave needs a very good score to reign-in Adam's 300 point lead, and accordingly flies at a blistering pace.

DAY FIVE RESULTS

1	Dave Seib	Moyes Litespeed	1:00:46
2	Trevor Kee	Moyes Litespeed	1:15:40
3	Rick Duncan	Airborne C4	1:02:51
4	Adam Parer	Airborne C4	1:19:39
5	Rod Flockhart	Moyes Litespeed	1:03:46

DAY SIX

Last day and a triangle is called to take advantage of the very light drift. The 92.9km triangle should have us home in time for the presentation dinner.

Dave is less than 300 points from winning the lead back from Adam, which means the Newcastle Airborne pilot probably has to land out.

Dave is off early, as is Rick, Al, Phil, Rod and Adam. The climbs are few and far between, and Adam and Phil land for a re-flight and watch the others position themselves for the valuable first start. Adam gets away late and Phil will take a third tow after a weak link break.

The day turns on and climbs of 800 to 1,200ft/min are found everywhere on the first and second leg. Dave, Rick and Al are smoking around the course while Adam flies by himself and gets low after the first turnpoint.

Adam then finds a boomer and screams back to cloudbase, catching Dave halfway along the second leg where they glide neck and neck for three kilometres. The next turnpoint claimed many during the week and Adam hangs back while Dave barrels out along course.

Rick is already in goal when Dave crosses the line. Even though Dave is in goal five minutes earlier, Adam averages 45.71km/h for the triangle to win the task.

DAY SIX RESULTS

1	Adam Parer	Airborne C4	2:01:57
2	Rick Duncan	Airborne C4	2:08:36
3	Dave Seib	Moyes Litespeed	2:15:00
4	Daron Hodder	Airborne C2	2:23:22
5	Phil Schroder	Airborne C4	2:29:59

The presentation starts at 7:30pm and kicks off with a couple of home grown hang gliding movies: Gulgong Classic 2004 by Jason Reid, and the Dalby Big Air 2005 by Simon Plint. The evening was low key thanks to the week of superb flying, some late night retrieves and the odd night out on the town. Dinner was followed by the awards ceremony that saw locals clean up the preliminaries. Daron Hodder received Best Sportsman award for getting everyone off safely on Day Six, then launching, making goal and placing fourth for the day! Kieren Brown managed a ninth place overall, an impressive effort for only his second competition; he was a fitting recipient of the Most Improved Pilot award.

FINAL RESULTS

1	Adam Parer	Airborne C4	4,858
2	Dave Seib	Moyes Litespeed	4,493
3	Rick Duncan	Airborne C4	3,832
4	Peter Aitken	Airborne C2	3,346
5	Trevor Kee	Moyes Litespeed	3,295
6	Phil Schroder	Airborne C4	3,083
7	Al Daniels	Airborne C2	2,963
8	Rod Flockhart	Moyes Litespeed	2,867
9	Kieren Brown	Moyes Litespeed	2,752
10	Daron Hodder	Airborne C2	2,655

See you at Dalby 2006!



FULL CIRCLE

WHILE MANY PILOTS MAKE THE PROGRESSION FROM NERVOUS NOVICE TO ADEPT ADVANCED, THAT'S USUALLY WHERE IT STOPS. YET THE TRANSITION FROM ADVANCED PILOT TO ACTIVE INSTRUCTOR IS CRUCIAL FOR THE CONTINUATION OF THE SPORT. WHAT IS IT THAT COMPELS SOME OF US TO TAKE THAT ALL IMPORTANT STEP? JULIE SHEARD HAS SOME QUESTIONS FOR FRED GUNGL; ONE TIME NERVOUS NOVICE, NOW SIX TIME AUSTRALIAN CHAMPION, FRED IS ABOUT TO EMBARK ON A NEW BUSINESS VENTURE, ACTIVE FLIGHT.

What made you first decide to take up paragliding?

Whilst skydiving in the early 80's, a couple of my skydiving friends were also doing some hang gliding. I was keen to have a go but never seemed to get the opportunity. During a skydiving training camp near Eildon, a couple of the guys used their skydiving chutes and launched from some of the steeper hills – possibly the first paragliding in Australia. Their glides were barely getting them away from the hill and I'm pretty sure they had to dodge some trees. Can't say that it enthused me enough to grab my gear and try it!

In the late 80's I was teaching skiing in St Anton, Austria. A couple of the ski instructors were also paraglider pilots. They were able to float around the mountain, which seemed much more fun than what I had previously seen, so my interest was rekindled.

When did you learn to fly and who taught you?

My first experiences were with the ski instructors in St Anton. After showing some inter-

est in their activities, they hooked me up to a glider and pointed me down a ski slope. I felt confident about pointing the skis downhill, flying and landing, but I had some concerns about the take off, particularly after seeing some of theirs! But I survived a couple of short flights, and felt ready for the glide down to the valley 1,000m below. Luckily these guys had some sense (I think they were mainly concerned about their gear!) and advised against it, due to mountain air currents, etc. This was something we didn't learn about in skydiving, though I can recall being stuck above the runway in Corowa, trying to get down so we could repack in time for the next jump.

I had spent most of my winters working at Mt Hotham, near Bright. At the end of the ski season in 1990, I signed up for a course with Alpine Paragliding, which was run by Brian Webb. Brian managed to get me up thermalling and I got the bug.

When did you realise that this was something you could make a career of?

I had seen the guys flying tandems in St

Anton, so I thought this could support my ski instructor wages. I began by helping Brian with some courses, but knew I was changing careers when I found myself trying to pack down this newly fallen powder snow around the launch area in St Anton whilst my ski buddies were off doing turns in knee deep powder. In the mid nineties I became a partner in Alpine Paragliding.

What do you want to achieve with Active Flight?

I believe that the current system caters well for pilots wanting to learn how to paraglide, but I feel pilots struggle a little after that stage. Safety, site knowledge, etc is being provided by the club environment, but there are not enough courses available in the skills enhancement arena.

I saw a similar scenario when I was skydiving in the mid to late seventies. Once I had finished the basic training, our aim was to do formations with other skydivers. There was no additional training available. I can recall many of the early jumps where I was happy if I could just see the other guys I had jumped out with, let alone join up with them! I think it took over 100 jumps before we started to become semi-competent at small formations. Today's skydivers get to a similar level after as few as 10 jumps, which can be attributed to the advanced courses that have become available.

I'm hoping we can move paragliding in a similar direction. Most pilots have a limited number of days they can dedicate to paragliding. If we can enhance their skill levels, they will hopefully get more airtime on the flyable days.

What characteristics do you think make a good pilot, and how can someone improve if they don't naturally have those abilities?

As with most sports, a good paraglider pilot has to be a "highly trained athlete" – strong, agile and quick thinking. Then again, if you consider our Aussie team, the above doesn't hold true!

From the groups I've taught over the past 12 years, the students with good



Viv and Fred ready for launch

Photos: Glen Thompson



co-ordination skills seem to shine through at the early stages. However, I feel as we start moving into thermalling and cross-country, it becomes more of a head game.

How comfortable a pilot feels in the air is a major factor and I can't say there's a particular characteristic I've seen that helps. Some pilots don't mind the bumps, whilst in the same conditions others squeeze the life out of their brake handles!

Minor fear can be a good thing, but some of our unnecessary fears, such as embarrassing ourselves by muffing launches, can be minimised by training and awareness. Getting your head around becoming comfortable with the bumps is a little trickier. I think a major problem, particularly with early airtime pilots, is knowing what constitutes bumpy conditions. Whilst doing thermic tandems with pilots, I give my thoughts on the conditions, turbulence, etc. This seems to help, as it gives them a reference to compare for later flights.

Any favourite flying places?

Always a tough one to answer, as there are so many good areas. St Anton has fond memories; the scenery is spectacular and it's where I did a lot of my early cross-country flights. I think it gave me a good grounding for cross-country, as I worked out that it was beneficial to land next to the Gasthofs (little pubs). It became a challenge to see how many Gasthofs I could fly over.

And of course there is Bright; great views of the Aussie Alps and reliable conditions. It's not an area for big distance, but offers good technical flying, which is the style of flying I prefer these days.

You must have had lots of special moments in your career, do any stand out?

The 1995 World Championships in Japan was the first time I competed at an international comp. I was able to fly with all the legends I had been reading about. There was also the time in the early days when I managed to get down to Harrierville. I was so stoked I proposed to the retrieve driver!

And are there any particular horror stories?

I suppose I would consider any of my three reserve deployments, all on prototype wings, a bit of a horror, but one instance where I had quite some time to think about it still stands out. In the early nineties I spent a couple of weeks in the Owens Valley, USA. It was a renowned hang gliding area, but I don't think there had been too much paragliding. The local guru hang gliding pilot Mark Gibson's advice was to launch before midday and don't land until after 5pm, or else the dusties might get you! I had scored some good conditions and had managed a few good flights, but on one particular day I hadn't paid close enough attention to the

cloud development on the other side of the range, some 30km away. I was still around 2,500m agl when the alarm bells went off and I headed for a landing at the airport. A few minutes later, to my horror, I saw a wall of dust heading in my direction and there was no way to get down before it reached me. Luckily there were still some good climbs, so I hoped altitude would help. I topped out around 3,500m agl. To my relief the gust front with numerous dusties passed under me. It was still windy when coming into land, but the dust devils were all gone. Back to the tent for a change of undies then to a bar for some drinks!

Any funny stories?

Whilst being collected during a competition in Manilla, the retrieve crew was helping me through a fence; I was aware of the electric strand but as I was almost through my leg touched it. I'm not sure what amount of current the farmer had running through it but it had three of us on our backs stunned! I'm not sure if we found it that funny, but Pete Bowyer, who had been supervising, seemed to get a good laugh.

What are the most significant changes you have seen in the last 10 years?

Definitely glider development. The increased performance is enabling pilots to accumulate airtime much quicker than in the early days. A current DHV 1-2 performs better than the competition wing I took to the Worlds in Japan.

Do you think having a family has changed your attitude to flying? And do you think your kids will take up flying?

If by attitude you are referring to risk taking, I would say that I fly more conservatively.

Too early to say for the kids; I would like to see them give it a try, but I have seen too many kids being pushed towards a sport, with the result that they burn out and give it away.

How do you think paragliding will have changed by the time your kids are old enough?

Tough to see how paragliding will be in 10 years – I keep wondering what more they can do with the gear, but I thought the same in 1995. I hope improvements continue to be made in harness protection and glider safety.

What flying ambitions do you still have?

My immediate ambition is to compete at the Worlds being held in Manilla 2007. The conditions suit the Aussies, so we will hopefully get some good results.

What do you think are the challenges facing paragliding, particularly in Australia, and what can individual pilots do to help?

In Australia, as in most countries, site access is always a concern. With litigation the way it is, both private and public sites are at risk of being closed. Clubs and some individuals are addressing the site situation by looking at



Tandem launch at Mystic



Climbing out over Mystic

purchasing and leasing sites, which in reality is the only long-term solution for guaranteeing access.

And lastly, when you have such a cool job, what do you do for fun?

I still enjoy snow skiing, but I think I've become more of a fair weather skier, rather than battling the blizzards which was required whilst working at Mt Hotham! My wind-surfing gear hasn't seen much use over the past five years, but it's something I would like to get back into.

I have set up a reasonable home theatre system, so I enjoy watching movies.

And of course if there are some cu's forming outside the window, I'll be out to catch some thermals.



Paramotors – An Overview

Graham Sutherland

PARAMOTORS ARE POWERED PARAGLIDERS. THEY ARE THE CHEAPEST, SIMPLEST AND ARGUABLY THE SAFEST FORM OF POWERED RECREATIONAL FLIGHT. THEY CAN OFTEN BE PACKED UP SMALL ENOUGH TO FIT IN A SEDAN'S BOOT AND BACK SEAT, ALTHOUGH MOST PILOTS PREFER NOT TO FULLY DISASSEMBLE THEIR PARAMOTORS AND INSTEAD PUT THEM IN A STATION WAGON, IN A VAN OR ON RACKS ETC. AS SUCH YOU CAN BE IN THE AIR WITH ONLY A FEW MINUTES PREPARATION. YOU DON'T NEED AN AIRSTRIP FOR LAUNCHING; A BEACH OR GOOD-SIZED FIELD IS SUFFICIENT.



Graham Sutherland flying north of Byron Bay
Photo: Sam Bridgeford

wing temporarily collapsing in bumpy air usually increases along with the time it takes to recover. Lower performance paraglider wings are designed to quickly recover from collapses with minimal or modest loss of altitude and direction, but it can be a scary experience for some. Paramotoring can be a quick way to learn about thermalling as you can't bomb-out and end up on the deck if you lose the thermal. Turning off the engine at altitude and gliding on in silence can be done, although some paramotors can be difficult to restart in the air. Both hand start and electric start options are available. Thermalling under power and using idle or engine off for the glides, you will go further and faster than if you try to imitate free-flying.

It appears that powered paragliding can be safer than unpowered paragliding, even though the propeller and thrust increase risks. This is because most paragliding accidents occur in relation to launching, landing and ridge soaring. Paramotor pilots have a lot more options for launching and landing and so can generally choose much safer places to launch and land, as well as safer conditions and situations in which to fly. Many paramotor pilots only fly in the very light conditions of early morning and late afternoon. The low speed of paramotors and ability to land just about anywhere would be the reasons paramotoring could be the safest form of powered recreational flight, even though mishaps are reasonably common. Launching and landing into wind on open flat areas of grass or sand results in bicycle-like groundspeeds that occasionally breaks props and bends cages but usually doesn't result in major injury to the pilot.

The engines are all lightweight two-stroke engines in the 80 to 300cc size range.

A bigger, heavier engine may produce more power and hence more thrust, but it doesn't make a paramotor fly any faster, it only makes it climb faster or capable of taking a heavier pilot. They are not classed as aero-engines and exhibit all of the typical two-stroke problems. Engine outs are not uncommon, but so long as pilots stay within glide of a safe landing it isn't an issue. Don't expect a paramotor to be as low maintenance as a motorbike either; because paramotoring is a small market, manufacturers can't spend much on research and development. So you will need to learn a bit about engines or find a good two-stroke mechanic.

For training in Australia you need first to learn to paraglide and gain some experience before you can begin training for the motorised endorsement to the paragliding licence. Training is administered by the Hang Gliding Federation of Australia [www.hgfa.asn.au/].

Paragliding is perhaps two thirds of paramotoring, so once you have mastered paragliding expect to have to learn half as much again to equally master paramotoring. Nil wind paramotor launches on flat ground are much more difficult than for paragliding, so expect the training to be hard physical work.

Some people choose to build their own paramotors and only buy the wing and perhaps the harness (plus helmet, boots, radio, parachute, etc). However such people often find that building a good paramotor is a lot more difficult and expensive than they expect. Many end up buying a commercially manufactured one if they fly often. Although it is relatively easy to build a paramotor that will get off the ground, it is much more difficult to build one that launches easily, is easy to control and comfortable in flight. There are no decent plans available for homebuilders. To design and build a good paramotor usually requires prototyping and lots of test

The most basic part is the wing. It is a parachute-like ram-air wing that is typically used for paragliding. Paraglider wings come with varying levels of certification as to their level of safety in gliding flight, but some paraglider wings are not very suitable for paramotoring in general, or for specific types of paramotors. For most people there is no point in using a high performance paraglider, as the added danger and difficulties of launching cancel out any gains.

The things that really separate paramotors from other powered aircraft are the very low flying speed, the thrust acting six metres below the wing, pendulum effects, and the very flexible connection between the motor/pilot/propeller and the wing.

The typical flying speed is only about 36km/h, so flying into a 15kt headwind may leave you with only 5km/h of groundspeed. If you want to do out and returns pick a light wind day. A great way to fly is to have a pick-up driver so that you fly with a tailwind for a groundspeed that is comparable to that of the pickup car following a less direct route.

You can speed up the wing to about 50km/h by lowering its angle of attack or reflexing the wing, but the chances of the



flying. It is rather foolish to choose to be a test pilot at the same time as being a student pilot. Before designing and building your own it is far better to get some experience up on a new or second hand paramotor first. Try lots of different styles of paramotor to try to understand all the methods of torque compensation, attachment point set-ups, thrust transmission to the carabiners, etc, as such things can make the difference between a paramotor that sits in the garage all the time and one that flies a lot.

When buying a paramotor it is very important to do your research well, as there can be lemons on the market. Currently there is nothing to stop homebuilders selling their first effort or two before they build one that they are happy with. Even many of the commercially built paramotors have their issues. There is no such thing as the perfect paramotor as everything involves trade-offs. As a rule don't get all your information from one source as they may have a vested interest or may not be the expert they think they are. Try to get second opinions on how good a particular paramotor is before you lay out the cash.

Do try to avoid noisy paramotors. Direct drive and small props are usually the loudest. Try to get opinions on how noisy particular paramotors are. The majority of complaints

from the public are due to noise. When flying under power don't stay in one area (unless it's deserted) but keep moving so that you spread your noise around. A noise that lasts a few minutes is much more tolerable than noise that just keeps on and on or that keeps coming back.

Whether you like turning off the engine and gliding in silence, or looking at the rainbow around your shadow on the tops of clouds, or dragging your boots along deserted beaches, it can be an enjoyable sport. The perseverance and kahunas required, the noise, the petrol smell in your car, the effort involved in getting off the ground, the weather dependency, etc, all mean that it is not a sport for everyone. For the right sort of people though it can be addictive.

The website of the US Powered Paragliding Association [www.usppa.org/] is very useful for information on the sport and it has incident reports so you can see for yourself that the most dangerous aspect of the sport is having the brains to keep fingers etc out of the propeller. The accident reports also show that if you knowingly or unknowingly behave dangerously then it is still possible to kill yourself. So getting good training to be able to know and minimise the dangers is important.

Following are some websites of manufacturers of paramotors you will encounter in Australia. Be aware that some manufacturers exaggerate the specifications of their products so it can be difficult comparing between different manufacturers based only on what the manufacturers tell you. Unfortunately the only Australian manufacturer of quality paramotors (Airtime Products) has recently ceased producing paramotors.

Fly Products [www.flyproducts.it]

Fly Castelluccio [www.flycastelluccio.com/]

Fresh Breeze [www.fresh-breeze.de/]

PAP [www.papteam.com/]

Airfer [www.airfer.com/]

Walkerjet [www.walkerjet.cz/]

Nirvana [www.nirvana.cz/en/]

Adventure [www.paramotor.net/]

There is an Australian email group for paramotoring and motorharness hang gliding. Email Jos Weemaes at <jweemaes@albury.net.au> to get on the list.

For an international email list that is much bigger and busier and consequently more informative, go to the Pilots PPG list based in America [http://groups.yahoo.com/group/pilotsppgclub/].

Author's note: If you wish to decide for yourselves how authoritative this article may or may not be, check out my background and read my past writings on paramotoring at [www.members.optusnet.com.au/~grahamsuth/].



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WAVE FLYING – HOW TO DO IT (SOME GUIDING COMMENTS)

Part Two

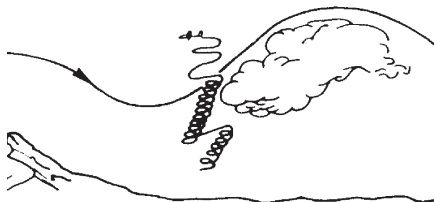
Rick Agnew

Flying the rotor: Getting into the laminar or wave system proper

There are several forms of under-laminar layer lift, but they all stay almost immobile over the ground.

Hopefully you have been towed to an area that has some cloud development (although wave can occur without cloud formation). The formation of the clouds and what they are doing are signs which, with experience, you the 'ace' wave pilot will utilise to your advantage. They can also save you launch fees by allowing you to confidently release at lower heights, thereby generating a 'nice' low point.

The nature of the cloud you are under or near will determine the type and characteristics of any lift or sink you may encounter. The aim of the next bit of flying is to gain enough height to fly forward into the laminar flow or wave system, and then just ride it up to the heavens...



Schematic of thermalling into wave

Just about all wave flying requires you to keep on flying into the prevailing winds. For wave to work effectively, the winds may indeed be very strong – in excess of 15kt – and it is preferable if they gain strength with altitude.

'Flying the rotor' can at times be very frustrating, but the up side is a sense of achievement at getting away from a 'nice' low point. The next piece of thermalling will require quick reaction and decision to utilise every bit of lift. Typically the lift will be very broken, as the air mass is getting churned about at this lower level of the atmosphere. In a typical thermalling circle, you may have some up and some down. Keep working the lift as if it is a very narrow and vicious little summer thermal. Ride that beast! If you are doing it correctly – adjusting into wind, making minor corrections, standing the

glider on its wing if need be – you will gain height. With a bit of persistence (and luck) you will get to cloud base. The aim then is to get to the upwind leading edge of the roll/rotor cloud to attempt the transition into the laminar/wave system proper. This transition attempt may not work the first, the second or even the third time, but practice and persistence will pay off. Watch your drift and location. It can be easy to get fixated on just flying the bucking bronco (your glider) to find that you haven't also kept an eye on things: Where is home? Can I still safely reach the strip and land for a re-light (another tow)? Where are the other gliders? What are they doing? Are they doing better or worse than me? What can I do to modify my position?



Lake Eucumbene

A lot goes on, and concentration at this stage of the flight is a must. Radio chatter tends to just be another distraction; I find that I am flat out just trying to fly efficiently. You may be lucky and settle easily into 'thermalling the rotor', but one day all your basic and well-taught training skills and experience will be needed.

It is an advantage to quickly form a mental picture of the lift structure, using information from the variometer (quantitative, but delayed) and your sensations (qualitative, but immediate). Using steep turns in tight and often rough lift (at times, very steep thermalling technique), flattening your turns in the upwind direction in areas of lift, and conversely quickly steepening the turn and increasing your speed in the downwind sinking areas; by this method – two steps up, one step down – you will gain height!

Usually you will have to use several techniques within a short time span, as the rotor lift changes quickly with time. Flying a glider in such conditions requires quick reactions to both the instruments and your sensations.

By matching your air speed to the wind speed, you can remain above the same

location with reference to the ground. Choosing some landmarks, and frequently checking them, will help you maintain your position in the air mass and maintain lift. By manoeuvring forwards, backwards or laterally, you may encounter stronger lift. GPS (for those who have such gadgets) may make the process of maintaining position easier. Remember also that cloud development is an indicator of your position relative to the rotor.

Flying the laminar/wave



Schematic showing height gain in front of a wave cloud



Sky surfing the leading edge

The atmosphere becomes calm when you reach the laminar layer. The strategy then is to stay in the area where the rate of climb is maximum. Things will likely have calmed down in the cockpit, and you will be able to relax somewhat; but to achieve maximum (most effective) lift, you will still need to keep your wits about you. Now, in the calmer laminar airflow, you shouldn't require the massive control deflections that were needed in thermalling the rotor air mass.

This stage, I must admit, is the best! You will have a HUGE grin. It is very satisfying beating the elements and riding above the 'crud', the washing-machine like air below the clouds; now riding the silky wave up the front of a roll cloud.

You have now become a *Sky Surfer*, – the envy of all pilots.

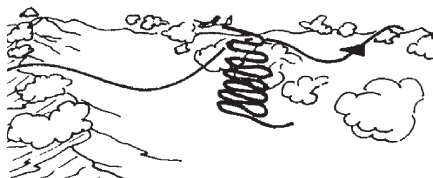
As you are getting carried to heaven, there are still some things to be aware of. In the back of your mind should be the

recent experience of your hard work getting here. You don't want to lose it, so keep your wits about you.

Check your position in relation to the roll cloud, against ground features and on your map or GPS. Have a drink, or even that little reward – a munchie. You may even like to radio base and let them know where you contacted the wave, thereby helping others (not gloating, but it is always satisfying when your transmission causes a flurry of activity on the ground if you are the first up and they doubted you!) However, the evil Murphy will still try to kick you out of the wave system and wreck your day. That is why it's important to stay on top of everything.

Moving about

If the wind speed is less than the speed of the glider's minimum sink, you will need to fly parallel to the obstacle triggering the wave, compensating for the crosswind. The best location is usually below the leading edge of the lenticulars, or slightly ahead of them. When the lift is localised, use wide figure eight turns as if in front of a slope, always turning upwind.



Schematic showing 'jumping up' wave systems

If the wind speed is equal to or greater than the speed of the glider's minimum sink, you will have to stay in front of the cloud, immobile above the ground. To adjust your speed to the wind speed, choose two landmarks as close as possible to the glider, and check your position often.

Don't forget that wind speed usually increases with altitude. You may have to increase your speed to stay immobile above the ground. Only frequent checks of your position will prevent you from being pushed backwards into sinking airflow.

As lift is not the same everywhere in the rising zone, you may have to move slightly upwind, downwind and/or laterally until you find the best rate of climb. If you lose lift, then you are too far downwind or upwind of the zone of best lift. For safety reasons, you should search for the lift upwind to avoid getting too far downwind. When



Moving upstream...

you have reached a comfortable height, move a little laterally to find the best climb area.

As a general rule, the best rates of climb are upwind of clouds with high vertical extension and downwind of the highest obstacles.

Launch heights

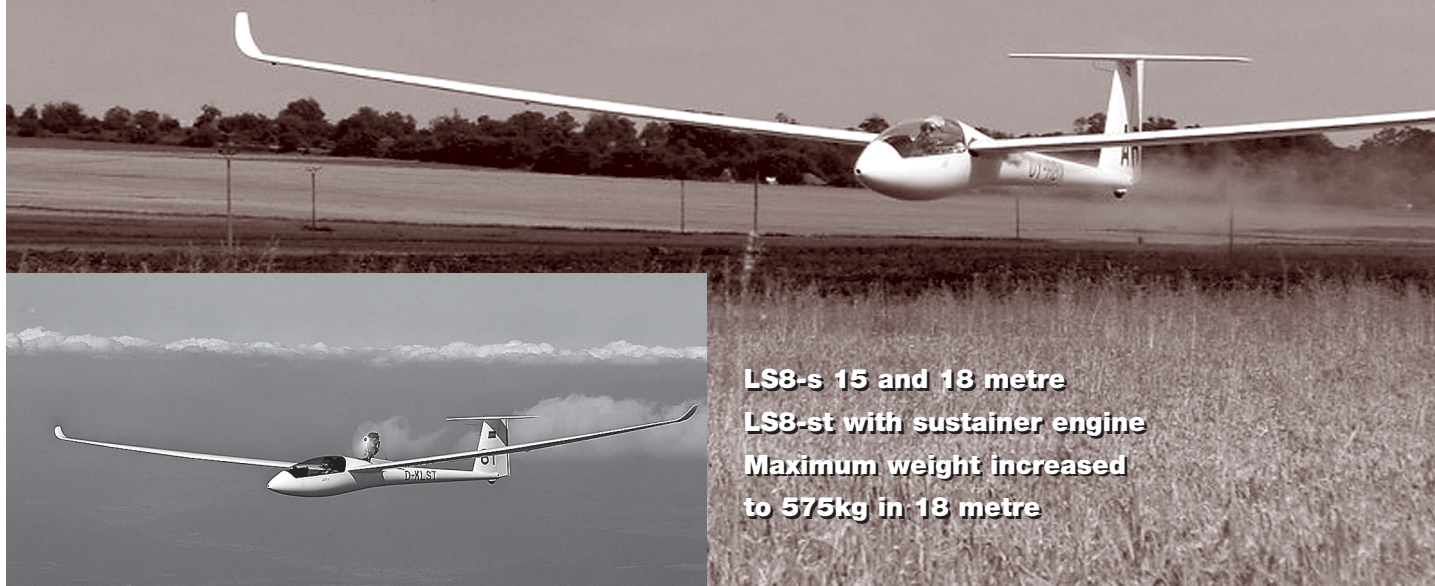
At Bunyan, NSW your trusty tuggy has more than likely 'dropped you off' near the round paddocks. If it is early, before thermal activity has really started, then you may get away with a low launch of, say, 2,000ft.

People have encountered wave straight off the hanger strip at 500ft agl! However, think safety first. I take a 2,000ft launch, and some-

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times a bit more, depending upon the day's cloud development and wind conditions.

If you are really slack, or want an easy way into the wave, you can get towed in front (upwind) of the roll clouds equal with or slightly higher than cloud base, and be released straight into the laminar/wave system. That way, you miss most of the hard work thermalling the rotor (if there is any). I recommend getting towed into the laminar layer for your first wave flights, as it will get you an easier flight. If you can get an experienced pilot in a twin-seater, all the better. That way, you can use their experience and knowledge as a stepping-stone.

Thinking about your options, and discussing them with those who are knowledgeable, may save you a lot of hassle, as well as launch fees. One 'flat-earther' pilot (no names mentioned) took six launches to 6,000ft agl, and still didn't manage to contact the wave. Think of the cost!

Flying cross-country in wave

For an experienced wave pilot, cross-country flights of long distances are possible – in Europe, America and New Zealand for example, as well as in Australia. I have flown legally from Bunyan to near Canberra, then well into Victoria, over Mt Buller, and back

to Bunyan. These flights normally require the use of several wave systems, triggered by different obstacles. Going up in wave can be fun, but sitting for too long over Bredbo township (our valley's best wave junction and high point) can get a bit boring. So let's go safely exploring and fly cross-country, utilising the wave system and some knowledge. My wave cross-country flights typically occur in the height band between 8,000 and 18,000ft. The reason for these heights is that in our region the lift is normally greatest there; also, lower down it's typically warmer, I use less oxygen, and it's easier on the airframe and my body. Remember, the effects of altitude potentially include hypoxia, decompression sickness (DCS) and hypothermia. You will need to learn about these dangers, and fly accordingly – refer to other articles and books on these life threatening dangers. There are no old bold pilots; death is permanent.

I will explain firstly how to fly in a single system, and then how to jump from one wave system to another.



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Paul Wiggin's ZZ sky surfing

Once you are above your safety height (ie, you are confident that you won't drop out of the bottom of the laminar airflow), you can move laterally along the wave, crabbing to compensate for the crosswind. This is usually rather easy when you have cloud to mark the wave (surfing the cloud!) In blue sky, you must imagine on the ground an alignment parallel to the obstacle triggering the wave. If you lose lift, you must search upwind.

Movements upwind and downwind

These movements imply a change of wave. Between the zones of lift, you will cross strong sink, where you will have to fly pretty fast. Be careful not to fly above the glider's V_{NE} , remembering that indicated V_{NE} changes as you gain altitude!

Height loss between waves varies depending on wavelength, rate of sink, and your trajectory. As an example: with a 40kt wind and a wavelength of eight kilometres, a change of wave upwind can cost you up to 7,000ft for a 25:1 glider, and 3,000 to 4,000ft for a 35:1 glider.

Flying downwind, loss of height is lower, as the areas of sink can be crossed more quickly. With the previous values, the losses are 1,700 and 1,000ft, respectively. I occasionally do a downwind dash as a last resort if I haven't contacted wave at the Muddah Lake area, and then race back to the 'train track' wave. This is a one-off attempt, because if you don't contact the wave east of the highway at Bunyan, you have to either head for home or risk outlanding.

To keep height loss to a minimum, you can sometimes change wave at one edge of the system you are aiming to move to. When flying from one wave system to the other, always stay parallel to the wind direction, in order to follow the shortest trajectory while in sink. You can jump to another wave system following a trajectory in which the clouds are thinner or less organised. These clouds can indicate that the wave system is weaker; the sink should be reduced, and therefore you should lose less height.

When flying upwind to another wave system, allow for a large safety height above the clouds. The glide ratio in sink can be deceptive, and you will have the feeling of going down without going ahead. If you realise that you will arrive below the cloud summit of your target wave system, turn back to the previous wave and top up your height before trying again. Avoid reaching the next wave system below the roll cloud, as you will probably find heavy sink and turbulence. Then you will have to attempt to 'thermal' the rotor to re-contact the laminar airflow again. Reaching the smooth lift may be difficult (or impossible!)

In wave, outlandings are on the cards if you 'stuff it'. At Bunyan, I treat every wave flight as a fully-fledged cross-country flight. Your safety height (altitude below which you will try not to go) will be chosen depending on the landscape and the makeup of the wave system. Such a safety margin should be higher than in normal thermal conditions.

Final part next issue.

Soaring Grand Prix

The first World Soaring Grand Prix will be held in France in September this year. Australia will be represented by Bruce Taylor.

These World Championships will be held every two years. Bids are now being sought for the 2007 World Grand Prix. While we anticipate that New Zealand will make a bid, no decision has been made yet whether Australia will bid. We would need a fairly serious expression of interest from a club in order to do this. However, each country is being asked to apply to hold qualifying events in 2006. There are two opportunities here:

Individual opportunity

There will be a qualifying event at Omarama, NZ at the end of January 2006. One pilot from Australia is invited to participate. Interested pilots should apply to Peter Trotter, chair of the International Teams Committee <gliderpilots@bigpond.com>.

The NZ organisers are seeking a lot of sponsorship for this event, and may be able to provide significant financial support to the competing pilots.

Club or State opportunity

Australia has registered its intention to run a qualifying Grand Prix in late 2006. This could be held in any state and should last about a week for 10 to 20 entries. The major focus of the Grand Prix is promotion of the sport to the media, so access to media and the energy to drive this outcome are critical in order to be successful in running the event. Individual clubs and/or State associations are invited to

express interest in hosting the Australian Qualifying Grand Prix. Please contact Terry Cubley for details and to express interest <cubley@netconnect.com.au>.

Terry Cubley

(GFA Organisational Development Manager)

Forbes Club Dinner

The Forbes Gliding and Aero Club held their annual dinner on Saturday 16 July. More than 50 guests enjoyed an outstanding dinner supplied by club member Anita Redfern.

A special presentation was made to Lindsay Dent, an instructor with the club for 30 years. On making the presentation, Wally Williams spoke of Lindsay's commitment to his club, and how that commitment had kept the club viable.

Beryl Hartley was a guest speaker, and spoke of gliding at Forbes in the 1970s, the role of the GFA, and the changes in the sport in the last 30 years.

GFA Annual Flying Awards 2005

All claims received between 1 May and 31 May 2005 have now been verified to my satisfaction. They are:

For The Martin Warner Trophy, Height

Gain, for the period 1 May 2004 to 30 April 2005

Two claims received:

Rick Agnew, 21,154.8ft (6,448m), 13 June 2004, Bunyan

Mal Bruce, 16,604ft (5,060.96m), 21 August 2004, Bunyan

Richard Agnew is the winner of the Martin Warner Trophy *For the Wally Wood Trophy, Greatest distance flight, and the Bob Irvine Trophy, Greatest points score for distance, after application of the relevant handicap factor*

Both for the period 1 May 2004 to 30 April 2005

Ed Bishop, 623km in a Jantar 2B, 8 January 2005, Benalla/West Wyalong/Benalla. 623 x handicap factor 1.06 = 660.38 points.

Geoff Sweeney, 801.36km in a PIK20B, 8 January 2005, Temora (Remote)/Tocumwal/Canowindra/Ariah Park/Temora Aerodrome. 801.36 x handicap factor 0.99 = 793.35 points.

Geoff Sweeney is the winner of the Wally Wood Trophy with outright distance of 801.36km.

Ed Bishop is winner of the Bob Irvine Trophy with 660.38 points for distance x handicap factor.

(Both trophies shall not be awarded for the same flight)

Fred J. Foord (GFA Trophies Officer)

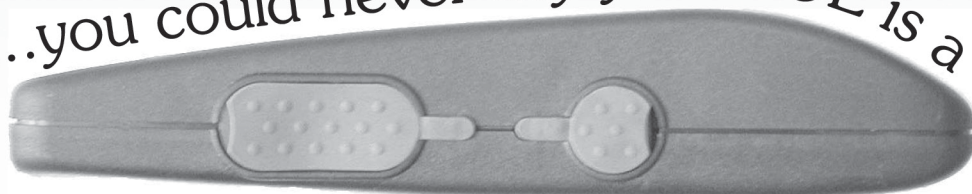


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Changes to Operations at Non-towered Aerodromes

As *Soaring Australia* went to press, discussions were being finalised among government agencies on changes to operations at non-towered aerodromes.

Due to take effect from 24 November this year, the changes affect radio communication boundaries and introduce a set of standardised positional radio broadcasts for use by pilots in and around non-towered aerodromes.

The new operations are being introduced as part of the National Airspace System (NAS) implementation which has been under way since May 2002.

The NAS implementation is based on the airspace system which operates in the United States.

The expression "non-towered" is borrowed from the vocabulary of the US airspace system and describes any aerodrome where there is either no air traffic control or only at certain times.

Civil Aviation Regulation (CAR) 166 has to be amended before the new procedures come into effect.

Aerodromes with a high traffic density (initially all existing mandatory broadcast zones – MBZs) will retain the requirement for all aircraft operating there to carry and use a radio.

The new procedures will allow all radio-equipped aircraft to perform straight-in approaches at any aerodrome, where safety allows.

Education and training material was sent to all AOC holders and pilots during August. In addition a series of information forums is being planned that will provide an opportunity for discussion and further questions. To find out where they are being held check the DOTARS website at [www.dotars.gov.au/airspacereform] and follow the links for "Information Forums."

Further information is available from the Airspace Reform Hotline on 1800 007 024.

Next month *Soaring Australia* will be covering these changes in depth and looking at the new requirements.

What about the flying though? The last good weekend day was the monthly competition round held at Blackheath when people managed to maintain for a while before the inevitable, apart from Paul Hunt who managed to get up and almost get away. The monthly comp round is a great way for lower airtime pilots to fly with the more experienced people and get advice and encouragement as it is usually well attended. Blackheath is often used, but we do go out to other sites depending on conditions. The round is held on the Sunday following the last Wednesday of the month. Contact Alan Bond on the day or just turn up at the traffic lights in Blackheath by 10:30am.

The weather for the next couple of weeks is looking a bit more promising so I hope to see you all out there. All news and reports can be sent to me at <dtoulalan@hotmail.com> or <derek.toulalan@ozemail.com.au>.

Derek Toulalan, BMHGC

Tasmanian Hang Gliding and Paragliding Association

The Tasmanian Hang Gliding and Paragliding Association (THPA) held their AGM at Ross in the central midlands, on Sunday 17 July 2005. Twenty active pilots from all areas of Tasmania attended – half paraglider pilots and half hang glider pilots. (That's 10 of each, thank you!).

Somehow, HG Anthony Mountain and HG Mico Skoklevski, who have been President and Secretary/Treasurer for the past three years, managed to have the rules changed at the start of the meeting, so they could not be made to continue with the tasks for another (fourth) year! So, by popular demand, HG Stephen Clark is the new Secretary/Treasurer and PG Rob Steane (me) is the new President.

Simon Allen (paragliding) and Hugh Glenn (hang gliding), have been appointed as Senior Safety Officers for Tasmania. So, although there are still no instructors based here, our pilots can now undertake licence upgrades and check-flights within Tassie. Hugh is also well qualified to show other HG pilots the do's and don'ts when it comes to ground based towing.

Although some great paraglider flights were had state-wide during last season, including the ones featured in the March '05 edition of *Soaring Australia*, the flying weather in general was nothing special – I suspect that was the case Australia wide. While "winter" in Tasmania has been spookily warm and dry this year, with many calm days of 17 to 20°C (consistently good snow-skiing finished in Tas more than 15 years ago) there hasn't been any real flying, as the sun is too low in the sky to make things work. September will see flyable sea

breezes happening and starting again in October, thermals will have us screwing skyward.

As mentioned here and there, just as the 2004/2005 Tassie season finished, some new XC areas have emerged. North-west Tasmania has the Crag and St Valentines Peak to be dealt with, while further south in the midlands region, Bothwell and York Plains have come to light. And if that is not enough to keep most pilots busy, "Longy" from Burnie and Pete Steane from Hobart are both threatening to tackle the famous Cradle Mountain to Lake St Clair journey by paraglider!

Wanting to fly somewhere new? – interstate pilots are always welcome here and this season will be a beauty. Although both the paraglider and hang glider straight-line distance record is exactly 60km, there are viable-looking routes to support 100km+ flights. A number of Tassie pilots have ordered new XC weapons in preparation for the coming season. More info about flying in Tasmania can be found via the web address [www.THPA.net].

Rob Steane

NEW PRODUCTS

Active Flight

Fred Gungl, six times Australian champion, has established Australia's newest paragliding training facility – Active Flight.

Based in Bright, Victoria, Active Flight caters to a wide range of pilots; from low intermediate to advanced. Cross-country courses, tow endorsements, competition clinics and tandem flights are just a few of the many services offered.

Active Flight is also a supplier for the major paraglider manufacturers and accessories. A range of secondhand and demo gear also available.

For more information please visit [www.activeflight.com.au], email <info@activeflight.com.au> or phone 0428 854455.

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We manufacture designs as per our customers' requirements. You can order any design, giving your size specs and embroidery and printing requirements. There is no limit to the quantity you can order.

CLUB NEWS

Blue Mountains Hang Gliding Club

Winter's been with us for a while now up in Blackheath with fairly cold days and strong winds. Another great annual dinner was had along with the AGM. All the committee members must be thanked for putting in the hours on behalf of the club over the last year. Peter Burkitt has finally managed to find someone else to take the helm for the coming year. Good luck to you Neil (Evans), along with the new committee members – Allan Bush, Paul Hunt, Alan Bond and Andrew Patterson.

Our winter flight suits are made of 330 Taslon Nylon lined with 100% Polyester Tricot fabric, US\$65.

Our summer flight suits are made of Ripstop 100% Nylon fabric lined with 100% Polyester mesh fabric, US\$39.

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Salman Javed, Director Exports

And the World Could Fly



In the middle of the 1970s there was an explosion of coloured fabric and aluminium tubing on the hills of the world. Hang gliding was here! A decade later ski-lift operators found a summer demand from a new wave of adventurers with huge rucksacks containing even simpler aircraft:

Paragliding had come of age.

Where had it all come from? Who were these new pilots? Why hadn't it happened centuries earlier?

And the World Could Fly tells the story of how piloting for the masses became a possibility and then a reality. See how the happy conjunction of the research of NASA aerodynamicists and the determination of Australian water-ski showmen produced a hang glider anyone could fly. Read how the parachute changed into a self-inflating wing capable of soaring for hundreds of kilometres. This is a tale of free-flight in every sense of the term.

Edited by Stéphane Malbos and Noel Whittall, *And the World Could Fly* contains contributions from many parts of the world as well as much new writing. Together, the editors have more than fifty years of undiminished enthusiasm for foot-launched flight.

A photo can be seen at [www.fai.org/hang_gliding/And_The_World_Could_Fly].

This book now available from Moyes Delta Gliders Pty Ltd.

Moyes Delta Gliders Pty Ltd, ph: 02 9316 4644, [www.moyes.com.au]

FAI NEWS

FAI Information Booth

To celebrate its centenary, the FAI produced a series of information panels presenting its main activities, air sports and World Records. These information panels have already been shown in seven exhibitions.

By using the new FAI visual identity introduced in 2004 and short texts and images, each element of the exhibition evokes the most important milestones in the development of FAI and its air sports. In order to show the public the breathtaking improvements of performances achieved in each FAI air sport, some World Records that marked the history of FAI are also mentioned.

Since the beginning of 2005, the FAI Information Booth has been displayed in seven exhibitions, thus potentially allowing some 220,000 visitors to get information on FAI, its activities and air sports.

The content of the information panels may be viewed by clicking on the appropriate links published on the internet page dedicated to the FAI Information Booth [www.fai.org/centenary/node/7]. On request, high-resolution graphic files are available to FAI Member organisations wishing to produce one or more information panels for their own promotional needs.

World Record Claims

FAI has received the following record claims:

Claim number: 11752

Class R – Microlights

Sub-class: RPL1 (Paraglider Control/Landplane/Flown with one person)

Type of record: Distance in a straight line without landing

Course/location: To be confirmed

Performance: 1,023km

Pilot: Alexander Bogdanov (RUS)

Powered Paraglider: not indicated

Date: 23/6/2005

Current record: 740.6km (22/5/99 – Pierre Allet, France)

Claim number: 11788

Class R – Microlights

Sub-class: RPL1 (Paraglider Control/Landplane/Flown with one person)

Type of record: Speed over a closed circuit of 50km without landing

Course/location: Verzej, Airfield Krapje (SLO)

Performance: 56.65 km/h

Pilot: Vojko Prah (SLO)

Powered Paraglider: Prah & Team Paratrike

BWP2005 + Sky Brontes

Date: 4/7/2005

Current record: 41.21 km/h (25/3/03 – Miro Drobec, SLO)

Claim number: 11796

Sub-class O-2 (HG with a rigid primary structure/movable control surface(s))

General Category

Type of record: Straight distance

Course/location: Zapata, TX (USA)

Performance: 688.7km

Pilot: Robin Hamilton (UK)

Hang Glider: Aeriane Swift

Date: 18/7/2005

Current record: 655.0km (18/7/01 – Davis Straub, USA)

The details shown above are provisional.

When all the evidence required has been received and checked, the exact figures will be established and the record ratified (if appropriate).

World Pilot Ranking Scheme Update Paragliding

1st Christian Maurer (SUI), 2nd Bruce Goldsmith (GBR), 3rd Christian Biasi (ITA) one point ahead of Torsten Siegel (GER). 5th Borja Rodriguez (ESP) one point ahead of Tomas Brauner (CZE). Toni Caniglia (SUI) rises to 7th and Paul Schmit (BEL) jumps 76 places to join the top 10 in equal 7th. 9th Jin Oh Kim (KOR) and 10th Martin Orlik (CZE).

Nations rankings are lead by Italy, clear of the Czech Republic, 3rd Switzerland.

Hang Gliding (Class 1)

1st Oleg Bondarchuk (UKR), 2nd Mario Alonzi (FRA), 3rd Gerolf Heinrichs (AUT) and 4th Johnny Durand Jnr. 5th Oliver Barthelmes (GER), 6th Attila Bertok (HUN), 7th Brett Hazlett (CAN), 8th Kraig Coomber (AUS) and Robert Reisinger (AUT) and Raymond Caux (FRA) tie in 9th.

France stay in top place, followed by Austria and Australia.

Class 5

1st Primoz Gricar ahead of Alex Ploner (ITA). One point behind is Toni Raumauf (AUT), 4th Johann Posch (AUT), 5th David Chaumet (FRA), 6th Walter Geppert (AUT), 7th Christian Ciech (ITA) two points ahead of Jacques Bott (FRA). 9th Manfred Trimmel (AUT) and 10th Gunther Tschurnig (AUT).

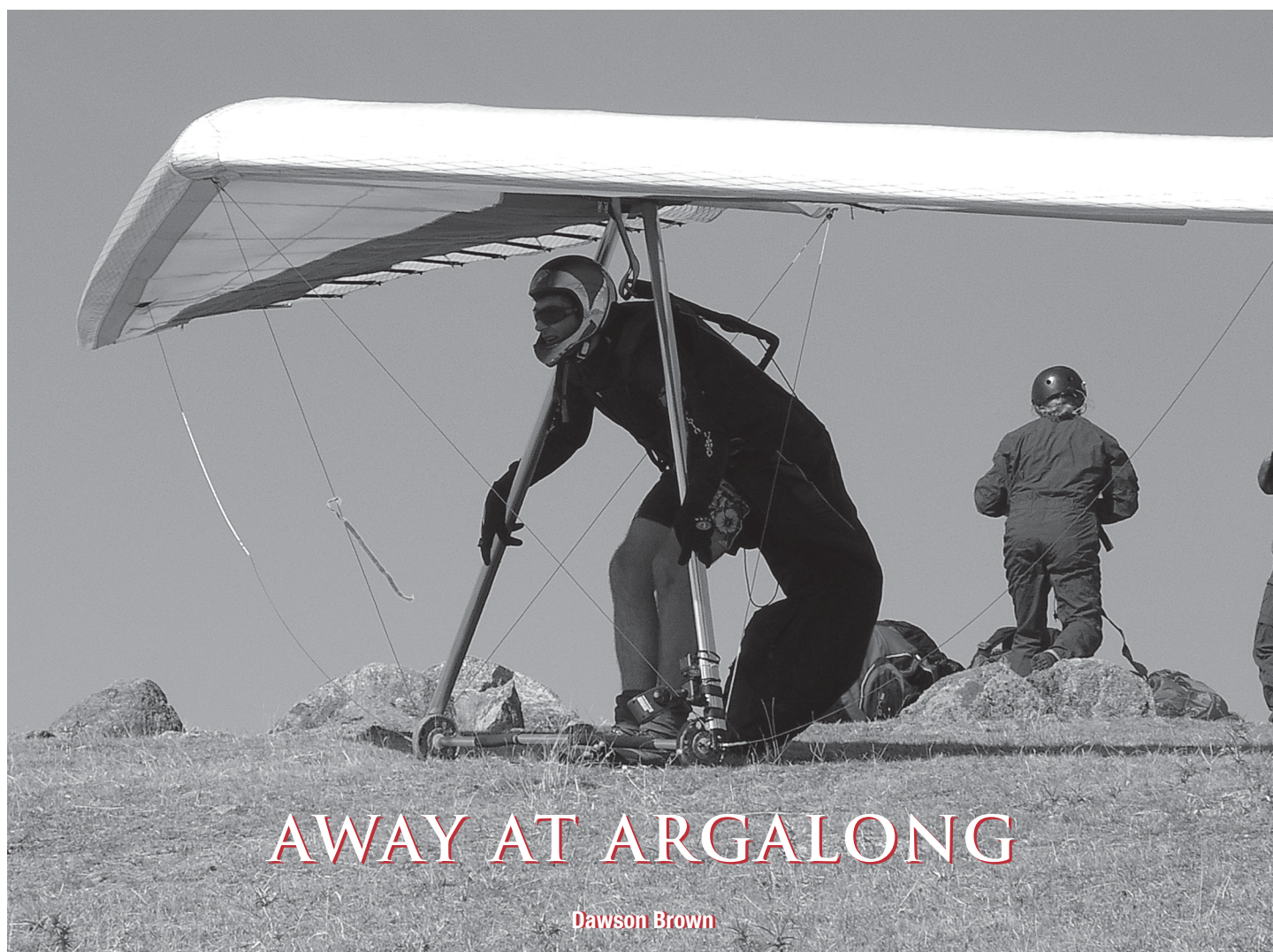
In the nations ranking Austria commandingly lead Italy, with France 3rd.

Class 2

1st Manfred Ruhmer (AUT), 2nd Brian Porter (USA) and 3rd Bob Baier (GER).

More details on any of the above rankings, please visit the FAI website [www.fai.org/hang_gliding/rankings].





AFTER STOPPING THE NIGHT AT MY PARENTS' PLACE IN YASS ON THE THURSDAY NIGHT BEFORE EASTER, FLO AND I WERE UP EARLY TO HEAD DOWN TO TUMUT FOR THE FLY-IN. FOREMOST IN MY MIND WAS THAT I DIDN'T WANT TO GET THERE LATE AND FIND THAT EVERYONE HAD ALREADY HEADED OFF TO SOME HILL I DIDN'T KNOW ABOUT.

I have only just recently returned to flying after six years of walking the earth with my eyes turned skywards. I was stupid enough to take off to Europe without my glider nor any money. It took me six years to get home, and when I finally did, we ended up living in a tiny unit in Sydney without a garage, so

my kite stayed in my parents' shed. As soon as we got a house, I picked up my kite and took re-training. Certificate finally in hand, I could not wait to get back in the air.

I had never been away on a hang gliding trip before and had only met at club meetings a handful of the other pilots who were going. (The day after I got re-certified, I went to the club meeting for the Blue Mountains Hang Gliding Club, which is where I was told about Tumut.) We arrived at the campsite at around 9 o'clock and found the club camped out right by the river. We quickly threw up the tent, then after introducing Flo to everyone, we all headed off to the airport for the day's briefing.

There were pilots everywhere, and whilst we didn't know many people, a real feeling of community exists among pilots, so it was easy to fit in.

The briefing was brief, discussion of the weather forecast being the primary thing I paid attention to and the ensuing discussion about where that meant we might fly. There was to be towing from the airport, and most of the rest of us headed up to Argalong. Flo and I jumped in our car and followed the rest of the club out to the hill. When we arrived at the bomb-out, we all parked and those of us new to the site were advised on how best to set up a landing there. The landing paddock slopes slightly downhill, but goes on forever, so looked pretty sweet. I set up my windsock on the fence, then grabbed another pilot and followed some others up the hill.

I was a little anxious about how the take-off area would look. Flo does not fly, and at Easter she was four months pregnant with our first child, so I was concerned that the sight of a nasty looking launch might convince her that me flying was not such a good idea. All my fears were abated however on



Setting up at Argalong

Left: Peter Burkitt, primed

Photos: Dawson Brown

arrival. With a beautifully rounded grassy top, launching here looked like a breeze.

The wind was coming straight up the face, but very light, so I was quick to get set up. For those of us with red streamers, and those of us who didn't know this site, there was a quick site orientation. After my pre-flight, a couple of other guys were ready to launch. I watched as two or three pilots took off and headed out towards the bomb-out.

Standing on launch, just waiting for the wind to come up squarely towards me, I kept on running through the mantra, "Eyes up, nose down, wings level, run hard." Whenever I'm about to launch, it seems as though sometime after my hang check, with the wind coming straight up, I kind of feel like I become one with my wing. It's like when you look through a telescope, and turn the knob, forwards, backwards, then there it is, focus. My wing just tells me it's time. Any apprehension or excitement I may have felt leading up to that moment just melts away. Right at that exact moment, I know that it's time to run, run hard, to try to run through the A-frame. Then, I'm flying.

Only once have I launched without that focus. I consciously assessed the conditions, and made a logical choice that I should start my run. The next thing I knew, my left wing was high, my right wing was low, I was not able to run straight ahead and it was too late to stop. I was lucky in that I pulled it off, but I learned an important lesson. Both I and my wing have to feel ready.

My first flight from Argalong was short. My launch felt great, I dropped to prone and searched for lift. It was my first flight with a vario, but it just droned on about sink all the way down. One of the great things about Argalong is that at 2,000ft from launch to bomb-out, it's a nice long sled ride.

The next day we went to Argalong again, but this time when I was ready to go, there was a long queue on the south-west side of launch. The cycles had been coming up both sides, and as there was no one waiting at the west launch right then, I figured I'd start my own queue. It was a long wait, and just after Rosie came over and predicted that there was a great big thermal cooking up on the rocks below to take me up and away, the streamers in front of me came alive and straight at me. I picked up, found focus and launched. The launch felt great, and sure enough, I was going up like a rocket. I turned to the left and found myself circling back over launch, and a couple of hundred feet below me the next pilot was launching.

An eagle's view

I kept on turning and turning, my vario singing its happy song. My eyes were busy keeping a lookout for other pilots, as there were quite a few around, above and below me. What a blast. Every so often I'd fall out of the lift and circle back around to find it again, eventually getting up to a thousand feet above launch. Following the thermal, and the other pilots, I ended up behind launch, but as I was a thousand feet above it, I was not at all worried.

Eventually, I fell out of the lift and didn't find any more. I managed to scratch out an extra few minutes about 500ft above the landing paddock, but then it was down to the ground. About an hour after I launched, I set up for a smooth landing. I reckon my smile must have been beaming from wingtip to wingtip.

That weekend, Peter Burkitt had already flown across to the other side of the valley some 20km away, Alistair Bramwell had flown his Fun from Argalong to the airport, and one of the guys aerotowing told me he'd been doing laps of the valley, but my one hour flight had me over the moon.

The next day, Easter Sunday, saw most pilots head off to the big one, Talbingo, and whilst I'd love to see it, we had to leave that afternoon and head back for some family time in Yass. I had another sleddie from Argalong, then headed off early in the afternoon. Easter Monday I was walking around the paddocks looking up at a sky dotted with cu's from horizon to horizon, dreaming of being up there, and hoping that the sky was the same in Tumut for everyone

Flying is fun



A good strong run

still down there. I found out later that it was, and some great flights were flown.

A lot of people went to a lot of effort to see that we all had a great weekend. I'd like to give thanks to them all, and especially to the guys and girls from the Blue Mountains Hang Gliding Club who took us under their wings.

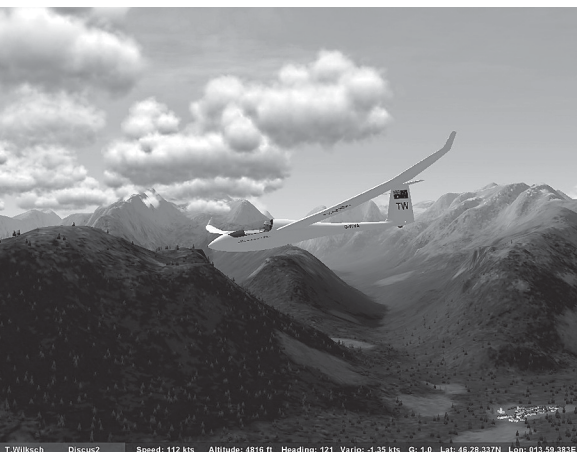


Software Review: CONDOR – THE COMPETITION SOARING SIMULATOR

Tom Wilksch

YOU KNOW THE FEELING. IT'S COLD, RAINING AND BLOWING 30KT – NOT THE BEST DAY FOR SOARING. GOOD THING, THEN, THAT THE NEW GLIDING SIMULATOR CONDOR DOES SUCH A GOOD JOB AT KEEPING THE FLYING URGE AT BAY FOR ANOTHER WEEK!

Ever since showing this sim to fellow members of my club, I have been hearing a neverending stream of “*I’d rather be doing the real thing.*” This I can fully understand; I’d rather be in the air as well! Since going solo at age 17 I have been mad keen on gliding. But when time, money, or the weather makes flying impossible, I have instead been racking up some virtual kilometres.



CONDOR

The Competition Soaring Simulator is a new gliding simulator produced by two very dedicated glider pilots from Slovenia. It is aimed, as the title suggests, at the competition pilot, but can also be used for training and local soaring flights. It is in multiplayer games, however, that Condor really shines through. I regularly join games with 10 other pilots for a quick blast around a 150km task in varying conditions.

GENERAL

After installation, the Condor startup screen greets you. Once you’ve set up your controls, you have the option of taking a lesson, having a free flight or joining a multiplayer game. The lessons are really aimed at people who don’t fly for real. I am told they are very good, but haven’t really delved into them as they cover basic flight controls, launching, circuits, etc. (Things that I hope I am already competent in!)

As testament to the realism of this sim, I went straight to a free flight and bashed out a (rather shaky) 150km task. ‘Free flight’ lets you choose your launch method (winch, aerotow or air start), your glider and the weather. You can then set your task, edit turn point types, and then go flying!

REALISM

I have played flight sims varying from the rather basic glider of Microsoft FS2004 to dedicated gliding sims like Silent Wings. Condor is far ahead in terms of weather and aircraft physics. With all the effort put into this by the developers, you come away thinking that it just feels right. It doesn’t seem like much but it is very important, and something which all the others lack. You forget you are playing a game.

Controls are simple but realistic. A basic two-axis joystick is all you need to fly, as the auto rudder works well. However, a better joystick can improve the feel of the game. I use a Microsoft Force-Feedback 2, which does an excellent job of simulating changes in pressure on the stick before and after trimming. Pre-stall buffet is also helpful in stopping me spinning out of the thermal, scattering gliders in my wake.

The gliders themselves perform to the manufacturers’ polar curves with such accuracy that you can use the real manuals for instruction! Stalls, spins, loops and every other manoeuvre you can think of behave as you would expect, and since a Fox is one of the available gliders, you can spend a lot of time seeing what interesting patterns you can get with the wind tip smoke on.

Lift sources can be thermals, ridge lift, wave, anabatic breezes, and interesting combinations of all these – as in real life. For students, there is the button we all wish we had: the ‘visible thermals’ button! If it is made available in a multiplayer game, its use results in a penalty. Generally however it is turned off, which gives you an instant extra 500m.

In-game graphics rely on 3D generated scenery rather than 2D satellite images pasted onto the landscape. This has the advantage of placing less demand on your PC, and not giving the horribly pixelated effect that you get from satellite images at low level. The scenery, while lacking in some respects, looks great while you’re blasting along a ridge at low level.

MULTIPLAYER

The multiplayer aspect of the game is really where the fun begins. After joining a game and selecting your glider and water load, you

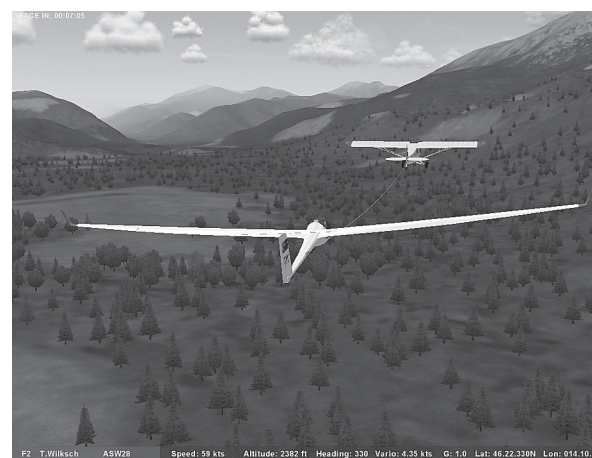


Photo (left): Tom in Pik

Other images: Screen shot examples of *Condor*

Images: Courtesy Tom Wilksch

are placed on the grid. The aerotow starts, and you are towed towards the launch point. The game is realistic enough that you can tell when you are in a thermal prior to release (although tuggies don't find them for you!). Then you can join the gaggles and work your way upward while you wait for the start.

Races vary from blindingly fast ridge races to big, slow tasks in which you are searching for lift and routes through the mountains. I have found that while the booming conditions are fun, 100km on a 10kt day in a Nimbus 4 is simply too easy. Lately I have had the most satisfaction in finishing a difficult task with low cloud over tricky terrain. Finishes are regularly close; I have witnessed the top three finish within 20 seconds over a 200km course!

When coupled with a voice-com program such as TeamSpeak, the result is enormous fun! While discussing tactics, team flying and working my way to turn points,

I am also getting better at thinking ahead, looking at the weather and making decisions on tactics. This can only help with my real-life cross-country flying.

DEVELOPMENT

Condor is a game in its infancy, and while it is perfectly playable as is, improvements are ongoing. Plane packs are being produced (including my favourite, the Pik20D) and a scenery tool will soon allow users to reproduce their own airfield and surroundings. The two developers have churned out help and patches at an impressive rate, but it is the ever-growing community of pilots behind it who are really helping by putting in the hours modelling gliders and identifying problems.

Current nice touches include: the ability to save your flight as an .IGC file, race against a ghost of yourself in a previous flight, and output to an IPAQ to give you

a moving map on your desk. Future plans include the planes and scenery pack, and the ability to have a two-seater instructor/student method of handing over control, amongst others. I am already aware of clubs in the UK looking to use Condor for training, and touches like this can only help.

INFO

Condor can be downloaded at [www.condorsoaring.com]. It isn't free, and there is no demo, so you might want to head to the forums at [http://forum.condorsoaring.com/] to get some opinions before you fork out your cash. As yet I haven't seen a bad comment on there, only suggestions!

In case you haven't figured, I highly recommend Condor. Have fun!



Marketing & Development Committee – Progress Report

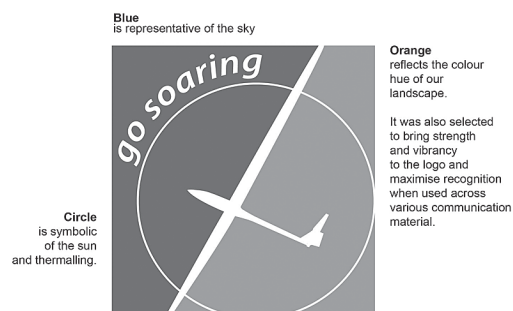
Ian Grant (M&D Committee)

THE MARKETING & DEVELOPMENT (M&D) COMMITTEE OF THE GFA WAS FORMED IN JULY 2004 UNDER THE CHAIRMANSHIP OF RALPH HENDERSON, STATE PRESIDENT OF GLIDING QUEENSLAND, TO SUPPORT AND EXTEND THE WORK BEING PERFORMED BY THE GFA'S DEVELOPMENT OFFICER, TERRY CUBLEY. UNFORTUNATELY, IN EARLY 2005 RALPH HAD TO WITHDRAW FROM THE COMMITTEE AS HE HAD BECOME OVERCOMMITTED WITH LOCAL STATE GLIDING AND WORK MATTERS. RALPH WAS INSTRUMENTAL IN THE CREATION OF THE M&D COMMITTEE, AND WE ARE ALL APPRECIATIVE OF HIS EFFORTS AND ENTHUSIASM AND THANK HIM FOR HIS VALUABLE INITIATIVE. THE COMMITTEE IS NOW OPERATING AGAIN AND IAN GRANT, VSA STATE PRESIDENT IS THE NEW CHAIRPERSON.



Gliding Australia

LOGO Rational



Gliding Australia

Wording

In order of priority the word Gliding is key, Australia communicates a geographic position and credibility. The slogan 'go soaring' is strategically invitational and motivational.

World wide gliding membership, including in Australia, has been in steady decline for many years, and as yet no one has found an easy 'cure' for this decline. That said, the committee is now reviewing the issues and generating ideas and strategy for what is to be a very significant challenge in growing our sport. We already appreciate that the 'cure' will require a broad range of actions involving the entire movement of the GFA, from the Board all the way through to the State Associations, the Clubs and individual Club members. This report is the first of a regular series to keep the GFA membership advised of our work.

YOUR M&D COMMITTEE

The M&D Committee comprises Terry Cubley and representatives from each State/Region: Al Sim (QLD), Jason Armistead (NSW), Ian Grant (VIC/TAS), Sarah Allen (SA), and Richard McLean (WA). The committee reconvened in June this year at a meeting in Perth, which also included Graeme Wishart (President, WAGA) and John Welsh (Executive Officer, GFA). On the second day, four other WA members visited and provided valuable contributions to our discussions. With the support of the GFA Board, it is the intention of the M&D Committee to rotate its meetings around each State to encourage direct contact with the regions and debate the issues in open forums.

The M&D Committee will be developed along similar lines to the Operations

and Sports Committees, with a national structure to provide comprehensive coverage and support and gain effective influence at the individual club level. This will take time to evolve, as we need to seek out volunteers from the clubs who will participate in regional M&D activities.

The minutes of committee meetings and the M&D component of the GFA Business Plan will be routinely published on the GFA website.

Now for news of our recent and forthcoming initiatives.

GFA DEVELOPMENT OFFICER

With the establishment of a functioning M&D Committee, the role of the GFA Development Officer will be revised to enable Terry Cubley to focus on 'higher added value' activities including revision of the GFA Development Handbook. Individual committee members will begin to take responsibility for visits to the clubs in their region with assistance from Terry to manage the transition. Terry has also indicated that he would prefer to see a 'fresh face' in the Development Officer role, and the Committee agreed to seek a replacement for Terry during 2006.

GFA MARKETING LOGO

Al Sim has developed a new marketing logo for the GFA, and the Board has approved it for all marketing initiatives. Please note that this logo is not intended to replace the traditional GFA logo.

GFA SEMINAR - 17 SEPTEMBER 2005

As advertised in Soaring Australia in August and again this month, we have arranged for an interesting seminar of presenters to accompany the GFA Annual General Meeting. Our keynote speaker will be the internationally renowned Kiwi pilot, Terry Delore, who will present on his World Record flights in New Zealand and Argentina with American Steve Fossett. These seminars will become an annual event along the lines of the gliding conventions held in Britain, USA and New Zealand.

COMMERCIAL ADVERTISING

A series of general advertisements to attract newcomers to gliding will be run in Flight Safety Australia and Flying Australia for three successive issues of both magazines, commencing in October 2005 in time for the soaring season. The magazines are bi-monthly, providing six months coverage. Flying Australia is scheduled to run a major feature on gliding from Caboolture in their September/October issue. The advertising will utilise the [www.soaring.org.au] website to direct reader enquiries, and our website monitoring will provide accurate statistics



discover the exhilarating experience of
gliding
do a conversion
safe affordable
a load of fun
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Visit our website to find a gliding club near you

on the number of enquiries generated by each magazine. All clubs on [www.soaring.org.au] should ensure that their site details are up to date, and get ready for responses to this advertising.

MAGAZINE IN NEWSAGENTS

There is to be a controlled trial of selling Soaring Australia from Perth newsagents for an initial three month period. If the results are encouraging we will look to expand the sale of our magazine on a national basis.

PROMOTIONAL GLIDING VIDEO

Richard McLean (WA) and Jason Armistead

(NSW) have started work on preliminary filming of a promotional video for use by GFA clubs. However, there is a significant and lengthy effort required to film and edit video material, so we expect it will be well into 2006 before there is a result. Meanwhile, keep your hair brushed and shoes polished, as you may find yourself on the video when Richard and Jason visit your Club!

Clubs who would like to take advantage of the national advertising campaign should complete the accreditation form (available on the GFA web page) so that they can get onto the [www.soaring.org.au] website.




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Ask for your
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Powered Paragliding in Tunisia

Franck Lechenet

THE SETTING IS A SEA OF DUNES. KSOUR AND THE
OLD VILLAGES ARE PLAYING WITH THE BLUE OF THE SKY.
DIFFERENT TAKE OFFS EVERY DAY – ONE OF THE MANY
WONDERFUL RESOURCES OF TUNISIA – WILL ADVANCE
THE SKILL AND EXPERIENCE OF THE TRAVELLING
PARAMOTOR PILOTS.



Luc Villard walking to the top of a dune for take-off

But first the airport is encumbered and our arrival causes many interrogative glances, equipped as we are with so many trunks, some almost as heavy as the pilots. We put up with the awkward moments – we are here to fly. Some of our trunks are 65kg, well over the 50kg maximum authorised for the planes. After discussions, openings and re-openings of luggage, transfers of various material, the passports are stamped, finally.

Jerba, the name evocative of beach tourism, is our obligatory point of arrival into Tunisia. We arrive at the hotel, and after dealing with our mountain of bags and cases once again, we are ready for a quiet night. There will be much to do tomorrow.

Monday morning, and the rush is on. From our luggage all type of machines and cages take shape. From the Backbone 125, in dismountable pieces of tubing which resemble a mechanic's toy, to the PAP, almost

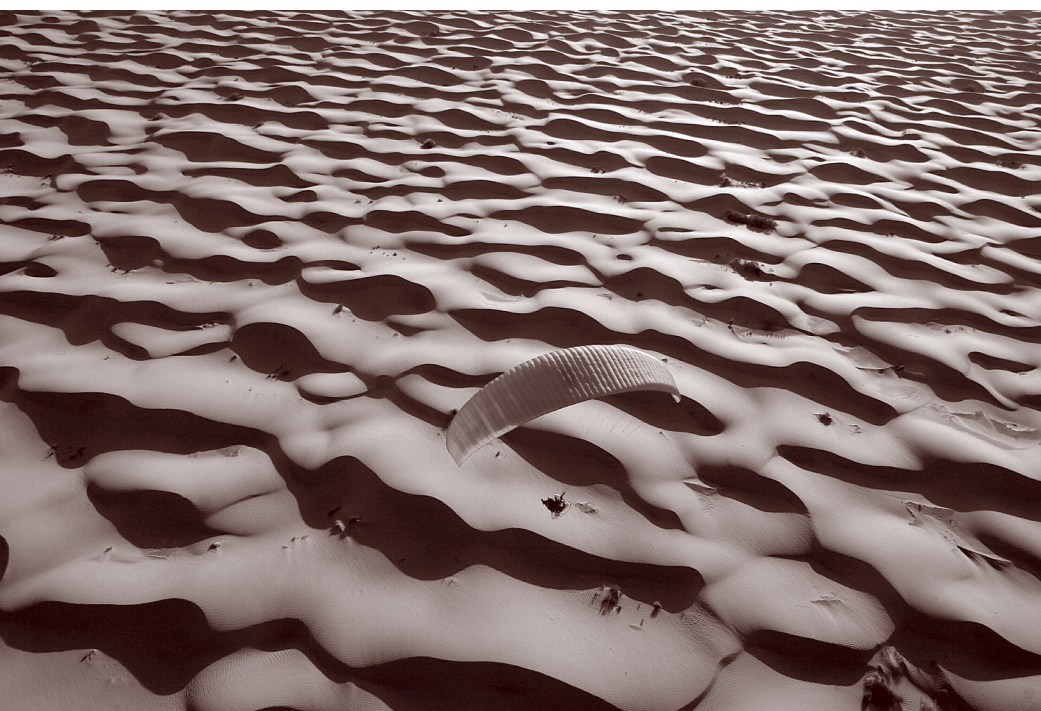
cast solid. One also finds Adventure bags and the Parateam frames thought well of by Jean-Yves Magnan. The machines take their final form – a few minutes for some, not so for others – but regardless, the checks and start-ups will take all morning.

Finally we leave for our destination, Ksar Hallouf. The evening cold is corrosive and the meal, couscous, is eaten greedily, energy for the next day, which is predicted to be less windy. We spend the night in various attics in the old village – very different from what we will do during the remainder of the stay, and a great memory.

The obligatory police committee, accompanying us for reasons of “safety”, arrives the next morning. Breakfast drags a little and we are impatient to hit the road and experience our first flight. The file of 4WDs finally rolls out of the village.

Arriving at the GPS co-ordinates of the football field, our allocated take-off zone, the wind direction is analysed. Not brilliant, but almost everyone takes off. It is here that the various levels of experience in the group are appreciated, and the tone for the rest of the trip is set.

After lunch in Tataouine, we circle the city for a splendid flight. From Ksar Ouled Soltane to Ksar Zaara it is a succession of splendid landscapes punctuated by mountain



Joel Sens over the dunes of Ksar Ghuilane in the early morning

peaks. Luc Villard, fond of great images, accompanies me above Ksour, strewn in the mountains. The conditions are idyllic: fantastic light, weak wind and no turbulence.

The evening meal becomes a great discussion, analysing flights and mechanical problems. Jean-Yves Magnan, our wonderful mechanic, deals with various repairs. What a useful presence!

The darkness is still deep when we're woken by the ringing of our alarms Wednesday morning. However the departure is slow because the synergy of a group is important. It is only around 9am that the take off begins. Between Tataouine and Douiret there are large valleys where landing places are spread out and reassuring, but between Douiret and Chenini it is rather the wadi (a small valley with a small river) and the road which act as landing options, not to mention the technical and turbulent landing approaches required in full midday. Group morale is good. New pilots, like Jean-Pierre Dubourvieux and Youssef Babouhoun, are integrated perfectly into the team, which include important differences in skill level. Three flights in two days, almost three months worth of flights for some!

The next vehicle connection is to Ksar Ghuilane, full desert, joined by a noisy and tiring track. After about 15km of vibration it is decided to connect to the oasis by flight rather than track. It's a splendid flight

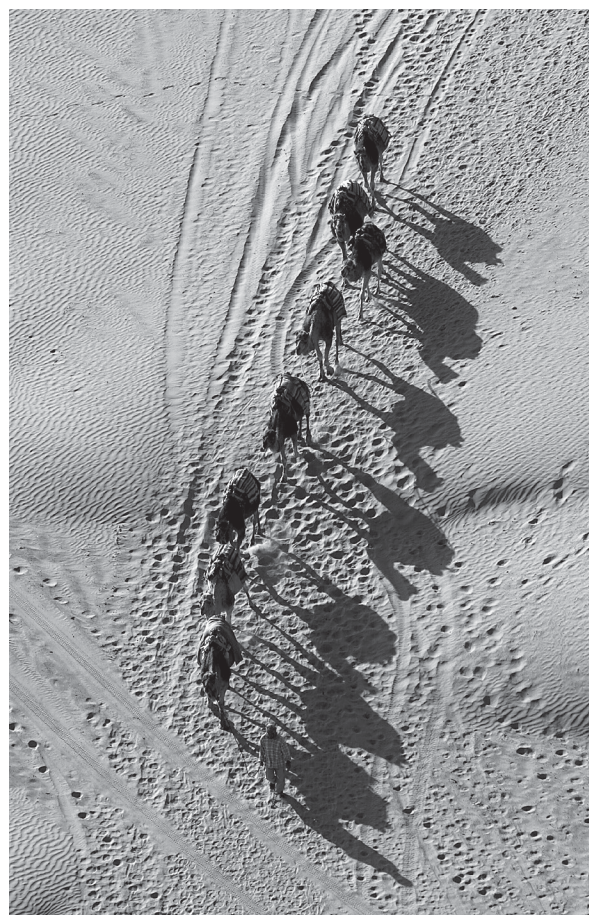
amongst scattered cumulus clouds. A group of Bedouins stop their car below, looking up at the spectacle of 10 flying machines high above their chech (Arabian hats).

The sun starts to take on its colour of sleepiness, the red disc producing fabulous shades across the landscape. Ksar Ghuilane is seen as a dark spot of palm trees in the sea of sand. Our paradise of camping tents awaits us. The unforgettable flight we've just had is celebrated with beer.

The night is very cold and the Tuaregs covers are welcome (the Tuaregs being an ethnic people of the desert). The next morning I watch the crowd of paramotors take off – it is too beautiful! Youssef lets me take off with his camera. I get some marvelous photos, the coloured goblins flying away in all directions. Filled with wonder by this spectacle, but my fingers a little tired of cold, I return to the ground. It's not long before the others follow, for a water bath in the source of the oasis.

Douz, an oasis bordering the east of Chott El Jerid and nested in a gigantic palm plantation, is our next stop. I use a bit of throttle on my Tomahawk wing to propel myself above the fabulous landscape. The camel caravans crossing a series of white dunes, licked by the evening sun, make another great photo opportunity.

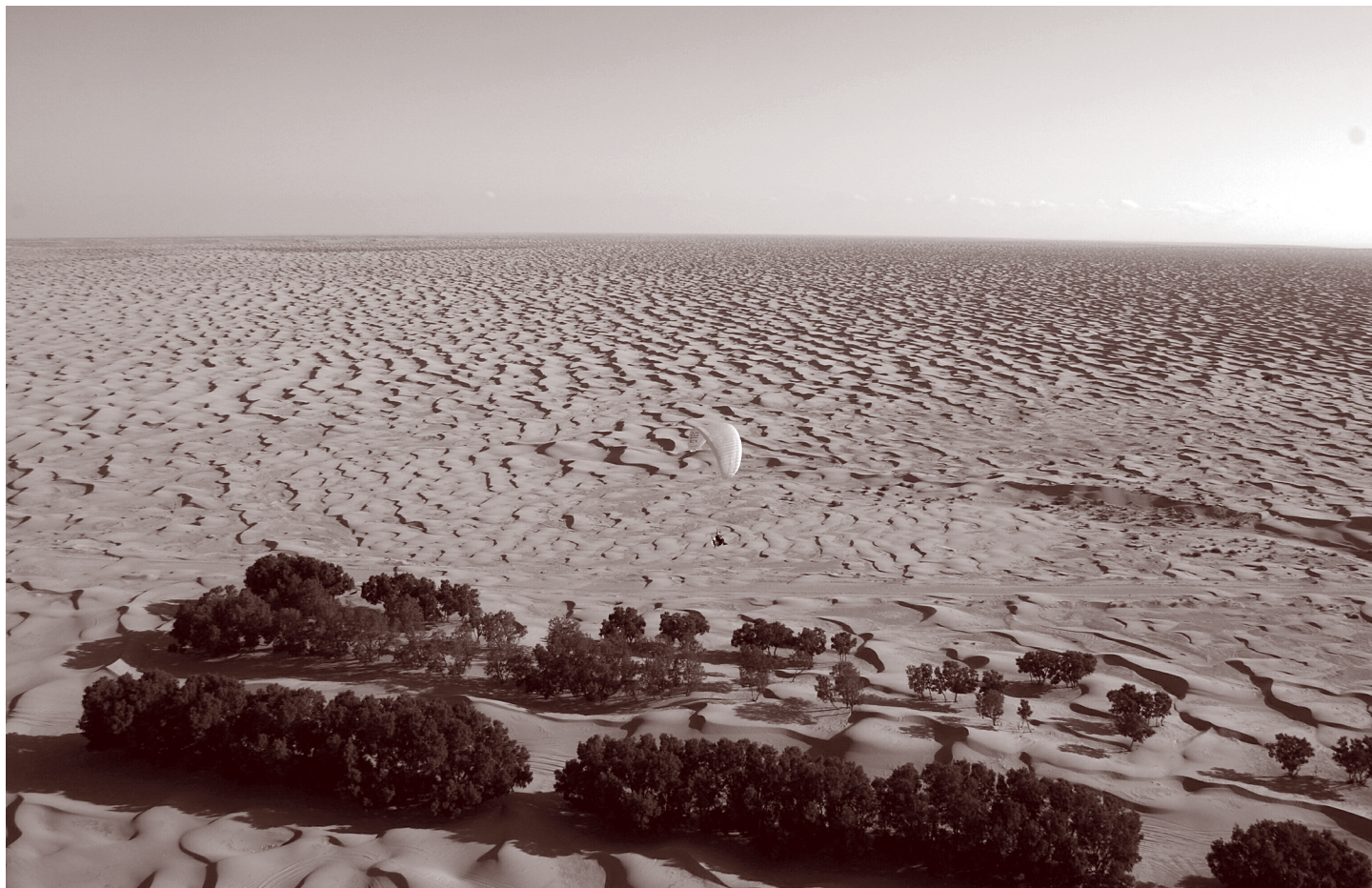
The night's sleep is short, but we are fresh and ready to tackle a day of intensive



Above: A camel caravan near Ksar Ghuilane, used to transport goods across the desert

Below: The Ksar Ghuilane oasis

Photos: Franck Lechenet





Travelling on the back of camels near Saafrane with our PPGs

flight. It is a leg from El Faouar to Zaafrane, passing by Sabria, which we carry out. Still dunes, which we are accustomed to now, but the pleasure remains intact. Everyone flies to appease their passion of flight. We arrive after ten hours of flying.

That evening we try to make a flight over an old village, but the civil aviation authorisation is refused. Some pilots take advantage of the break to make repairs, because the frequency of our flying is testing our equipment to its limits. Our camp that evening is located south of Douz. It's a small bit of paradise, with authentic tents and meals of traditional sand bread. The wood fire illuminates our discussions on various flights, which for some now counts 10.

The next day we have as our playground the enormous Chott El Jerid, south of Nefta – an old salt lake which covers an incredible distance. As the morning passes, the wind increases, but flights are made. Eric Kotolevsky with his Simonini CP6 and Sens Joel with his Simonini Reflex take tandem flights. The wind does not always lend itself to this type of activity, but they are good pilots.

At the end of the afternoon we move to Chott Gharsa to play at Engel Jmel: the rock of the dromedary. The wind is very weak and the choice of take off area contestable. Nevertheless, Jean-Yves shows us with dexterity a beautifully controlled take off. Luc takes off and I follow him. He moves unrelentingly towards the salt lake and I do not believe my eyes when I see his sail passing slowly above his head and the leading edge

touch water. He's planted in the middle of the lake, quite spectacularly. The impromptu rescue committee is able to recover his wing, but Luc is annoyed with himself for losing reference of ground versus sky in the heat shimmers of the lake. The light is brilliant and after some photographs on the chott (salt lake), I slip off with Joel in the two-seater to take photos at a nearby site where some scenes were filmed in the original Star Wars movie.

When we arrive at the hotel at Tozeur, Luc and some helpers hasten to thoroughly wash his sail with fresh water, so that the salt does not attack his fabric. Youssef is also unhappy as his engine has become tight. The usual impromptu mechanical team gets to work and the paramotor is soon spread out through the room! Around two hours later the engine is back together and operating.



Flying over the El Faouar area

On Monday we all get to fly over the Star Wars site – an amusing buzz for all pilots. I fly till the end of my fuel.

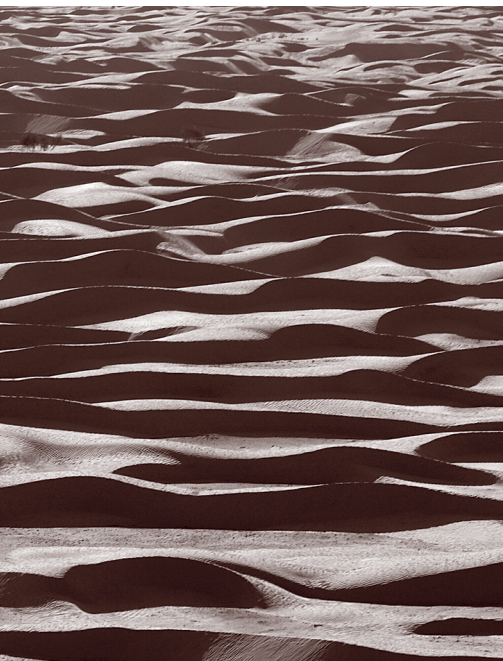
We have a lunch of sandwiches in a palm plantation, then fly for the old village of Chebika. The wind is perfect and we navigate first to Tamerza, above a landscape that takes your breath away. Chebika, still ahead, is nestled on the banks of Jebel Nagueb. For safety, pilots will have to fly high to have a good choice of emergency landing options.

Many of us have had 20 hours of flight time on the trip so far, which corresponds to a year of flying for some pilots. Pilots such as Yves Willem, Jean-Pierre Dubourvieux, Babette, Edouard Lopat, Francis Mauchien, Youssef Babouhoun and Patrick Evrard have gained a huge amount of experience during this journey. They take off now with astonishing ease, and we all feel much pride at their greatly developing skills.

On Tuesday afternoon we set out for our last flight, Tamerza to Chebika. Several pilots



An old filming site for some scenes in the original Star Wars movie



Right: The ancient village of
Chebika near the Algeria border

decide to also pass over the small village of
Jebel – the decoration it gives to the hillside
is incredible, even without the sun on this
side of the mountain. Jean-Yves accompanies
me through the mountain pass, filming all
the way. As we pass the mountain peak
emergency landing zones are far away, but
it is with confidence that we fly down
towards Chebika where the light is a dream.

We have managed 16 flights in 10 days
and are all very tired. Our last day is filled
with shopping and packing, keeping in mind
the 50kg per trunk limit that hounded us on
our arrival! Nevertheless our heads are filled
with souvenirs – extraordinary sites and
Tunisian experiences. We try not to think
of the grey skies back home, but instead let
our minds turn towards our Tunisian trip
of next year...



Author's note: Should you wish to experience magic
flying in Tunisia, the following web addresses will
be most useful [www.chocsaventures.org] and the
Tunisian National Office of Tourism [www.tunisie.com].



Sunset travel

Following the camels near El Faouar
oasis across the white dunes



DEVELOPMENT: Whose responsibility?

Terry Cubley

Our Strengths are our Weakness

When you ask people about the real strengths of the GFA, they quickly identify delegations to conduct airworthiness and operations for gliding, relatively independent from the civil aviation authorities. In both operations and airworthiness, we are internationally recognised for strong structures, great systems and administration of a rigorous process for managing these systems. Each of these areas has a long history that has enabled the development of systems, resources, and even a culture that supports these critical components of our organisation.

As in many situations, it is our strengths in these areas that are also the weakness of the association. Because we are so good at these areas, and our current leaders have all grown up within this culture (I myself was once an RTO/Ops), we tend to focus on the things that we are good at.

This also means that we don't focus on the things that we aren't good at – and this is our major weakness.

Even if club committees ignored the ops and airworthiness people and systems for the next two years, the clubs would continue to operate safely. The good systems are entrenched, people are doing the necessary work, and our monitoring and administration would keep on doing what it is good at. Club committees, however, continue to spend a lot of time checking that ops and airworthiness are progressing well, discussing the issues and making decisions.

At a recent VSA AGM, the club presidents suggested that in most cases, ops and airworthiness probably take up 60- to 80% of activity and discussion at club committee meetings.

What of Sports and Development?

The sporting coaching system has now been in place for approximately 15 years, and at best you would say that the systems, structure and activity are doing okay. Good in a small number of clubs, and poor in the majority. There is a great future in these areas, but it is a slow process to get club committees to actually focus on sports. Very strange, given that it's the sport that people join for.

So, sports is part of the way there – not bad after 15 years. If clubs don't embrace the coaching opportunities offered by sports then they will struggle. Larger clubs have by now established a coaching panel and are organising structured coaching programs. State associations are arranging programs to cater for people from smaller clubs.

When we look at development, which has been fairly active for three years now, progress is still quite slow, with the majority of clubs making only token efforts to develop their own operation. If it takes 15 years for clubs to start making serious efforts in development, then we will probably be too late and we will be further down that slippery slope to oblivion.

The Challenge

The challenge for all club committees, State associations and the National board is to immediately change the focus and topic of discussion at meetings from ops and airworthiness to development and sports. Ops and airworthiness are still important and must continue, but there are enough experts out there now; it can just continue to happen without a lot of input and discussion from club committees.

If 60 to 80% of meeting time was spent talking about how to promote the club, how to get new members, how to alter club systems with an objective of improving outcomes for members, how to develop all members, how to increase participation rates and club activities, then the club, state and national scene would be completely different. And don't be mistaken, if we don't make it completely different then we will continue down that slippery slope.

The National Focus

In order to assist clubs to develop our sport more effectively, the national M&D committee has the responsibility to develop the national structure and provide resource materials to support the clubs.

The introduction of the national M&D Committee is the first part of the national structure. With each State association nominating a State representative to this national committee, we now have the

equivalent of RTO/Development in each state. These individuals will work with the state organisation to support development initiatives within the state.

The next level that now needs a focus is the introduction of Club Development Officers – people who will encourage, support and maybe even drive development activities within their club.

Development or Publicity

Many clubs have a publicity officer, but this is not the same as a development officer. Publicity generally focuses on advertising or public events, promoting the sport. As we have said many times, development is much broader than this. It encompasses the marketing side, but also includes development of current members, changing club operation so that members are better supported, focusing on increasing participation rates and aircraft utilisation.

This is a critical role and maybe should be handled by a small group of people. I would expect that the whole committee would accept responsibility to support and drive these initiatives.

Performance Measures

I would encourage club committees to establish some critical measures to track the effectiveness of their initiatives. These measures could include membership numbers, number of junior pilots, number of hours flown in club gliders, and of course income/surplus. There may be other specific measures, such as cross country km, entries in the OLC, FAI certificates achieved, etc.

Small or Large Clubs

For large clubs, this recommendation is probably fairly easy to introduce, but much harder to implement – they have a larger group of people to influence. For small clubs, where the workload is probably already falling on a few people, it is still important to look at the development of the club. There are approaches such as whole club meetings to set direction and propose options – your State M&D rep would be keen to talk to you about this. The advantage for small clubs is that you can usually implement actions easily, trial a few different approaches; and of course when you make progress and increase members, it is a significant change.

Next Steps

- *At your next committee meeting you need to discuss the issues raised above.*

- You need to make a decision to change the agenda for your committee and club meetings – at least 60% of the actual time spent at the meeting should be talking about development and sports opportunities.
- You need to appoint one or more development officers. They should immediately contact the state M&D rep so that contact can be established.
- The committee should set some key goals and measures for the next 12 months.

Finally, concerning the M&D Committee, clubs who would like to take advantage of the national advertising campaign should complete the accreditation form available on the GFA website, so that they can get on to [www.soaring.org.au].



HAPPENED RECENTLY ON AN AIRFIELD

Martin Feeg

Recently I was a wingman at a club I visit infrequently. While waiting for action, I watched a young fellow doing his pre-flight check. He had become a full-blown glider pilot only a few weeks before. I couldn't believe my eyes; the checks were done with such a lack of attention that he barely cracked the airbrakes before locking them. Later, the duty instructor admitted noticing that the young chap had gotten increasingly slack.

On his return, I couldn't help engaging him in conversation, stressing the importance of checks. I pointed out that if he didn't change his ways he may be the next case of a 'close shave', if not worse.

Checklists, including the ones we memorise in gliding, are a means of remembering to check things. I could fill these pages with stories of accidents and incidents which could have been prevented if checks had been done properly.

After a while, the check sequence becomes familiar enough that you can carry it out automatically in a stressful situation, while still maintaining a high standard of flying and, as such, reducing your workload. Think of an outlanding, for example.

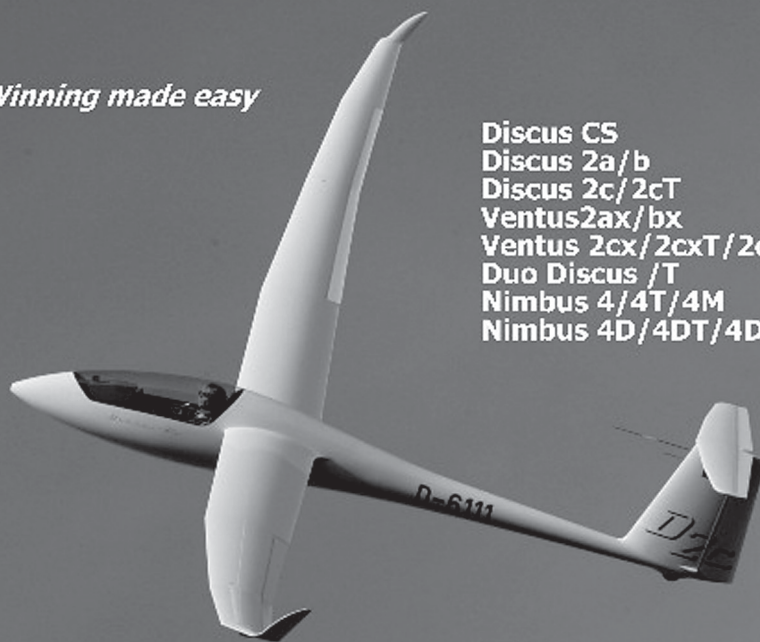
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HGFA Board Nominees

As per section 6.8 of the HGFA Constitution, where the number of Board nominations exceeds the number of Board positions available, a postal ballot from the membership is required. The election of members will be decided on a “first past the post” basis.

A postal ballot paper is included in this magazine. Postal ballots need to be completed and returned to the HGFA Office no later than 30 September.

You may vote by placing a tick against any nine of the nominees only.

You must state your name, HGFA number and be a current member before your vote will be counted.

Please ensure that your name and HGFA number are legible and that you forward the ballot paper to the office before the closing date of 30 September.

Nominees for the HGFA Board, in alphabetical order, are as follows:

Paul Coffey

My name is Paul Coffey, and I hereby nominate myself for election to the HGFA Board.

I've been involved in microlights for over 10 years and a Senior Flight Instructor since 1999. My total flying time exceeds 1,400 hours.

As well as flying, I've been actively involved in the Western Microlight Club Inc as Secretary since the club's inception in 1995. I inaugurated the club's newsletter 'Triker News' and have been editor since its inception in August 1997. Triker News has been published on the web since 1999 [www.trikernews.com].

I am a classroom teacher with duties in the operation and teaching of Information Technology skills with particular emphasis on software applications.

As a member of the local council's Airport Advisory Committee for six years, I have gained a much wider understanding of the problems and concerns of the wider aviation community. This has also helped me to gain experience in dealing with government departments and exploring funding avenues. This committee has also been involved in negotiations with various flying clubs, organisations and special interest groups.

My vision for the HGFA is to actively promote goodwill, cross pollination and co-operation between all Sports Aviation groups and to continue to lift the profile of the HGFA in the eyes of the wider aviation community. To achieve this, I'd like to foster a greater knowledge and understanding of the

HGFA among the other aviation groups including GA, GFA, RAA, ASRA, SAAA, etc.

In the case of trikes, I'd like to promote a jointly agreed syllabus, joint recognition of qualifications and instructors between HGFA and RAA which would result in the same level of skill and qualification regardless of training organisation. Such a move would inevitably lead to more credibility and recognition for both organisations.

Rohan Grant

I'm standing for re-election (again) because I want to complete a task I undertook more than a decade ago when I was serving as the HGFA's President. That task is to represent your interests in the negotiation of a significantly better regulatory environment and certainty of access to airspace for sport aviation participants.

As I write this, CASA Part 103 is being finalised and the new order will remove a number of the legislated controls that have artificially restricted how and where we can fly. It will also offer significant improvements to our organisation in the way it delivers services to us as pilots, and should lead to a better understanding by the regulator and other aviation participants of what we do and how we fly.

What is much less certain is our access to airspace. We face a number of threats from vested interests, most seriously the blanket imposition of Class E airspace across Australia and pressure for mandatory carriage of transponders despite the fact that we can't power them.

I have and will continue to insist that any change that affects you must be justified by a valid safety case that demonstrates how the controls to be imposed will mitigate the alleged risk. I ask for you to vote for me so I can continue to fight for your rights as a private pilot.

Geoff Guest

My name is Geoff Guest, I'm a member of the Skyhigh Paragliding and North East Victoria Hang Gliding Clubs and have been a member of these clubs since I completed my license in 1994. I have been a committee

member of Skyhigh Paragliding Club and was President from 2001 to 2003.

I have worked as a volunteer running the Mystic Cup Paragliding Competition at Bright for the past five years. For those of you not familiar with Mystic Cup it is a weekend-based paragliding competition aimed at introducing cross-country pilots to competitions in a safe and friendly club atmosphere.

I am seeking your support to be elected to the HGFA Board at the upcoming elections.

Strong club structures are the cornerstone for building our sport into the future. It is the clubs that provide the fun, safe environment for pilots to enjoy and learn more about our wonderful sport. Clubs can be more than just a place to meet once a month to chat about flying; by running regular flying events they can also provide the broader social network which brings richness to all areas of our lives.

The development of pilots is also an important area for the continuation of our sport. If we can improve the skills development of new pilots, we may be able to reduce the significant attrition rate we see in new pilots. The first 20 hours is critical in determining if a pilot will stay in the sport over the longer term. Establishing strategies to help pilots through this testing period will be vital in the success of our sport into the future.

These are areas I will be pursuing if elected to the HGFA Board. Thanks for your time, see you on a hill somewhere.

Tove Heaney

I would like to stand for election to the HGFA Board.

I learnt to hang glide in Norway during my last year at high school. I have been hang gliding for 18 years and instructing for 14 years, becoming more involved with the HGFA through the Competition Committee and the Ops and Safety Committee.

I fly hang gliders, trikes and gliders (have had a go and still own a paraglider). I own a property outside Canberra (where I ran my hang gliding school) with an airstrip, hangar, car towing strip and training slope.

I've been a member of the Norwegian and Australian hang gliding teams, both female and open, and have competed in many World Championships. I've obtained three World Records, and been the Australian National Women's Champion for many years. I've been organiser and director of large scale competitions, tours, fly-ins and training events.

I'm now employed by Sportavia Soaring Centre as General Manager. An international gliding centre for 30 years, Sportavia is now expanding into hang gliding, ultralights and microlights. It's a fully inclusive sports aviation resort with some amazing



development plans of which hang gliding will be an integral part.

I recently visited the USA looking at sports aviation centres to gain a broader understanding of where sports aviation is going and how Australia can keep abreast of world trends.

We need to evolve teaching methods. Teaching is extremely important; without new students our sports will slowly die!

We need to pamper and educate new enthusiastic instructors as well as pilots.

We should keep flying fun and social, to help keep our existing members as well as attract new ones.

Critical issues include insurance, liability, site ownership.

I feel with my broad background I very much want to be part of the future of the HGFA.

Kathy Little

I am currently a Board member and have been for the past two years. I have found it to be an enjoyable and challenging position. In this time we have had changes of General Managers, so this has meant a busy time for the Board.

Flying is generally a male dominated sport; more particularly so in triking. I have tried and will continue to bring a female perspective into decision making on the Board. There has been a lack of representation for trike pilots in WA, so I hope I can continue to be a speaker for the issues that we face in the west, as well as for the concerns of other trike pilots throughout the country. Trikes are beginning to take off here, so it is important that we have a voice.

Most of you already know a bit of my background, but for those who are new members, I am a teacher working casually as a relief teacher. I began learning to fly Cessna 172's in 1988, then a few years later I got my aerobatic endorsement. I had my first flight in a trike about nine years ago. I soon bought one and went on to get my licence. Shortly after I travelled around Australia with my trike and met a lot of trike pilots. I live in Ravenswood which is an hour south of Perth and fortunately have my own runway. I encourage people to fly in and visit.

Hakim Mentas

I am a Melbourne based paraglider pilot and have been in the flying arena since 1996. Since I started flying I have been very active with organising flying events and club activities, especially for novices. I served as Skyhigh Paragliding Club President

for two years and then as a committee member for a number of years.

Currently, I am serving as a HGFA Board member and approaching the end of my first two year term. These two years as a Board member gave me an in-depth understanding of the way the HGFA operates. Based on this experience, I believe there is more I can do for the good of the sport.

For a living, I work as a maintenance consultant in a large consultancy group. Interacting with clients, understanding their needs and producing effective and creative solutions are routine activities of my daily life and I believe these experiences and skills will assist me in making a contribution to our sport.

Bill Moyes

I again nominate for the HGFA Management Board. I began flying in 1966 and worked with John Dickenson to develop the first ski wing. I began building hang gliders in 1967 and continue to do so.

In recent years I have also manufactured the Dragonfly tow plane for hang gliders. In the early years of hang gliding I set seven World and two Australian Records.

I have served on the Board for the past four years and seek to continue to do so. My aim is to promote our sports and ensure the efficient management of the federation.

Bill Olive (Billo)

Dear fellow HGFA members, I hereby seek election to the HGFA Board. I have been hang gliding for fifteen years with more than 400 hang gliding and 600 microlighting hours flying time. I have been strongly involved in the Newcastle Hang Gliding Club committee and have organised many club events. This led to me being awarded Life Membership to the NHGC.

Since 1995 I have successfully organised and run the NSW State Hang Gliding Titles at Mt Borah, and since 2002 have also conducted the Airborne Gulgong Classic.

As a member of the HGFA Board I would work to promote hang gliding as a competition sport as well as a recreation, seek to ensure the sport's future and therefore a growing number of pilots for us to go flying with. I also see the need for the federation to fulfil its responsibilities regarding CASA and legal requirements.

I work as an IT manager at John Hunter Hospital in Newcastle, and believe that my skills and experience would make me a valuable Board member.

Colin Page

I would like to be considered for nomination to the HGFA Board. Relevant experience for this position includes my 330 hours flying paragliders, one year as a general committee member on the Skyhigh Club committee and two years as President of the Skyhigh Club. I have been involved with the VHPA as the Skyhigh Club Representative for two years. As an active member of Skyhigh and the NEVHGC I have been involved with the Bright Paragliding Open, Mystic Cup and many other activities for pilots of all levels. I would like to contribute at the national level and work on the Board to improve the overall situation of access and safety for all pilots as well as promotion of events and competitions where pilots can learn and share the experience of their personal airsports.

Andrew Polidano

I have been a member of the HGFA since 1995. I started flying hang gliders, then paragliders, paramotors and para trikes or flykes. I started a school in Byron Bay in 2001 teaching paragliding and motorised endorsements. I have worked mainly at the club level since 1995, however recently have completed a two-year term on the HGFA Board.

I have been on a Crusade for some years now developing new training programs in paramotoring and para-triking. Historically these have been endorsements tacked on the end of our free-flying certificates. The HGFA has turned away large numbers of people that wish to paramotor without free-flying. To my knowledge no other organisation has taken this on successfully. Culturally this involves a shift of thinking, which I believe the HGFA is ready for. I have made progress with this endeavour and believe another term on the Board will allow the process to be completed. I have good contact with our new General Manager, members of CASA, overseas related organisations, other instructors in Australia and the flying community via competitions. I believe paraglider towing has a positive future in Australia, and could be one of the answers to deal with hill politics and competition formats.

I believe the recent tightening of the belt regarding procedures in training needs to continue. I believe our identity is moving away from the backyard organisation mentality and consequently the HGFA will be able to attract more members, have less accidents via better training standards and be more in line for funding opportunities.

I love to fly; it is always the central motivator. I'm still attending cross-country



workshops to improve my personal flying. I have one free-flight site record and am hungry for more!

Michael Powell

Hello everyone. My name is Michael Powell, and I live on the Sunshine Coast in south-east Queensland. I have been flying hang gliders since 1993, accumulating around 500 hours over that time. My commitment to the sport is demonstrated by the fact that I have served on the executive of the Sunshine Coast Hang Gliding Club as President, and subsequently Treasurer, over six consecutive years (1997-2002). I am an active pilot, and currently fly a tandem glider with my partner, Marja-Leena.

I have well developed management skills acquired through years of experience as a Construction Manager in the building industry. Latterly, I have been actively involved in the environmental movement, and am currently studying for a PhD in Conservation Planning. I have a good insight into the mechanisms of how government interacts with community groups through serving on the Management Committee of the peak regional environmental group, the Sunshine Coast Environment Council.

I believe that we should be proactive in exploring ways of how we can ensure that the self regulation status of our sport is maintained in an era of increasing legal liability and control of activities by Government and Managers. Our future ability to negotiate acceptable outcomes rests in part with effective management, including a strong club structure which has effective control of our sites, and well developed transparent safety protocols.

The independent-mindedness and love of freedom are core attributes possessed by participants in our sport, however these qualities can be detrimental to our cause at times. We should be looking at ways of how we can ensure that pilots are acting responsibly in their flying activities, with the core objective of maintaining the freedom to continue enjoyment of our wonderful sport without undue restrictions being imposed in the future.

Jules Sanderson

Before I was born my grandmother sewed wings for 'Fairy's Swordfish', the aircraft that disabled Bismarck. My grandfather worked on aircraft engines whilst his brother was the first ever air steward. Later, I myself worked as an aircraft mechanic on gas-turbines, Hercules's, Chinook, Boeing and Rolls Royce. I've had an obsession with flying things, then with flying, all my life. I joined the Air Training Corps in

December '75. I became a BAPC Instructor fourteen years ago and did it all again with HGFA when I came to Australia in 1998. I am a Paragliding CFI, but I fly all types of aircraft and have a comprehensive insight into each discipline. I have flown in Scotland, England, Ireland, Spain, NZ, USA, Tanzania, Kenya, Uganda, France, Germany, Switzerland, Thailand and Egypt. In Australia I have flown every State extensively except NT and SA. I was the first paraglider pilot to fly Dobroyd Head and The Gillies Range, and I've pioneered and developed many other sites. In NSW I was awarded a Gold Medal for developing 'Safe Sporting Practice' – a \$10,000 prize. Together with Mik Terren I have developed wheelchair paragliding. I was instrumental in developing the Plan of Management at Stanwell Park after three fatalities. I teach and am aware of the associated responsibilities.

I find it hard to believe that interest in free-flying in general is declining, as the membership trend shows. I would like to have the opportunity to promote our sports to increase membership by organising instructor symposiums that help new pilots come through the ranks to become good instructors, and also use my media experience and connections to produce video courses (as benchmarks) and promos to positively promote free-flying and motoring to Australian residents, and consequently Australia as a flying holiday destination to overseas pilots.

Rob Steane

When I joined the HGFA in late 1998, I was one of about six active paraglider pilots in Tasmania; we now have about 20 active paraglider pilots statewide and a similar number of hang glider pilots.

I travel regularly to Victoria or NSW for summer thermal flying and plan to be competing in the Canungra Cup in October this year. This season I will be assisting with and competing in the second year of our combined paragliding and hang gliding cross-country league, with handicaps in place to encourage all. I have always been a keen member of the Tasmanian flying scene and successfully campaigned for the Tasmanian regional body of the HGFA to change its name in 2003, to officially include "paragliding" in its name. I was recently elected as President of the THPA.

I work as a fisherman and therefore can easily manufacture time to dedicate to the broader directions of the HGFA. Apart from wanting to see greater representation of the HGFA sports in Tasmania, I also have an interest in the future of paragliding and hang gliding in all parts of Australia.

Jiri Stipek

I became involved in HGFA activities in 1991 when I obtained my paragliding pilot license. Before I had some flirtation with flying through GA, sailplanes and flying RC models. I also have 20 years business experience, mostly in the car industry. My education in physics of fluids and robotics gives me a solid background for understanding the mechanics of flight and the equipment involved.

I became heavily involved in paragliding and contributed to Australian and overseas magazines by a huge number of photographs and articles of mostly technical nature. Being technically orientated, I found the technical side of paragliding especially interesting and became specialised in paragliding equipment through my business, Paragliding Headquarters. Together with WA instructor Jiri Hlavaty we established the first professional paraglider repair centre in Australia, now fully accredited by one of the world's largest paragliding manufacturers, Gradient. I also run a popular website devoted to paragliding [www.paraglidingheadquarters.com].

I'm in constant touch with a number of equipment manufacturers and people involved in overseas organisations similar to HGFA. Through a comparison, I know HGFA is doing an outstanding job in the area of regulations and safety of our sport. I'd like to get involved and contribute to the development of HGFA, especially in the technical area, using my skills and experience.

Craig Worth

I have been flying hang gliders since 1977. Over that period I have taken a keen interest in my local club and the HGFA. I was employed as HGFA Operations and General Manager for 10 years, during which time I also flew paragliders and microlights. I gained a comprehensive understanding of HGFA systems, developed training programs and sought to increase the federation's standing in the sport aviation community, both within Australia and internationally.

The onset of illness forced me to resign from the federation in 2003. Over the past two and a half years, with the support of my wife Suzie and many others, I have managed to overcome the disease and now am completely clear of cancer and keen to resume an interest in the HGFA.

As a Board member I would work to foster the HGFA's aims and objectives. In particular I would seek to: promote safety in training and operations; improve governance and member communication at Board level; have the federation's administration run efficiently and



cost effectively; and in particular, foster a continuation of volunteer participation.

Michael Zupanc

My name is Michael Zupanc, otherwise known as Zupy, and I would like to stand for election to the HGFA Board.

I started flying in 1981 and was a keen competition pilot for many years, including lots of international competition as well as being a member of the Australian team. I was a HGFA Board member for a number of years as well as being the convener of the Competitions Committee and the Australian CIVL delegate (where I was a vice president of CIVL).

I have recently stepped down from the Competitions Committee so as to get some fresh faces and fresh ideas happening in the competition scene, and I am keen to get myself, as an experienced "fresh face" back into the HGFA Board side of things.

Due to time constraints, I have not been very active in flying lately except for my ongoing competition work and competition scoring duties. These constraints are now largely dealt with and I am keen to get back

into the air and I am keen to be part of the organisation of the HGFA. I feel I would bring a practical view of the sport of flying to the Board, and my aim is to make the sport more accessible and to endeavour to get the general public at least better informed about what we do.

I have seen many contentious issues come and go over the years from a variety of different viewpoints, that is, from the casual pilots' point of view, the Board members' point of view, the competition organisers' point of view and also from the perspective of the international hang gliding community. I am keen to bring these experiences into the practical workings of the HGFA.



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Soaring Calendar

AUSTRALIA

GFA National Coaching Program 2005/06

Can you think of a sport without coaching? If you want to make progress in your cross-country gliding, find a coach or participate in a coaching event. There are coaching events being held across Australia with something for everyone. Top Australian pilots will be coaching at these events – contact your RTO Sports to find out more.

Peter Trotter is coordinating this GFA national coaching program. You can contact him directly to discuss what coaching might suit you <gliderpilots@bigpond.com> or 0417 888040.

10-16 September 2005

GlideFast Course, Kingaroy Soaring Club. To secure a place, send a cheque for \$150 made out to QLD Soaring Assoc Comp Acc to: Gliding Queensland, PO Box 15322, City East QLD 4002 – with your name and email address. For more information contact Ralph Henderson ph: 07 3843

6178 or 0409 596579, <rhenderson@iinet.net.au>.

24-29 October 2005

WA Performance Week, Narragin. Ph: James Cooper 08 93076186 or 0429 992468, <james1@vianet.net.au>.

30 October – 5 November 2005

Vic Performance Week, Bendigo. Ph: Peter Buskens 03 53671050, <pbuskens@melbpc.org.au> or Dave Wilson 03 98360683, <dwcra@ozemail.com.au>.

20-26 November 2005

Narromine Cup Coaching, Narromine. Ph: Martin Feeg 02 98633055, <xcCloudBase@aol.com>.

4-10 December 2005

JoeyGlide, Leeton. Ph: Bruce Taylor 0428 787349, <brucetaylor10@bigpond.com.au> or Nick Gilbert 0419 412772, <CirrusC2@internode.on.net>.

11-16 December 2005

GlideFast Course, Benalla. Ph: John Switala, GCV 03 57621058, <john_switala@ptp.com.au>.

26-31 December 2005

SA Coaching Week, Waikerie. Ph: Bernard Eckey 08 84492871 or 0412 981204, <eckey@internode.on.net>.

4-11 February 2006

Horsham Week, Horsham. Ph: Peter Buskens 03 53671050, <pbuskens@melbpc.org.au> or Dave Wilson 03 98360683, <dwcra@ozemail.com.au>.

Picolight Fly-in

16-18 September 2005

Milbrulong, NSW. All powered paraglider, powered hang glider (and powered parachute) pilots are invited to the 8th annual Picolight Fly-in. Again in Milbrulong (east of Lockhart), with plenty of open paddock, roos to chase, foxes to hunt and sheep to muster... and no powerlines to be afraid of. Camping as usual at the sports ground and for the rest... byo everything. Join us for a weekend of flying fun. Contact Jos on 02 60265658 for details.

Jimbour Wines Qld State Gliding Championships

17-24 September 2005

McCaffrey Field, Jondaryan. First State comps of the summer. Entry fee \$150 per aircraft. See [www.ddsc.org.au]. All classes, practice day Saturday 17 September. For more information ph: Ralph Henderson 07 38436178, <rhenderson@iinet.net.au>.

Canungra Classic

24 September – 1 October 2005

Canungra, SE Qld. AA sanctioned comp. The Canungra Classic has become an annual event for HG pilots around Australia every spring. It is well known for World Record flying conditions, big parties, great food and fun activities for the whole family. Registration and BBQ on Friday 23

September. This year headquarters will be based at the Canungra showgrounds in the heart of town. Camping is available at the showgrounds and only a few steps away from all the action. Alternatively you can book accommodation with one of the hotels in town. For accommodation information visit [www.triptera.com.au/canungra/area/index.html]. Pilot numbers are limited to 75 so book now. Entry fee: \$180, site fee: \$40. GPS mandatory, intermediate pilot rating with inland experience. For registration send cheque or M/O made out to "Canungra Classic", addressed to Jon Durand, 32A Jardine Rd, Beechmont 4211. To register online contact Reagan <rkowald@centrepoinfinance.com.au>. For entry enquires contact Jon Durand on 07 55333596 (h), 07 55333611 (w) or <durand@ausinfo.com.au>. Don't miss the best comp of the year!

Canungra Paragliding Cup

8-15 October 2005

Canungra Qld. PG pilots are invited to compete in the sixth year of the AAA sanctioned Canungra PG Cup. Only 85 entries will be accepted to compete this year for the eight day event. Pilots must have a minimum of Intermediate rating. Entries will be accepted based on the requirements in the latest edition of the HGFA Competitions Manual. Last year saw six days of epic flying, all high scoring 900+ point days! Come and experience the fun and games, supportive and diverse flying Canungra has to offer. Entry fee will be \$390. This includes full retrieve service, pilot pack, official comp T-shirt, map, presentation dinner and day prizes. Package includes pickup and return from Brisbane Airport on Friday 7 October. Accommodation in Canungra is limited, so book early for rooms at the Motel, B&B and Hotel. Details available at [www.chgc.asn.au] (click on the "Competitions" link). Registration can be made online. Email enquiries to the Competition Organiser, Brandon O'Donnell, on <canungracup@chgc.asn.au>.

Airworthiness

Assessment Week

9-15 October 2005

Bathurst, NSW. The NSWGA is conducting Assessments for GFA Airworthiness Authorities (both Replacement of Components and Annual Inspection) for sailplanes from 4pm Sunday 9 October to Saturday 15 October at Piper's Field at the facilities of Bathurst Gliding Club. The assessment week is made up of workshop and seminar sessions on practical sailplane inspection and component maintenance. Contact Len Diekman on 02 94993600 (w) or 0401 713610, <ljd@ihug.com.au>.

NSW State Gliding Championships

12-19 November 2005

Hosted by Lake Keepit Soaring Club. Great site, interesting country, friendly atmosphere. We like to ensure our comps are lots of fun. All classes including Club Class. Enquiries to Dave Shorter, ph: 02 66561979 <dave@shorter.net> or go to [www.users.bigpond.com/keepitsoaring/] for more info and registration.

Mystic Cup

19-20 November '05 – 1 April '06

Bright, VIC. B sanctioned comp, held on the weekends of 19-20 November 2005, 3-4 December and 17-18 December 2005, 7-8 January and 21-22 January 2006, 25-26 February 2006, 18-19 March 2006 and 1 April 2006. An introduction to competition flying for XC pilots. 1 April final day and presentation night. 5km, 25km, 90min, 15%. Contact Craig Collins <craig@alpineshire.viv.gov.au>.

AirBorne Gulgong Classic

22-26 November 2005

Gulgong, NSW. Entries for this aerotow competition will be strictly limited to 50 aerotow qualified pilots.

Entry fee of \$350 covers T-shirt, presentation dinner, strip and hangarage fees and all tows on competition days (practice days are pay per tow). 21 November is set as a practice day. Due to the complexity of organising tugs a late fee of \$50 will be imposed for entries received after 30 September. Enquiries to <fly@gulgongclassic.com> or phone 02 49423131 or 0412 423133. Online info and rego at [www.gulgongclassic.com]. GAP parameters: AA grade, 5km, 70km, 10%.

Australian Junior Nationals (JoeyGlide '05)

3-10 December 2005

Leeton, NSW. See [www.JoeyGlide.com/JG2005/] for more details.

GlideFast Coaching Course 11-16 December 2005

Gliding Club of Victoria. Peter and Lisa Trotter are offering coaching at Benalla in the month prior to the Club Class National Championships. To secure a place, send \$150 to GCV (PO Box , Benalla, Vic) with your name and email address. For more information contact John Switala <john_switala@ptp.com.au> or ph: GCV on 03 57621058.

Coaching Week at Waikerie

26-31 December 2005

SA Gliding Association is holding another coaching event at Waikerie just prior to the 2006 Multi Class Nationals at Gawler. This allows Nationals pilots to attend and take advantage of the excellent training conditions in the eastern part of the competition area. An invitation is extended by SAGA and the Waikerie GC to pilots from all over Australia. No course fees are charged, and to keep the costs as low as possible, winch as well as aerotow launching will be provided. Almost 50 pilots attended last year's event, and there are early indications of a similar roll-up this year. First class catering will again be provided by Rod Vandenbrink of the Waikerie GC, culminating in a big New Year's Eve party on the last day. Campsites, dormitory accommodation, airconditioned rooms as well as family units are still available, and can be booked online, as can gliders, on [www.waikerieglidingclub.com].

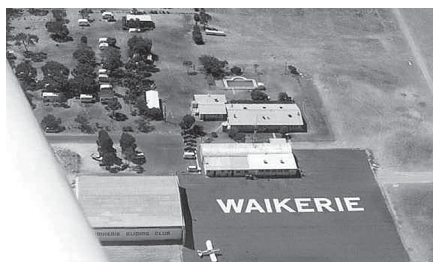
In order to accommodate all levels of experience, organisers are again offering a basic and an advanced course, and pilots can freely alternate between the two. Significant interest has already been shown, with approximately 25 early enrolments. A number of well-known coaches will be on hand to help participants achieve their goals and ambitions. Theory lectures with PowerPoint presentations in the morning will be followed by practical flying in the afternoon and a debriefing session in the evening. Highly reliable soaring conditions in the Riverland region make for easy cross-country flying, with speeds well above those usually achieved in other parts of the country. Most coaching will be conducted on a 'lead and follow' basis, but an opportunity for coaching flights in an ASH-25 and other two-seaters also exists. For further details regarding the course contact Bernard Eckey (RTO/S for SA and NT), ph: 08 84492871 or <eckey@internode.on.net>.

Australian Free

Flight Festival

30 December 2005 – 3 January 2006

Bright, VIC. To promote all free-flying sports to the public and most of all, have fun and learn more! The comp will be a accuracy landing in the morning, open XC distance in the afternoon. You take off from any NE site, just return your GPS to HQ to verify your best flight of the day... The last day will be a demo/display fundraiser day and Masquerade. Get your best costume or most impressive ensembles together now! \$2,000 of cash to be won! Awesome trophies, daily and overall cash prizes for PG/HG categories,



great flying and non stop parties! Info: [www.xcflight.com], email: <info@xcflight.com>, ph: 0429 403 606.

44th Multi-Class Championship

2-13 January 2006

Gawler Airfield, SA. Adelaide Soaring Club will be hosting this event. The competition will run two classes, the 15m Class and the Open class and all gliders will be handicapped according to the current Multi-class handicaps. However, if sufficient entries are received the 15m Class will be split into Standard and 15m Racing and the Open Class will be split into 18m and Open. Gawler Week will be held immediately prior to the event. There will be weather briefings and tasks set. All are welcome to attend and get some practice in before the start of the competition. See News note for further details.

Bogong Cup

7-14 January 2006

Mt Beauty, Vic. AAA sanctioned comp. Registration and practice day 6 Jan. Strictly 70 pilots max. Minimum rating int with inland experience. Entry \$195 before 10 Dec 2005 (\$205 thereafter). Club, Open, Kingpost, Floater and Female categories. Also, the Joel Rebecchi award for most improved Australian pilot. The dynamic team of Carol Binder (Organiser) and Heather Mull (Director) will once again ensure heaps of fun, prizes (serious and novelty) and social events. GPS, radio, parachute and a passion for flying mandatory. GAP parameters: 5km, 50km, 90min, 25%. Info: [www.xcflight.com], email: <info@xcflight.com>, ph: 0429 403 606.

Sky High XC Cup

14-15 January & 4-5 March 2006

Mt Cole area, VIC. C sanctioned comp. The intention is to run a competition similar to Mystic Cup to actually get pilots flying XC at sites other than Mystic in Victoria. Contact Geoff Wong <geoff@zikzak.net>.

Corryong Cup

15-21 January 2006

Corryong, VIC. B sanctioned comp, practice day & rego 14 Jan. A relaxed, fun meet, aimed to foster the development of competition and cross-country flying skills. Maximum enjoyment at one of the sport's best venues – Mt Elliot. Open Class and Entry level tasks. 65 pilot limit, entry confirmed with payment. Enter online at [corryongcup.com]. Entry fee: \$110, includes comp T-shirt and Presentation Dinner. HQ: The Court House Hotel, Corryong. Intermediate rating and inland experience required. GAP parameters: 4km, 40km, 90min, 15%. Contact: Cameron 0407 418295.

Club Class Nationals 2006

16-27 January 2006

Benalla, VIC. This competition is being held during the prime soaring season. We hope this will guarantee some excellent weather for your tasks. Benalla has large areas of flat land to the north and foothills and alpine mountains to the south,

so lots of variety for tasks or directions to fly. The airfield has a large, long and wide grass east/west (08-26) strip, as well as a sealed parallel power strip and two grass parallel runways for north/south (17-35). Two tie-down areas are available, one is adjacent to the runways and can accommodate approximately 20 aircraft. Further space is available in front of the club hangars. The clubhouse has a large room well suited for briefing and meals. The clubhouse is airconditioned, has a licensed bar and meals will be available for around \$10 or sample the variety of restaurants around town. The clubhouse has a number of PCs wired up to our network and broadband internet connection so you can download you emails fast. For those with wi-fi capability on their laptop or handheld will find connectivity in and around the clubhouse. The airfield has limited camping and there are additional camping options at the town's caravan park. A variety of motel/hotel accommodation is available around town, the closest is 500m from the clubhouse. The township of Benalla is closeby, about 1.5km, or about a nine-minute walk. There are many activities in the local region should the day not be flyable. Wineries are available for tasting with the nearby Milawa region renowned for its good food. The nearby hills offer many trips, walks and sights. For a real shopping trip, Melbourne City is just over two hours down the freeway offering its famous Victoria Market or bevy of fashion and food shops. The GCV welcomes all pilots and their crews and looks forward to hosting a successful and safe competition.

Top Gun Apprentice Challenge

16-19 January 2006

Sportavia, Tukumwal, NSW. Combined XC clinic and competition. Open to all pilots eager to learn about XC flying. Top rated international pilots (the "Top Guns") will be hosting XC competition clinics during the event. A number of Top Guns will each coach a team around the course each day with the scores being the sum of the scores of the learner pilots. Cost \$450, which includes all tows and all clinic sessions. Contact Tove Heaney <info@sportavia.com.au>.

Sportavia International Hang Gliding Championships

21- 28 January 2006

Sportavia, Tukumwal, NSW. AAA aero competition. Open to all pilots (floaters to topless), but all pilots need an aerotow endorsement (even a Fun can be aerotowed). Entry fee \$200 plus \$400 for tows. Will be run at Sportavia or a paddock nearby. GAP parameters: 10km, 80km, 90min, 25%. Contact Tove Heaney <info@sportavia.com.au>.

Killarney Comp

28 January – 4 February 2006

Killarney, Qld. AAA HGFA Sanctioned, FAI Cat 2 PG competition. Killarney is three hours drive inland from the Gold Coast and two hours from Brisbane. The take-off has been bought by Queensland pilot Andrew Horchner, who will be hosting the event; local, national and international pilots are all invited. Killarney offers some of the best cross-country flying in Queensland and nationally; it has numerous launch sites that cover most directions in a very close proximity of each other. In this area there are 1,000's of km of wide open flatlands to the west with excellent road networks throughout the area. In the past people have accomplished rewarding flights, flying over and gazing down upon extinct volcanic plugs and the picturesque flatlands of the Darling Downs – a must for your PG calendar. Organisation supplied 4WD bomb-out retrieves back to launch or back to serviceable roads, but this service will be limited, so to guarantee your chances of an effective re-fly retrieve system organise

your own. Note that from the SE bomb-out there may be some water crossings depending on previous weather, so a 4WD vehicle could be of benefit for a team's retrievals. Entries accepted based on requirements in HGFA Competitions Manual Edition 6.4, section 3.4, with 85 positions available. Pilots should have a good, comprehensive level of inland experience. Other pilots con-

sidered at organisers discretion. Accommodation is limited, so early bookings are recommended – details on the competition website [www.chgc.asn.au/killarney/]. Entry fee: \$190 before 20 December 2005, \$220 thereafter no exceptions. Payment by M/O, bank cheque or direct deposit. Account: Access Factor Pty Ltd, BSB 124-050, account no 10583935, please place your HGFA number in detail section. Post: Killarney PG Classic, PO Box 70, Killarney, Qld 4373. Enquiries to <afact@gil.com.au> or contact the organisers on 0427 807516 (Andrew Horchner) or 0418 807516 (Wendy Mugridge).

NSW HG State Titles

5-11 February 2006

Please note the dates. The PG Pre-worlds will be held on this site later in the month, so this comp has moved forward to avoid a clash. Registration at Royal Hotel on Friday 4 Feb. This is a AA grade comp. GPS turnpoints and goal verification. Pilot requirements: int rating with inland experience. Entry: \$120, includes T-shirt and presentation dinner. Ph: Billo 0412 423133, <fly@nswhgstatitles.com>, website [www.nswhgstatitles.com].

Bright 321 – Australian Paragliding Open

11-18 February 2006

Bright, VIC. The Bright 321 Australian PG Open will be held in and around the picturesque town of Bright. It will be a Category 2 event and has a AAA Australian sanction. Following the popularity of last year's event places will be increased to 120 this year. Cash prizes include \$3,000 1st, \$2,000 2nd, \$1,000 3rd. Entry fee \$220 (incl. GST). There is a \$20 discount for cash/cheque entry fees received before 1 January 2006. GAP parameters: 5km, 30km, 90min, 20%. Full details found at [www.bright321.net] or contact Geoff Wong <geoff@zikzak.net>.

Tocumwal Challenge

25-26 February 2006

Sportavia, Tukumwal, NSW. Fun national fly-in fly-out weekend for all pilots, run in conjunction with Tocumwal town festival. Mega parties and all sorts of activities, flying sports and other things. Contact Tove Heaney <info@sportavia.com.au>.

Manilla Kiwi Open

24 February – 2 March 2006

Manilla, NSW. FAI Cat 2 + NZL PG League round. Entry fee: \$140 (\$170 after 1 Jan), includes hill transport, 1x dinner, \$2000 prizes, heaps of fun Kiwi pilots to fly and drink with, and all the usual things you would expect from a Manilla event (big XC tasks). Register from 1 Oct via [www.manilla2007.com]. Max 150 pilots. Entry place allocation on 1 Nov if oversubscribed. See website for details. Organiser: Godfrey Wenness ph: +61 (0)2 67856545, <skygodfrey@aol.com>.

Manilla Pre-Worlds

5-11 March 2006

Manilla, NSW. FAI Cat 2. Entry fee: \$170 (\$190 after 1 Jan), includes hill transport, 2 x dinners, over \$5,000 in prizes, expert organisation and legendary Manilla tasks. A unique opportunity to fly with some of the world's best as they practise for the 2007 Worlds. Register from 1 Oct via [www.manilla2007.com]. Max 150 pilots. Entry place allocation on 1 Nov if



LAKE KEEPIT

TAMWORTH NSW

**We will welcome you to
the NSW State Comps
12-19 November 2005**

**All classes including Club.
Limit 50 gliders. Book Early!**

[www.users.bigpond.com/keepitsoaring]

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- ★ Club rates for all GFA pilots
- ★ Good glider availability
- ★ Winch and aerotow courses
- ★ Free flying after 4 hours
- ★ Mid week operations
- ★ Camping, bunkhouse,
airconditioned cabins



GLIDING FEDERATION OF AUSTRALIA

Airworthiness Inspection

FORM 2 AND C OF A NOTICE

- ☐ A Form 2 inspection is due and a cheque for \$143* is enclosed
- ☐ The C of A requires renewal. A cheque for \$33* is enclosed for renewal and the existing C of A document is returned
- ☐ Initial registration package is required and a cheque for \$363* is enclosed

* Fees include GST

A) DOCUMENTATION REQUEST

- ☐ Please send me a change of certificate and owner document
- ☐ Please send me an application to register an aircraft form

Aircraft Type

Registration marks VH –

Address to which documents are to be sent is:

Name

Address

.....

State. Postcode

**Forward to: GFA Airworthiness Secretariat,
130 Wirraway Road,
Essendon Airport VIC 3041**

Soaring Calendar

oversubscribed. See website for details. Organiser: Godfrey Wenness, ph: +61 (0)2 67856545, <skygodfrey@aol.com>. Note that free-flying at Mt Borah will be limited during the double header event period (24 Feb-11 March) – generally launching is permitted after the bulk of comp pilots are on course.

[Note: GAP parameters, where listed in the above events, are: bomb-out distance (minimum scoring distance), nominal distance (minimum task length), nominal time (minimum expected winners time), and goal percentage (nominal percentage in goal).]

OVERSEAS

PG World's Ridge Race

7-16 September 2005

Timbis, Bali. This is the PG comp that brings the FUN back into paragliding! This comp is not just about the pilot disappearing into the distance, it's about having fun for the whole family. There will be non-PG events giving opportunity to see all the exciting things Bali has to offer while the pilots do their thing. The event consists of a ridge race where you will be competing against pilots on similar gliders to your own. We'll strive to make it as fair as possible for all – from novice to advanced full time pilots. The first three places of each division get a Bali-style trophy for their efforts. The four divisions are: DHV 1, DHV 1-2 (AFNOR Std), DHV 2 (AFNOR Perf), Open Class (DHV 2-3, 3 Comp, AFNOR Comp, proto, paramotor wings and un-certified wings). Anything goes as long as it's safe and a PG of some sort. Timbis Flight Park will be closed to all non-comp related pilots during the week of the event. The cost will be Rp350,000 (approximately AU\$50), which includes site fees and T-shirt. There will be a discount available for all non-PG events for the pilot's family and friends. For more info visit [www.baliparagliders.com/events/2005/index.html] or email <balicomp@hotmail.com>.



Soaring Wave Camp Patagonia 2005

November 2005 – January 2006

For the fourth year, Jean-Marie Clément and his team have prepared the next soaring wave camp in Patagonia, taking place at San Carlos de Bariloche, Argentina. Pilots of all skills and their families are invited to join them. The goal is to practice wave flight in ideal meteorological conditions, while discovering the natural marvels of the Austral world: glaciers falling into the sea with seals and sea lions swimming around, the sub-tropical falls of the north, watching whales nursing their calves, or walking amongst thousands of penguins. Not to mention local volcanoes, extraordinary both from the ground and air.

Participants can be accompanied by mountain flight instructors while they make record attempts. Four world records and nine national records have been achieved during previous expeditions. Dates will be scheduled according to the availability of the gliders. This year the group will have a container from Europe, and there is room for one more glider. Come with your own glider, motorised or not (San Carlos de Bariloche has the only tug of the whole Patagonia region).

Begin your dream by surfing our website [www.topfly.

aero], where you will find general conditions for participation as well as many narratives, photos and movies from previous expeditions. Don't hesitate to contact us: TopFly

Via delle Forze Armate, 26, 20147 Milano (Italy)
<info@topfly.aero>, ph: +39-02-48705377; fax: +39-02-48705352; Mob: +39-335-6049302.

Ladies Open Distance Comp

11-16 December 2005

De Aar, South Africa. This Cat 2 competition is not restricted to women only, but they do hold the upper hand! Every woman who enters the comp gets 4 nominations. These nominations can be used at her discretion; for every spot used (male pilot nominated), she gets 1/4 of her entry fee discounted, i.e. 4 nominations = Ladies Free entry. Payment per nomination must be received by 10/12/05 for the entry and discounts to be valid. For international ladies, should you not have enough pilots coming with you, we can find local nominations for you and in return these local pilots on your "team" will assist you with local site knowledge. As this is a winning event there will be limited entry space available, so don't leave your planning too late. Contact us for more information: Des and Arnold ph/fax: +27 (53) 631-1555, web: [www.pottiesbnb.co.za].

Mauna Kea Thermal Clinic

27-31 December 2005

Mauna Kea, Hawaii. Achim Hagemann will be organising the 2005 Mauna Kea Thermal Clinic on the Big Island of Hawaii. Mauna Kea (13,796ft) has flying sites at various altitudes. Pilots flying here should expect big air, high altitude take offs and challenging XC flying. Mauna Kea and the surrounding areas are still unexplored to a large extent. Our plan is to pioneer several peaks around Mauna Kea between 11,000ft and 13,000ft that have never been flown before. To register for the clinic contact: Paraglide Hawaii, PO Box 797, Mountain View, Hi. 96771, USA; <tofly@excite.

com> or ph 808 895 9772. Clinic requirements: int or better (nov with instructor sign off; bring everything you need for high altitude XC flying; food and gas money extra; cost \$275. Clinic incl: 4WD transportation, airport pick up, guide service, free camping, daily weather report.

IGC World Gliding Calendar

2007 and beyond

2007 WGC – Juniors, Bid selection 2005
2007 WGC – Women's, Bid selection 2005
2007 Alternative Events, Bid selection 2005
2008 WGC – 15m/18m/Open, Bid selection 2005
2008 WGC – Std/Club/World, Bid selection 2005
2009 WGC – Juniors, Bid selection 2006
2009 WGC – Women's, Bid selection 2006
2009 Alternative Events, Bid selection 2006
2010 WGC – 15m/18m/Open, Bid selection 2007
2010 WGC – Std/Club/World, Bid selection 2007
2011 WGC – Juniors, Bid selection 2008
2011 WGC – Women's, Bid selection 2008
2011 Alternative Events, Bid selection 2008
2012 WGC – 15m/18m/Open, Bid selection 2009
2012 WGC – Std/Club/World, Bid selection 2009
2013 WGC – Juniors, Bid selection 2010
2013 WGC – Women's, Bid Selection 2010
2013 Alternative Events, Bid Selection 2010
2014 WGC – 15m/18m/Open, Bid selection 2011
2014 WGC – Std/Club/World, Bid selection 2011

NOTE: Shown as running through 2014 for illustrative purposes only. Calendar and structure of the World Gliding Championships will continue on as shown after 2014 (until changed or modified by the IGC Plenum).

Letter to the Editors



Questions arising from Basic Sailplane Aerodynamics

Many questions arise from Colin Vassarotti's article (*Basic Sailplane Aerodynamics, Soaring Australia July 2005, pp 14-16*).

I feel it is very important to have answers to these before the rest of his series on basic sailplane aerodynamics continues.

Question 1: In Figure 3, what do the forward-pointing arrows on the underside of the wing mean? Is the air in this area flowing forwards?

Question 2: In Figure 6, all the arrows point in one direction, which seems to contradict Figure 3. I grant Figure 6 is only a 'simulation', but it appears that less air leaves the diagram at the right hand edge, than enters at the left. Where does the missing air go?

Question 3: Col mentions that the Coanda effect requires 'a stream of air emerging from a nozzle'. My own diagram of the Coanda effect (in *Soaring Australia*, March 2004, p 23) illustrates this. Col's own diagram, Figure 7.7, omits the nozzle. How, then, can the Coanda effect be used to explain lift on ordinary sailplane wings where there are no nozzles?

Question 4: How does Col reconcile what he calls the 'new school of thought' with the measured pressure differences that do actually occur on wings, like the one shown in my diagram of the Du 89-134/14 wing profile, as used on the ASW-27 sailplane?

Finally, no serious aerodynamicist or sailplane designer, past or present, has ever suggested or implied that there is some conflict between Newtonian laws of motion and aerodynamic theory. The two are bound up together. The ability of a simple wing to maintain an aircraft in flight depends totally on obtaining a useful Newtonian reaction force from the air. What seems to be at issue is how the wing generates this reaction from the fluid air. The answer is found in all reputable aerodynamic texts, but apparently not in some of those emerging from 'the new school of thought'.

Martin Simons,
13 Loch Street, Stepney SA 5069



Cartoon by Codez

No, not a gentle zephyr Grimshaw...
it's back to the hangar.



GlideFast Coaching Course at the Kingaroy Soaring Club

10-16 September 2005

- Peter and Lisa Trotter are offering coaching at Kingaroy in the week prior to the Qld State Championships.
- The format will be lectures/discussion, briefing and post-flight analysis.
- The course is aimed at advanced cross-country pilots who are interested in competition or who are attempting 300km or greater distances.
- There are a limited number of places available. To secure a place, send a cheque for \$150 made out to QLD Soaring Assoc Comp Acc to:

**Gliding Queensland
PO Box 15322
City East QLD 4002**

with your name and email address.

- For more information contact Ralph Henderson by email <rhenderson@iinet.net.au> or by telephone 07 3843 6178 or 0409 596 579.

GFA NATIONAL COACHING PROGRAM

GlideFast Coaching Course at the Gliding Club of Victoria

11-16 December 2005

- Peter and Lisa Trotter are offering coaching at Benalla in the month prior to the Club Class National Championships.
- The format will be lectures/discussion, briefing and post-flight analysis.
- The course is aimed at advanced cross-country pilots who are interested in competition or who are attempting 300 km or greater distances.
- There are a limited number of places available. To secure a place, send \$150 to GCV (PO Box 46, Benalla, Vic) with your name and email address.
- For more information contact John Switala by email <john_switala@ptp.com.au> or telephone the GCV on 03 5762 1058.

GFA NATIONAL COACHING PROGRAM

Are We There Yet?

David Humphrey



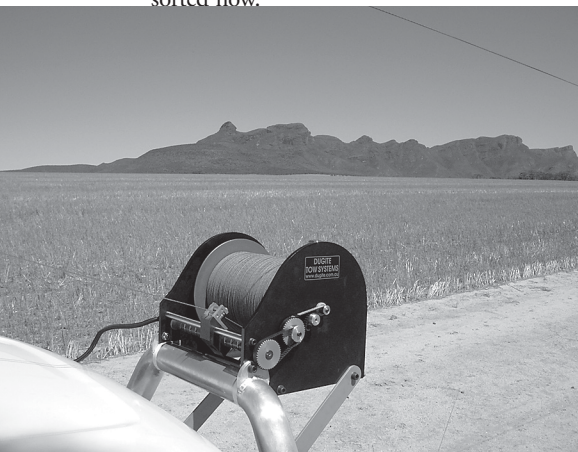
THIS IS THE STORY OF A GREAT LITTLE ROAD TRIP WITH SOME SPECIAL PEOPLE.

Spear Creek

Whatever your means, it's all about getting into the air and satisfying the passion. A road trip that had been on the boil for a while was finally about to happen. It was time to turn my Rav 4 into a "Tardis" – filling it with more toys than seemed physically possible.

A winch, fondly named the "wench", was the first item packed, as this trip was about towing in remote areas. Next was the paramotor of course, as I was going flying, that was for sure. Then a few wings, and maybe the camping gear and some food would be helpful.

I needed a driver for the towing and Hedi just happened to be on three weeks holiday and always keen to see new places. She had the whole towing thing pretty well sorted now.



The "wench" performed her role admirably during the trip

Tanya, who originally came across only for a visit and the drive back over the Nullarbor, was now keen for the whole adventure, as the passion for getting into the air had taken hold.

It's amazing what you can fit into a little car when you try.

Leaving Perth later than planned meant we arrived at Kalgoorlie way after sunset. Not a problem; Richard from the Kal Dusties kindly supplied us some floor space for the night. Next day I pulled out one of the back seats from the Tardis and left it with him so we might have a little more room for more gear.

Headed to Eucla, clocking up 1,000km including more night driving which was not really the plan. The last 80km I stopped counting the roos at 100. Thankfully they were standing sentential on the edge of the road, not bounding across it. This was pretty much the scariest part of the whole trip.

Pitching tents in the dark was a good laugh and it got to be easy after that. Next morning it was time to test the wench and see if she could do the job and get the tandem into the air. Hedi towed me up solo first – thermals at 9:30am and a little hard to get down. The tandem tow after that worked fine.

We headed for Bordertown (WA/SA) in good spirits and arrived at one of my favourite little camping spots right on the coast. We walked up the dunes to check the wind, and I found myself running back to the

car shouting instructions to Tanya on what to wear – yes, it was on.

It was a little light and I thought maybe we wouldn't stay up, but it turned out perfect. Tanya and I flew tandem and Hedi drove, working on her filming skills. We could have gone on all afternoon, but we still had plenty of kilometres to drive.

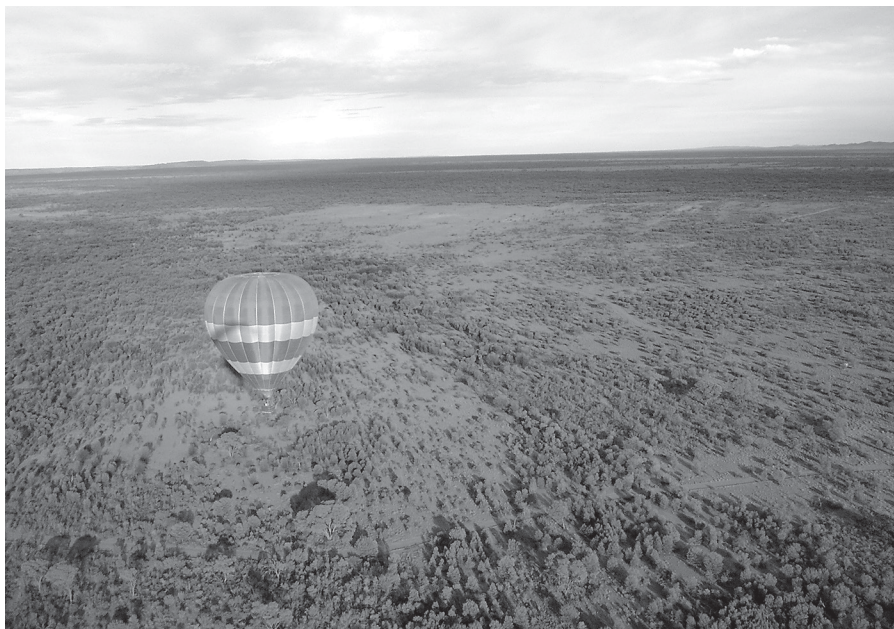
Ceduna was next stop; more playing with tents in the dark. Then Spear Creek (Port Augusta) the next day with real grass to pitch tents on and time to get in some towing at the airstrip.

The following day we arrived in Adelaide to meet Kym, Kris and Aude – the adventure was really about to begin.

Driving out of Adelaide ahead of them and past Wilpena Pound, Hedi, Tanya and I headed for the country race meeting and bush concert at Beltana. Got the paramotor up with the local chopper for a nice sunset flight after the last race. Sadly we did not back any winners.

Back to Wilpena Pound the next day where the others caught up with us – time for some towing. It all worked fine, but Aude was the only one to get any decent thermals. Once again I had a great sunset/moonrise flight with the paramotor.

As it was a full moon we all got up at 3am next morning and hiked up St Mary's Peak to catch the sunrise: about a six-hour return trip and worth the pain. This was not



for a fly, just something that was really special and a must do if you go there.

Then it was dirt driving on the Oodnadatta Track. Coward Springs is a must if you ever take the drive – we happened to loose the others while playing in the bush spa there. We then found another great little place called William Creek. Population about eight, and 10 million flies, but one very nice airstrip and a great pub. There is a fly-in here 24 and 25 September that I think would be worth going to. It coincides with a Bronco Branding, Camp Draft and Dinner Dance. This will be a first and they welcome anything that flies. Free camping plus entertainment. A very friendly bunch. For more info call 08 86707962.

We caught up with Kym, Kris and Aude at Coober Pedy and did the underground camping thing. Very interesting place. We all got off the ground at the Breakaways, a ridge just out of town.

While car troubles kept Kym, Kris and Aude in Coober Pedy, we drove on towards the Rock. More night driving but no road kills got us to Curtin Springs Station and a bit of luxury in a cabin. Another dawn motor flight to get the lay of the land. The Rock I could see in the distance, but I think Mt Conner, which was nearby on station property, is far better.



The "north launch", Alice Springs, NT
September 2005

The others were still catching up so we went on to Kings Canyon for another moonlight hike and sunrise viewing.

Chris and Aude had not been to Ayers Rock before, so while they did the tourist thing we took to the dirt again and went the long way via Mereenie Loop (great country, really bad road) to Alice Springs.

We met up with them the next day for sunset and a few beers at Anzac Hill in town, then a great BBQ at Tanya's sister's place. Real showers, real beds, no tents. Very nice.

Over the next few days I got in some nice morning motor flights with Rick, the only paramotor pilot in town at present. Curly, another pilot, is tiring of being ground crew and will soon become a petrol head I think. One morning we even got to play while the balloons were doing their thing.



An early morning paramotor flight over Alice Springs, NT



Above: Our first tow near Wilpena Pound, SA

Left: Hot air balloons take to the air, Alice Springs, NT

Photos: Courtesy David Humphrey

Alice has the wonderful McDonald Ranges running right through the place, but sadly the wind usually runs along the ranges and the take off is in airspace. So when it did come on we wasted no time in getting up to the north launch. Don't even think about flying here without contacting local pilots: you need to get through a locked gate, have permission from the airport tower, and have a VHF radio. It all works okay if you follow the rules and the tower will even give you more space while you are flying if they are able.

Tanya and I played along the ridge in the tandem as far as the tower allowed us. It could have been a day to go somewhere but we were not prepared, so after about 45 minutes we headed down. Some dead air and rough ground made for a bad landing and a sprained ankle for Tanja. An old ski injury was now a new flying injury. Our first

**The tow perspective**

bad landing after dozens of great ones. But she still had the passion and was still able to drive so we carried on.

Hedi had sadly parted company with us in Alice as she had to get back to school. And now it was time for Tanja and I to leave Kym, Kris and Aude to continue their adventure.

Tanya and I stuck to the main road going down as our time was running out. We had a close call with a cow on the road as we came into Cagney Homestead that night. Free camping and swimming pool, nice meals and cheap cabins (if you don't feel like pitching a tent). There is also a nice airstrip next to the Gahn rail line, but no time to try it out.

The next afternoon I enjoyed another paramotor flight near Woomera and wasn't shot down by any test missiles. The museum there is worth a look, too.

We eventually hit the Great Ocean Road and cooler weather. Cape Otway, yet another place to go back to.

Bright was our final stop, and some beautiful weather greeted us. It was novel to paraglide with lots of other pilots again. The paramotor also got some more use, with some nice late afternoon flights with Brian.

All good things must come to an end, and it was time for some work to pay for the next little adventure.

Tanya was finally home after 10 weeks from what was meant to be only two.

So many places to go back to. So many kilometres covered but well worth it. Thanks to all who were part of it.

We are in the lucky country, get out and see it. Live and love life.



ELLEN'S EASTER

Eibhlin Fletcher

NICK AND I ARE ONE OF THOSE RARE COUPLES IN HANG GLIDING, WHERE EACH PARTNER FLIES. OUR 'SYSTEM' WORKED FINE FOR A LONG TIME. I WASN'T BIG IN TO LEAVING THE SECURITY OF THE 'KNOWN' BOTTOM LANDING FIELD, WHICH MEANT OF COURSE, THAT MY HUSBAND ALWAYS HAD A RETRIEVE DRIVER. HOWEVER, SEVERAL EVENTS OVER THE LAST 12 TO 18 MONTHS WERE TO HAVE SIGNIFICANT IMPLICATIONS ON OUR CO-DEPENDENCY SET UP. WE'D HAD OUR FIRST CHILD, ELLEN, AND WE HAD MOVED CONTINENTS FROM THE UNITED KINGDOM TO AUSTRALIA.

Nick and I made a promise to each other before the birth of Ellen (December 2003) that although she would change our lives forever, we would continue with our recreational activities. Hang gliding was still on the cards for both of us. Solutions were required for some important dilemmas though. Which one of us was going to look after Ellen and who would fly? Moving to Australia, where the landing paddocks are enormous compared to Europe's, also meant that the daunting task of landing out suddenly appeared achievable for me. So who would be the retrieve driver? Best of all, what if it was a mega day for thermals, who was going up?

As we hadn't been flying for a while, both of us went to Dynamic Flight for some coaching and refresher work. This proved to be an excellent set-up and more child-friendly than even the owner had imagined. Much to my husband's annoyance I used to spend every Wednesday at Dynamic Flight. Since

our move I still hadn't found employment and was getting quite used to being a stay-at-home mum! I would pack a lunch for Ellen, a box of toys, a mat and lots of drinks, sunscreen and a hat. Ellen, fortunately, really enjoys the outdoors and ambles quite happily from pilot to pilot and anywhere there is food and toys. Our time under the wing of Rohan Holtkamp at Dynamic Flight was gearing us up nicely for a trip to the Flatlands over Easter. Nick and I had heard so much about the hang gliding up there: the fun and friendly comp, the huge landing paddocks, and the fact that it was in the middle of nowhere. We have spent some time in "quiet" places before and have always found something to amuse us, so the voices of the veterans didn't dampen our enthusiasm.

Nick works away during the week sometimes, so Ellen and I picked him up from Tullamarine at 8:40pm on the Wednesday night. We tend to do our journeys at night, as there are fewer tantrums while Ellen sleeps. This meant we didn't get to fully appreciate the change that was taking place in the landscape as we went further and further into the north-western interior of Victoria. Our only clues were the longer and longer stretches between the towns, and the long straight roads with the odd bend every now and then. At 1:30am we arrived at our accommodation, the local motel-come-campsite, petrol station, laundry, shop and fast food joint (almost as good as Ireland for multi-tasking). The lights from the car bounced back off a very barren, dry earth, with a few trees for shelter.



Though setting-up is still a bit beyond young Ellen, sitting-up is no problem

Photo: Courtesy Eibhlin Fletcher



Sunrise the following morning was gorgeous. Nothing tops having what my husband calls a “fat boy’s” breakfast in an ethereal dawn sunrise. Although, Ellen naturally had her porridge first! The comp did not actually begin until the Friday, but we decided to get up there a day early to have some time to take in the local attractions. Five minutes was enough at the Mallee Bull, a huge red fibreglass animal in the centre of town. Ellen was happy not to go anywhere near it. We picnicked at the local swimming hole with some flies as hosts and did a shopping spree to Donald. That was it, morning over! Nick and I had never been anywhere like this. Remote, quiet, dusty, flat; so flat that in the distance it was hard to tell where the sky ended and the earth began.

As Thursday rolled on, the isolation of Birchip was slowly blown away with the dust as other pilots and families began to emerge from the afternoon sun in the campsite. Retirement to the pub was in order. One of the bonuses of travelling with children is that they are fantastic ice-breakers. Not a lot of people had their children or partners with them over Easter; quite a few were missing them. Ellen was benefiting from this, receiving lots of attention. However, it wasn’t long before talk turned to flying. I couldn’t wait to see 16 tow cars towing up pilots. We don’t have paddocks that big in Ireland! The most I had seen before were four strips at a free-flying exhibition in the UK.

A little incident with a tree a few weeks back saw me relegated to babysitter for the weekend, much to my husband’s joy. All dilemmas solved for now! I spent most of my time watching gliders and babysitting. Ellen got quite dusty every day that we were out, much to her amusement. She made good use of the dust, filling her boxes with it, using her bucket and spade, and eating it with her food every now and again despite my best efforts.

No one flew on the first day. The second day saw some people make it out of the HUGE paddock. Day three and four saw a lot more pilots make goal, including my husband. Someone on an Airborne Fun was shaming a lot of pilots on the fast ships. Turned out it was a chick, by the name of Helen. She spent a lot of time collecting awards on the last evening, including the fabulous Skypig trophy! And talk about suspect: the guy doing the scoring actually managed to win the comp outright! It was fantastic to see so many people achieve personal bests, including my husband, and in such an encouraging and fun atmosphere.

Birchip has been in the news a lot recently with the drought. Let me tell you that the countryside has a rare, quiet, serene
September 2005



Ellen and Eibhlín Fletcher

Photo: Courtesy Nick Fletcher

beauty about it. And apparently the salt lake was a wonder to behold, according to all the pilots. My husband raved about it: a hypnotic, beautiful, white and purple dazzling mass, mesmerising one pilot so much that he over shot goal by five kilometres. Hopefully next year I’ll see a glimpse of its charm.

Birchip may be an isolated community in the middle of nowhere, but they opened their doors to us, worked throughout the Easter break to feed and water (or, ahem, beer) us, and as incredible as it seemed to us, the farmer donated the use of his paddock. Ellen became a hit with the locals; she was chosen to do the Easter draw in the pub. The comp had a fantastic atmosphere with loads of prizes. We loved the gossip box and quite easily followed all the piss-taking despite only being in Australia for six months. For those of you with families, even the kids seem to enjoy themselves with the freedom to run wild safely all day – oh, and find an

Easter egg or two!

Having a child doesn’t make you less daring or more conservative as a pilot. It has the advantage of making you want to practice until you get things right, like landings and launches. It makes you check your glider thoroughly before flying and repack your parachute every six months. I found that when I returned to hang gliding following Ellen’s birth that it wasn’t quite like riding a bike, and when things go wrong, the consequences were more severe. Most mothers couldn’t imagine how you could manage a family while having your own broken bones to mend! Could you ladies?

So the Fletchers move on to the next competition. The question as to who is going to get airborne and who will be the retrieve driver/babysitter will be raised. This time, however, we may have to toss a coin, or take it in turns. So far, the team (as parents rather than pilots) works!



HGFA General Manager's Report

Having your say in HGFA Management

HGFA Board nominations are now in and listed in this magazine for your review. Since there are more than nine nominations there will be a postal ballot to decide on the nine positions available. A postal ballot paper is also included in this magazine.

So why vote for any of these members to be a representative for you on the Board of your organisation? Voting is not only our right, but also our responsibility as members to ensure that the direction of our organisation is being undertaken by the managers that we choose. Through the mechanism of voting we are each able to participate in the selection of a panel of representatives that will provide oversight to the development of the respective activities within our organisation. Without placing your vote you have no choice but to put up with who you get in the management panel.

Typically voting is not a big thing among members. Typically elections are won by narrow margins because of the low number of votes sent in. This in itself proves that your vote does count and can have a big impact on who will represent you on the Board and how effective that Board will be in the management of the organisation. If other members are not submitting votes then your vote has all the more power to sway the selection to your favour.

So, take a few minutes and help decide the next directors of the HGFA. Review the nominees and make note of how they might contribute to the various activities, and necessary developments of our organisation. Mark your choices on the ballot paper and send it in to the office.

Budget

Life just never gets any cheaper. The end of financial year review of the 2004/05 HGFA budget shows that the cost of last year's operations has brought in a deficit of approx \$13,000. This is largely due to general increases in costs like postage, fuel, accommodations, rents, bank merchant fees, etc, the set-up of the new GM position, legal fees, and other small but collectively costly items which have all contributed to the overall cost of operations.

In all likelihood fees will have to be raised above the CPI level to compensate for these and upcoming costs. There is just no simple way to reduce the expenses that we, as an organisation, have. You can be assured that we are looking into whatever way we can to reduce the increase in costs, but to reduce costs in the longer term we will need to look at expending some dollars in the short term to

provide for the long term efficiencies where savings can be made. The Board will be looking over the budget and likely giving notice on any increase to fees in the next couple of months. The complete EOY financial statement will be available once it is returned from the independent auditor in October.

Hang Checks and Pre-Flights

Pre-flight checks, including hang checks for hang gliders, are essential safety precautions. Several instances have now been reported where pilots neglect undertaking these routines prior to launching into the air. The pre-flight check is one of the last safety precautions you carry out before engaging in flight. There is no sense in not undertaking this simple self preservation exercise. There are a few simple rules regarding pre-flight checks; ignoring them merely ensures a lessening of your time as a pilot.

1. *Do a pre-flight check before every flight. Missing even a single step can lead to serious accidents.*
2. *Work out a standard procedure to check over your aircraft, and follow it every time.*
3. *If you are interrupted during your pre-flight check, start over.*

For hang gliders, if the conditions, harness design and set-up area permit, use the method of attaching one's harness to the glider as part of glider assembly, and include its attachment in the general overall pre-flight inspection.

Coastal Soaring Myth – flying without locking your hang-point carabiner

I have been informed that coastal hang glider flyers sometimes leave their hang point carabiner undone as a safety precaution when flying over water. The myth has it that the pilot, if ditched in water, will more easily escape if the carabiner is not locked on. On hearing this I made some investigation into the merits of the report.

I spoke to several experienced hang glider pilots regarding the report, all of whom had similar disbelief in the merit of it. One such pilot I spoke with was Robert Lepre, who has been awarded recognition for his work on the particular subject of water landings. Rob informed me that his experiments concluded the following points:

1. *The average time for a hang glider to stay afloat once ditched in the water was three minutes. This may vary somewhat with swell, wing size and method and force of impact.*
2. *A pilot wrapped in their harness under the wing is unable to twist, reach up and*

disengage themselves from the hang point even if the carabiner is unlocked.

3. *The best thing a pilot can do in this situation is to unzip from the harness, reach up and unzip the centre zipper of the wing thereby accessing the air pocket that lies between the wing surfaces.*
4. *Once the pilot has gained breath and composure they can sort out what to do next.*

Conclusion: there is no safety benefit from having an unlocked carabiner for purposes of flying over water, but there is great potential for disaster if anything should happen which would cause the pilot to disengage from the hang glider frame due to an unlocked carabiner during flight. Always lock your hang point carabiner whether flying inland or on the coast!

Cross-country Microlight Flying

Section 6.1.6 of the Operations Manual refers to Cross-country Operations – Weightshift Microlights. It states the following:

No HGFA pilot certificate holder shall act as pilot in command of a weightshift microlight:

- (a) *at a distance greater than 25 nautical miles from the airfield where the aircraft is normally operated... Unless he or she is the holder of a valid WM Cross-country Endorsement; or flight training exercises are being conducted under the supervision and control of a CFI.*

I have my pilot certificate and I want to fly my aircraft. I want to fly my aircraft from some other location than where I trained. What then is meant by "where the aircraft is normally operated?"

The rule intends that:

- (a) *until you are endorsed to fly cross-country your normal place of operation would be the airfield where you trained. Because you have received your training at that airfield your normal operations will have been done at that airfield.*
- (b) *You are not entitled to operate your aircraft beyond 25 nautical miles from that airfield until you receive your cross-country endorsement.*

This rule does not provide for the ability to launch from one place and land 25 nautical miles distance from that place and then launch again to fly a further 25 nautical miles. Nor does it provide for the non cross-country endorsed pilot to trailer their aircraft to a temporary location in order to fly 25 nautical miles from that location. The intent of the rule is to ensure that certified pilots gain some training in cross-country navigation and airfield operations other than their training

airfield before they venture off to fly into unfamiliar locations.

So what about the pilot who has gained a WM pilot certification, does not have a cross-country endorsement, but is now flying in an area that is not their original training location?

Technically they are breaking the rule and should obtain the cross-country endorsement as soon as possible. Normal operations from a location other than the training area should be discussed with the training CFI or Operations Manager.

The cross-country endorsement requires five hours of in-flight cross-country navigation, four of those hours under direct instruction and the remaining one hour as solo pilot in command. It also requires the pass of a written examination. Neither of these requirements are arduous and can be cross credited if the pilot holds an RAAus cross-country endorsement or holds a private pilot license.

The Illusive Generic Waiver

We are a step closer to the generic waiver. I have recently received a further copy of the waiver form and have forwarded it on for a final independent legal review. This should see the waiver cleared for implementation in the near future. Hopefully within the month we will be in a position to offer it to instructors and passenger carriers as a standard across the organisation.

Changes to Operations at Non-Towered Aerodromes

Please review the HGFA News item in this Soaring publication regarding changes to operations at non-towered aerodromes. It refers you to changes that will be coming into effect in November 2005. A website for initial preview is given in this news item and further information will be published in the next issue of *Soaring Australia*, once further developments from DOTARS have been finalised.

Accident Reports

The past month has been very quiet, with no more than the single incident report below. In the absence of more reports I would like to share with you a recent experience where I got caught out by end of day katabatics and ended up landing on the slope of a small sea cliff rather than back at the landing area. I launched at about 4:30pm in the afternoon, keen to get one more flight in for the day. The wind was still blowing up over the sea cliffs and felt like it had earlier, lifting the glider easily above me. I ran off the launch fully expecting to rise and fly away. Quite the opposite happened,

and as I flew away from launch I began to sink rather rapidly. I turned and headed back to where I expected to gain some lift, enough to carry me to the safety of the landing area. There was no lift to be found and I continued to sink out at an increasing rate. Realising that I was not going to make a normal landing on the beach I flew over the low sloped cliffs until I finally touched down on the face of the cliff among the scrubby bushes. There was really nothing too drastic in this flight, but it brought home again the very quick changes that come on the end of a winter's day when the sun sinks low and the evening air chills to flow down the slope even when above the cliffs on launch it still seems flyable. Think again about what time is "too late" for launch on a winter afternoon and remember the glide is not likely to be there for any distant landings.

Number 1

Pilot: Restricted

Experience: 5 hrs total with 2 hrs last 90 days

Aircraft type: Paraglider

Pilot injury: Nil

Bystander injury: Nil

Aircraft damage: Leading edge and upper surface damage

Location: Inland

Conditions: Headwind 10kt, nil turbulence

Description:

Pilot was new to the site and new to hill soaring. Pilot ridge soared for approximately 15 minutes then dropped out of the lift zone. The pilot flew close to the hill in an attempt to scratch back up, but flew into an area where there was no possibility to turn out from the hill due to trees on a small ridge line. An attempt was made to land across slope but the glider hooked onto a tree branch just as landing, damaging the glider but causing no injury to the pilot. Comment: The correct action, once lift had been lost, would have been to head for the landing zone instead of trying to prolong the flight. The pilot demonstrated inexperience and over confidence when attempting to pilot the aircraft around the ridge face once the effective lift had been lost. Pilot was debriefed regarding this incident and now understands the need to give more clearance from the ridge when soaring.

HGFA GENERAL MANAGER

Chris Fogg

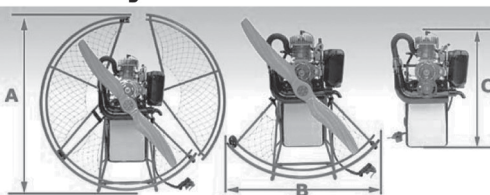
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Contact Addresses

GFA

NSW Gliding Association (NSWGA)

Australian Air League

NSW Gliding Wing, 1 Perry St,
Kings Langley NSW 2147.

Bathurst Soaring Club

PO Box 1682, Bathurst NSW 2795.

Byron Gliding Club

PO Box 815, Byron Bay NSW 2481,
02 66847627, 0428 847642.

Byron Soaring Centre & Aeroclub

PO Box 549, Byron Bay NSW 2481
02 66844244.

Canberra Gliding Club

PO Box 1130, Canberra City ACT 2601,
02 64523994, 0428 523994.

Central Coast Soaring Club

PO Box 1323, Gosford South NSW 2250, 02
49772740.

Cudgegong Soaring Pty Ltd

PO Box 352, Frenchs Forest NSW 1640,
02 94522777, 02 94530777.

Forbes Soaring & Aero Club

PO Box 267, Forbes NSW 2871,
02 68523845.

Goulburn Gliding Group

57 Munro Rd, Queanbeyan NSW 2620.

Grafton Gliding Club

16 Fuller St, Mullaway NSW 2456,
Sec: Bob King, 02 66541638 (h), 040
388551, <kingb@coffscs.nsw.edu.au>.

Greenethorpe Gliding Club

Weerona Young Rd, Grenfell NSW 2810,
02 63431375, 02 63431375.

Harden Gliding Club

78 Badenoch Crs, Evatt ACT 2617, 02
62585554, 02 62578280, 0418 670291, Sec:
Richard Hart 02 62585554.

Hunter Valley Gliding Club

PO Box 9, Newcastle NSW 2300.

Lake Keepit Soaring Club

PO Box 152S, South Tamworth NSW 2340,
02 67697514, 02 67697640.

Leeton Gliding Club

PO Box 607, Leeton NSW 2705,
02 69536970.

Narramine Gliding Club

PO Box 240, Narramine NSW 2821,
02 68891229, 02 68892733.

NSW AIRTC Gliding Club

41 Simpson Ave, Forest Hill NSW 2651,
02 69227526.

NSW Police Gliding Club

27 Bourne St, Wentworth Falls NSW 2782,
0427 592744.

RAAF Richmond Gliding Club

RAAF Base, Richmond NSW 2755.

RAAF Williamstown Gliding Club

C/o Mr AJ Lee, 10 Federation Dr., Medowie
NSW 2318.

Royal Australian Naval

Gliding Association

PO Box A37, Naval Air Base, Nowra
NSW 2540.

Scouts NSW Air Activities Gliding Wing

RG (Bob) Balfour, 80 Malvern St, Panania
NSW 2213, 02 97735648 (h), 02 9695
1100 (w), <rbalfour@tpg.com.au>.

Soar Narramine Pty Ltd

PO Box 56, Narramine NSW 2821,
02 68891856, 02 68892488.

Southern Cross Gliding Club

PO Box 132, Camden NSW 2570,
02 46558882.

Summerland Gliding Club

PO Box 820, Lismore NSW 2480,
Sec: David Wright, 02 6621 6495 (w),
<wrights@nor.com.au>

Sydney Gliding Inc. (Concordia GC)

PO Box 633, Camden NSW 2570,
0412 145144.

Temora Gliding Club

PO Box 206, Temora NSW 2666,
02 69772733.

Wee Waa Gliding Club

(formerly Warrumbungle GC) PO Box 586,
Wee Waa NSW 2388, 02 67954333.

Queensland Soaring Association (QSA)

Boonah Gliding Club

PO Box 107, Boonah QLD 4310,
07 54632630.

Bundaberg Soaring Club

PO Box 211, Bundaberg QLD 4670,
07 41553158.

Caboolture Gliding Club

PO Box 920, Caboolture QLD 4510,
0418 713903.

Central Queensland Gliding Club

PO Box 953, Rockhampton QLD 4700,
07 49371381.

Darling Downs Soaring Club

PO Box 584, Toowoomba QLD 4350,
07 46637140.

Gympie Gliding Club

PO Box 103, Gympie QLD 4570,
07 54867247.

Kingaroy Soaring Club

PO Box 91, Kingaroy QLD 4610,
07 41622191.

Moura Gliding Club

PO Box 92, Moura QLD 4718,
07 49973265.

North Queensland Soaring Centre

PO Box 1743, Aitkenville QLD 4814.

No. 229 Squadron Australian

Air Force Cadets

3 Hedlow Court, Carindale QLD 4152,
07 33989745, 0148 984752.

Southern Downs Aero & Soaring Club

PO Box 144, Warwick QLD 4370,
07 38923473.

Tarwan Soaring

PO Box 34, Wandoo QLD 4419,
07 46274080.

SA Gliding Association (SAGA)

Adelaide Hills Soaring Group

PO Box 1, Bridgewater SA 5155.

Adelaide Soaring Club

PO Box 94, Gawler SA 5118, 08 85221877,
08 85223177.

Adelaide University Gliding Club

Adelaide Uni Sports Association,
the University of Adelaide, SA 5005, 0412
870963.

Air Cadet Gliding Club

PO Box 2000, Salisbury SA 5108.

Alice Springs Gliding Club

PO Box 356, Alice Springs NT 0871,
08 89526384.

Balaklava Gliding Club

PO Box 257, Balaklava SA 5461,
08 88645062.

Barossa Valley Gliding Club

PO Box 123, Stonefield via Truro
SA 5356, 08 85640240.

Bordertown Keith Gliding Club

PO Box 377, Bordertown SA 5268.

Millicent Gliding Club

PO Box 194, Millicent SA 5280.

Murray Bridge Gliding Club

PO Box 1277, Victor Harbor SA 5211.

Northern Australian Gliding Club

PO Box 38889, Winnellie NT 0821.

Port Augusta Gliding Club

PO Box 272, Port Augusta SA 5700,
08 86436228.

Renmark Gliding Club

PO Box 450, Renmark SA 5341,
ph/fax 08 85951422, mob 0417890215.

Scout Gliding Club

22 Burford Crescent, Redwood Park
SA 5097.

Waikerie Gliding Club

PO Box 320, Waikerie SA 5330,
08 85412644, 08 85412761.

Whyalla Gliding Club

PO Box 556 Whyalla SA 5351
08 86452619, 0413 876642.

Victorian Soaring Association (VSA)

Albury Corowa Gliding Club

PO Box 620, Wodonga VIC 3689.

Beaufort Gliding Club

116 Tennyson St, Elwood VIC 3184.

Bendigo Gliding Club

62 Lawson St, Bendigo VIC 3550.

Corangamite Soaring Club

Kurweeton, Derrinallum VIC 3325.

Geelong Gliding Club

PO Box 197, Bacchus Marsh VIC 3340.

Gliding Club of Northern Tasmania

58 Hales Street, Wynyard TAS 7325,
03 64422108.

Gliding Club of Victoria

PO Box 46, Benalla VIC 3672, 03 5762
1058, 03 57625599.

Grampians Soaring Club

PO Box 468, Ararat VIC 3377,
03 53524938.

Latrobe Valley Gliding Club

PO Box 625, Morwell VIC 3840.

Mangalore Gliding Club

PO Box 80, Avenel VIC 3664.

Mount Beauty Gliding Club

44 Roper St, Mount Beauty VIC 3699.

Murray Valley Soaring Club Ltd

PO Box 403, Corowa NSW 2646.

RAAF East Sale Gliding Club

C/o Gary Mason, 9 Weir St, Sale VIC 3850.

Soaring Club of Tasmania

C/o Bruce Thompson, 34 Clinton Rd,
Geilston Bay TAS 7015, 03 62552191 (h),
03 62252561 (CFI).

South Gippsland Gliding Club

PO Box 475, Leongatha VIC 3953.

Sportavia Soaring

PO Box 78, Tocumwal NSW 2714,
03 58742063.

Sunraysia Gliding Club

PO Box 647, Mildura VIC 3500.

Swan Hill Gliding Club

PO Box 160, Nyah VIC 3594.

Tumbarumba Gliding Club

Mundaroo, Tumbarumba NSW 2653.

Victorian Motorless Flight Group

(Operates out of Bacchus Marsh aerodrome)
GPO Box 1096J, Melbourne VIC 3001, 0402
281928, 03 98486473.

Wagga Wagga Gliding Club

25 Beauty Point Ave, Wagga Wagga
NSW 2650, 0427 205624.

Wimmera Soaring Club

PO Box 158, Horsham VIC 3402.

WA Gliding Association (WAGA)

Beverley Soaring Society

PO Box 136, Beverley WA 6304, 0407
385361.

Gliding Club of Western Australia

356 Abernethy Rd, Cloverdale WA 6105,
08 92774148, 0409 683159, 08 96351023.

Morawa Flying Club

PO Box 276, Morawa WA 6623.

Narrogin Gliding Club

PO Box 232, Narrogin WA 6312, 0407
088314 or 08 98817795 (weekends).

Stirlings Gliding Club

C/o Post Office, Lower King WA 6330.

WA Squadron Australian Air Force Cadets

Headquarters, RAAF Base, Pearce,
Bullsbrook WA 6084, 08 95717800,
08 95717877.

HGFA

All correspondence, including changes
of address, membership renewals, short
term memberships, rating forms and other
administrative matters should be sent to:

HGFA National Office

PO Box 157, Hallidays Point NSW 2430. Ph:
02 6559 2713, fax: 02 6559 3830, <office@
hgfa.asn.au>.

HGFA General Manager

Chris Fogg, PO Box 258, Helensburgh
NSW 2508, ph/fax 02 4294 9300, 0417
766356, <general.manager@hgfa.asn.au>.

Information about site ratings, sites and
other local matters, contact the appropri-
ate State associations, region or club.

Board Members

Pres: Rohan Holtkamp RMB 236B Western
Highway, Trawalla VIC 3373, ph/fax: 03
53492845, 0409 678734, <President@
hgfa.asn.au>.

Vice-Pres: Rohan Grant 188 Bathurst St,
Hobart TAS 7000, 03 62334405 (h), fax: 03
62243598, <Rohan.Grant@hgfa.asn.au>.

Sec: Carla Pierce 33 Edmonds St,
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Trs: Stewart Dennis PO Box 118, Dickson
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158721, <Treasurer@hgfa.asn.au>.

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Polidano@hgfa.asn.au>.

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<Mark.Thompson@hgfa.asn.au>.

Microlight Public Relations

Paul Haines ph/fax: 02 42941031.

States & Regions

ACTHGPA

PO Box 3496, Manuka ACT 2603; Pres:
Steve Foggett 0417 313589, 02 62884351,
<steve.foggett@hotmail.com.au>; Sec:

September 2005

GFA MEMBERSHIP FEES 2005

Membership:	Normal	Family
NSW/QLD	\$175	\$139
Victoria	\$176	\$140
South Australia	\$179	\$143
Western Australia	\$180	\$144

Student membership:	Full	Family
NSW/QLD	\$108	\$72
Victoria	\$109	\$73
South Australia	\$112	\$76
Western Australia	\$113	\$77

Short-term membership:	1 Month*	3 Month*
NSW/QLD/VIC	\$48	\$60
South Australia	\$57	\$69
Western Australia	\$58	\$70

*Note: Once only purchase to Australian residents,
thereafter 12 month membership to be
purchased.

International postage for Soaring Australia
to be added to membership fees:

Zone	Country	Price
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Mark Elston 0428 480820, 02 62655718, <mark.elston@defence.gov.au>; Trs: Tony Davidson 02 62392019, <td@silknet.com>; Sites officer: Michael Porter, 0415 920444, <michael.porter@lilrd.com.au>; Committee: Nicolas Siefken, Barry Oliver, Stephen Harris; SSO: HG – Peter Dall, PG – Peter Bowyer 0412 486114. Meetings: 1st Thu/ mth 7:30pm Yamba Sports Club, Phillip.
Hang Gliding Association of WA
PO Box 146, Midland, WA 6936; <hgawa@hgfa.asn.au>. Admin: Rick Williams <hang_gliding@dodo.com.au>; V-Pres/Sec: Nigel Sparg <nsparg@bigpond.net.au>; HG Rep: Gavin Nichols <gknichol@tpg.com.au>; PG Rep: Gordon McCabe <sikacro@yahoo.com.au>; PM Rep: Mark Wild <mark@gastech.com.au>.

NSW Hang Gliding Association
Sec: Steve Hocking, 19 Gladswood Gardens, Double Bay NSW 2028, ph/fax: 02 9327 4025, <nswhga@s054.aone.net.au>.
North Queensland HG Association
12 Van Eldik Ave, Andergrove QLD 4740; Pres: Graeme Beplate 07 49552913, fax: 07 49555122, <sitework@mackay.net.au>; Sec/Trs: Ron Huxhagen 07 49552913, <sitework@bigpond.net.au>.

Queensland HG Association
Pres: Greg Hollands <greg.s.hollands@transport.qld.gov.au>, PO Box 61, Canungra Qld 4275 07 38448566.

South Australian HG Association
1 Sturt St, Adelaide SA 5000, ph: 08 8410 1391, fax: 08 82117115; Pres: Stuart McClure 08 82973452 (h), <stuart.mcclure@csiro.au>; Sec: Mark Tyminski 0411 414 816, <marknjan@senet.com.au>; Trs: Robert Woodward 08 82977532 (h), <rcob_woodward@ultimatepositioning.com>.

Tasmanian HG & PG Association
[www.thpa.net]. Pres: Rob Steane (Hobart PG pilot), 0418 146137, <president@thpa.net>; Sec/Trs: Stephen Clark (Hobart HG pilot), 0419 997550, <secretary@thpa.net>. Northern Tas info: Richard Long (Burnie PG pilot), 0438 593998, <northern@thpa.net>.

Victorian HG and PG Association
PO Box 157 Northcote VIC 3070, [www.vhpa.org.au]. Pres: Carolyn Dennis; Sec: Steve Norman; Trs: Lisa Charleston; SSO: Rob Van Der Klooster 03 52223019 (h). Site weather-boxes: Three Sisters 0409 864700, Buck-land Ridge 0407 356295, Mt Buffalo 03 57501515, Ben More 0417 112062.

Clubs

New South Wales

Blue Mountains HG Club Inc.
[www.bmhgc.org.au]. Pres: Neil Evans 02 47878027, <dream2@tpg.com.au>; Sec: Andrew Patterson 02 47395495, <scumbag@optusnet.com.au>; Trs: Allan Bush 02 47738037, <fairallan@pnc.com.au>; News-letter: Paul Hunt 02 96997720, 0404 851 876, <huntrp@ozemail.com.au>; Comps: Alan Bond 02 98995351, 0408 470544, <skybond@primus.com.au>; SOs: Allan Bush, Paul Hunt. Meetings: With Club Comp round last Sun/mth or contact above committee members.

Dusty Demons Hang Gliding Club
6 Miago Court, Ngunnawal, ACT 2913. Pres: Trent Brown 0427 557486, <trent.brown@anu.edu.au>; Sec: Peter Dall 0428 813746, <peter.dall@casa.com.au>; Trs: Dan Watters 0410 347801, <dan.watters@csiro.au>; SSO: Grant Heaney 02 48494516, 0419 681212, <grant@gastechdemos.com>; Editor: Kath Kelly 02 64561590, 0427 220764, <phase9@snowy.net.au>.

Hunter Skysailors

Pres: David Holgate 0410 112381, <david.holgate@hotmail.com>; V-Pres: Meg Butler 0408 446358; SSO: James Thompson 0418 686199, <james.b.t@hunterlink.net.au>. Meetings: last Tue/mth 7pm, Hexham Bowling Club.

Illawarra Hang Gliding Club Inc.

27a Paterson Rd, Coalcliff NSW 2508. Pres: Frank Chetcuti 0418 252221 <chetcuti1@bigpond.com>; Sec: John Parsons; SSO: Tim Causar 0418 433665 <timcau@ozemail.com.au>.

Kosciusko Alpine Paragliding Club

[www.homestead.com/kapc]; Pres: James Rylie 02 62359120, <rymicalago@netspeed.

com.au>; Sec: Alex Johnson 0411 748713.

Manilla SkySailors Club Inc.

PO Box 1, Manilla 2346, [www.FlyManilla.com]. Pres: Brian Shepard 0401627830; V-Pres: Suzy Smith 02 6785 6545; Sec/Trs: JJ Bastion 0427 161504; SSO (HG): Patrick Lenders 02 67783484; SSO (PG): Godfrey Wenness 02 67856545, SSO (Towing): Rhett Rockman 0428 428962; Trikes: Will Ewig 02 67697771.

Mid North Coast HG and PG Club

Pres: Nigel Lelean 0419 442597, <clean@smartchat.net.au>; SSO: Jason Turner 0419 997196, <jasonflys@hotmail.com>.

Newcastle Hang Gliding Club

PO Box 64 Broadmeadow NSW 2292; [www.nhgc.asn.au], <fly@nhgc.asn.au>. Pres: Mick Hurley 02 49432903; V-Pres: Matt Olive 02 49436791; Sec: Simon Ross 02 49447915, 0407 528966; Trs: Monica Barrett 0425 847 207; SSOs: Tony Barton (coastal) 0412 607 815, John O'Donohue (inland) 0419 765715, Alaric Giles (inland) 02 49430674, James Thompson (PG) 0418 686199; Newsletter: David Stafford 02 49215832 <editor@nhgc.asn.au>. Meetings: Last Wed/mth 7:30pm South Newcastle RLC, Llewellyn St, Merewether.

Northern Beaches HG Club

Pres: Wayne Fitzgerald 02 99827094; Sec: Brian Clarke 0418 280407, <trincott@bigpond.com>; Trs: Jim Gaal 0414 799822, <jimg@acay.com.au>; SSO (HG): Glen Salmon 02 99180091; Wayne Fitzgerald 02 9982 7094; SSO (PG): Wayne Fitzgerald 02 9982 7094. Meetings: 1st Tue/mth 7pm Mona Vale Bowling Club.

North Rivers HG and PG Club

PO Box 126, Byron Bay NSW 2481, [http://bbhgc.tripod.com/]. Pres: Eddie Gray 02 66841795, <edgrey@linknet.com.au>; Vice-Pres: Maggie Clark 0404 263524; Sec: Mick Mackender 0414 867820.

Stanwell Park HG and PG Club

PO Box 258 Helensburgh NSW 2508; Pres: Chris Fogg 0412 904800, <fogg@idx.com.au>; Trs: Adrian Le Gras; Sec: Scott Zwanen-beek <scottz@internode.on.net>; SSO: Tony Armstrong <tony@hangglideoz.com.au>, 02 42949999.

Sydney Hang Gliding Club

Pres: Bruce Wynne 0417 467695, <bwynne@bigpond.net.au>; Trs: John Selby 02 9344 7932, <johnselby@idx.com.au>; Sec: Steve Hocking 02 93274025, <nswhga@s054.aone.net.au>; SOs: Bruce Wynne, Doug Sole; SSO: Ken Stothard. Meetings: Monthly 7:30pm Endeavour Hotel, Botany.

Northern Territory

Alice Springs HG and PG Club

Pres: Ricky Jones 08 89551088, 0402 805 099, <paragliding02@austarnet.com.au>. Please contact for paramotoring, PG ridge soaring & thermal flying.

Queensland

Caboofure Microlight Club

50 Oak Place, Mackenzie QLD 4156. Pres: Derek Tremain 07 33957563, <derekjo@gil.com.au>; Sec: John Cresswell 07 34203254, <crezzj@lineone.net>; SO: Graham Roberts 07 32676662, <trike@tpg.com.au>

Cairns Hang Gliding Club

Pres: Russell Krautz <krautzr1@yahoo.com.au>; V-Pres: Joe Reyes 07 40555553, <reyes@ledanet.com.au>; Sec: Lance Keough 07 40912117, 31 Holm St, Atherton QLD 4883; Trs: Nev Akers 07 40532586, <nevjoy@ozemail.com.au>.

Canungra Hang Gliding Club Inc.

PO Box 41, Canungra QLD 4275; [www.chgc.asn.au]. Pres: Brandon O'Donnell 07 3399 9850, 0416 089889, <president@chgc.asn.au>; V-Pres: Raef McKay 0408 994104, <vicepresident@chgc.asn.au>; Sec: Phil Hystek 07 55434000 (w), <secretary@chgc.asn.au>; Trs: Cameron McNeill 0419 706326, <treasurer@chgc.asn.au>; Gen. Exec. Member: Greg Hollands 07 32534239 (w), 07 3844 8566 (h), <gem@chgc.asn.au>; SSO PG: Phil Hystek 07 55434000 (h), 0418 155317, <sso@chgc.asn.au>; Senior SO (HG): Ken Hill 0418 188655, <sso@chgc.asn.au>.

Central Queensland Skyriders Inc.

915 Yeppoon Rd Iron Pot Qld 4701. Pres: Bob Pizzey 07 49387607; Sec: James Lowe 07

ALL CLUBS PLEASE CHECK DETAILS IN THIS SECTION CAREFULLY

Could all Clubs please ensure they maintain the correct and current details of their Executive Committees and contacts here in the magazine. Specific attention is directed to the listing of SSOs and SOs for the Clubs. Please ALL CLUBS and nominated Senior SOs and SOs confirm ALL SSO and SO appointments with the HGFA Office <office@hgfa.asn.au> to ensure that those holding these appointments have it listed on the Membership Database and can receive notices and correspondence as required. Appointment of these officers is required to be endorsed by Clubs in writing on the appropriate forms. Sometime in the future if confirmation is not received, those listed in the Database where no current forms or confirmation is held, the appointment will be taken as having expired.

General Manager, HGFA

49309298 (w), 07 49363836 (h); Trs: Adrienne Wall 07 49362699; SSO: Alister Dixon 49861984; Towing Biloela: Paul Barry 07 49922865, <prbarr@tpg.com.au>.

Conondale Cross-Country Flyers Inc.

[www.entrypoint.to/conondale-x-country-flyers]. Pres: Peter Buch 07 54352421, <buchy9@bigpond.com>; V-Pres/SSO (PG): Graham Sutherland 07 54935882, <grahamsuth@optusnet.com.au>; Sec: Sue Buch, 531 Balmoral Rd, Maleny QLD 4552, 07 54352421, <sbuch@bigpond.net.au>; Trs: Kim Hodson 07 33541910, <khod@samford.net>; SSO (HG): Russell Groves 07 54450084.

Dalby Hang Gliding Club

PO Box 107, Dalby QLD 4405; [www.hgfa.asn.au/-dhgc]. Pres: Daron Hodder 0413 515160, <dhodder@alpanel.com.au>; Sec: Regan Kowald 0418 729456, <rkowald@centrepoinfinance.com.au>; Trs: Don Cramer 0409 699115, <don@cramer.com.au>; SSO: Jason Reid, 0424 293922, <jasonr@gleda.com.au>; SO: Rod Flockhart, 0412 882639, <flockhartrod@hotmail.com>.

Sunshine Coast Hang Gliding Club

PO Box 227, Rainbow Beach QLD 4581; <intheair@ozemail.com.au>. Pres: Geoffrey Cole 0408 420808, 07 54554661 (h); Sec/SSO (PG): Jean-Luc Lejaille, 0418 754157, <rainbow_flyer@hotmail.com.au>; Trs: Gary Allan 0417 756878; SSO (HG): David Cookman 07 54498573.

Whitsundays HG Club

Pres: Graham Lee 07 49546726, <gdsrlree@hotmail.com>; Sec/Trs: Ron Huxhagen 07 49552913, fax: 07 49555122, <sitework@bigpond.net.au>.

Tasmania

Tasmanian HG&PG Ass. (see States & Regions)

Victoria

Dynasoarers Hang Gliding Club

Pres: Darren Brown 03 93971233 (w), fax: 03 93974566, <dbrown@bmlegal.com.au>; Sec: Dale Appleton 0408 382635; Trs: Greg Holt 0418 516058; SSO: Rob Van Der Klooster 03 52223019, 0408 335559; Publicity Officer: Harry Buckle 03 52214544, <monument@pipeline.com.au>. Meet-ings: 1st Fri/mth, venue see: [vhpa.org.au/dyna].

Melbourne Hang Gliding Club Inc.

PO Box 8057, Camberwell North VIC 3124; [www.hgfa.asn.au/~melbourne/], <melbourne@hgfa.asn.au>. Pres: Hugh Alexander 03 97101214 (h), 0417 355578, <wurundjeri.lane@bigpond.com>; Sec/VHPA rep: Steven Ross 0410 600595, <steven@pchelpathome.com.au>; Trs: Leif Gorander 03 97080136 (h); 0407 545052, <leif.gorander@varianinc.com>; SSO: Peter Batcher 03 97353095 (h), <pbatch@netspace.net.au>. Meetings: 3rd Wed/mth 6:30pm Palace Hotel, 893 Burke Rd, Camberwell.

North East Victoria HG Club Inc.

Pres: Heather Mull 0437 134573, <hnull@bigpond.net.au>; V-Pres/Trs: Isla Christian 0408 362277, <islapeter@bigpond.com>; Sec: Brian Webb 0417 530972, <brianmwebb@bigpond.com>; Mship: Simon Taylor 0404 942933, <staylor@cs.mu.oz.au>; Comps: Karl Texler 0428 385144, <brightvt@netc.net.au>; Comms: Geoff Wong 0403 441147, <geoff@zikzak.net>; Committee: Vivian Williams 0409 505812, <viv@forwardsixty.com>. Meetings: [www.hgfa.asn.au/~nevhc/].

Sky High Paragliding Club

[www.skyhighparagliding.org]; Pres: Malcolm Marker <president@skyhighparagliding.org>; V-Pres: Peter Whitworth <vicepresident@skyhighparagliding.org>; Trs: Stuart Banks <membership@skyhighparagliding.org>; Sec: Leanne Kennedy <secretary@skyhighparagliding.org>; Sebastian Stoffels, <webmaster@skyhighparagliding.org>; Linda Wooley, <merchandise@skyhighparagliding.org>; APN Editor: Julie Sheard <editor@

skyhighparagliding.org>. Meetings: 1st Wed/mth 8pm Retreat Hotel, 226 Nicholson St, Abbotsford.

Southern Microlight Club

[http://home.vicnet.net.au/~stclub/]. Pres: Kel Glare 03 94395920 (h), 0421 060706; V-Pres: Mark Howard 03 97511480; Sec: Dianne Pierpoint 03 9735278; 0429 938426. Newsletter: Barry Wood <jbwood@bigpond.net.au>, Michael Rose <mrose3@bigpond.net.au>. Meetings: 2nd Tue/mth 8pm Manningham Club, 1 Thompsons Rd, Bulleen.

Western Victorian Hang Gliding Club

PO Box 92, Beaufort VIC 3373, [www.vhpa.org/vwhgc]. Pres: Glenn Bachelor 0419 324 730, <GlennB@pocketmail.com.au>; V-Pres: Mark O'Keefe 0412 473724, <mokeefe@bigpond.net.au>; Trs: Stuart Coad 0408 524862, <scoad@edlyn.com.au>; Sec: Lisa Miller, 0407 319397, <lisam130@hotmail.com>; Web/Database: Damian Georgiou 0413 677090, <damiand@bachomp.net>; SSO: Rohan Holtkamp 0409 867834, <dynamiac@netconnect.com.au>; Paul Rundell 0418 348948. Meetings: Last Sat/mth, The Beaufort Hotel, Beaufort.

Western Australia

Albany HG & PG Club

Pres: R D Jones, 1/14 Lyndavale Dr, Alice Springs NT 0870, 08 89551088, 0402 805099; SSO: Simon Shuttleworth 0427 950556; Sec: John Middleweek 08 9841 2096, fax: 08 98412096.

Cloudbase Paragliding Club Inc.

334 Belmont Ave Kewdale WA 6105. Mes-sagebank 08 94875253; Pres: Nigel Sparg, <president@cloudbase.asn.au>, 0427 476629; V-Pres: Mark Wild, <vicepresident@cloudbase.asn.au>, 0411 423923; Trs: Colin Brown, <treasurer@cloudbase.asn.au>, 0407 700378; Sec: Lachlan Byrd, <secretary@cloudbase.asn.au>, 0439 922510; Committee <committee@cloudbase.asn.au>; Mike Allen 0408 947048; Gordon McCabe 0407 776462; Alain Latino 0408 099679; SSO: Gordon McCabe; SO: Mark Wild, Nigel Sparg. Meetings: 2nd Tue/mth, 7:30pm, The Windsor Hotel, 112 Mill Point Rd.

Goldfields Dust Devils Inc.

9 Broadarrow Rd, Kalgoorlie WA 6430. Pres: Richard Breyley <richard.breyley@harmonygold.com.au>, 0427 778202; Sec: Andrew Talmage <jodandrew@bigpond.com>, 0413 992960; Trs: Nick Holthouse <nich.holthou se@harmonygold.com.au>; SSO: Mark Stokoe <Mark.Stokoe@health.wa.gov.au>, 08 90911297.

Hill Flyers Club Inc

<hillflyers@dodo.com.au>; Pres: Rick Williams 0427 057961; Sec: Gary Bennett 0412 611680; Committee: Dave Longman 08 93859469, Mike Ipkendanz 08 9255 1397, Gavin Nicholls 0417 690386. Meetings held on site during club fly-ins, at either York, Toodyay or Seabird.

South West Microlight Club

Pres: Brian Watts 0407 552362; V-Pres: Don Wilson 08 97641007; Sec: Paul Coffey 08 97251161; CFI: Brendan Watts 0408 949004.

Western Soarers

<wswhgc@hgfa.asn.au>, PO Box 483, Mt Hawthorn WA 6915, [www.westernsoarers.com]. Pres: Mirek Genierowicz 0427 778 280, <mgenierow@bigpond.net.au>; V-Pres: Mark Wild 08 94098581, <mark@gastech.com.au>; Sec: Ben Griffith 08 94724068, <benandrobryn@aardvark.net.au>; Trs: Sun Nickerson 0401 135042, <Sunny@iinet.net.au>; SSO (HG): Shaun Wallace 0411 885178, <swallace@iprimus.com.au>; SSO (PG): Jules Sanderson 0405 089709, <airoz@speedlink.com.au>. Meetings: Last Tue/mth 7:30pm The Como, 241 Canning Hwy.

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GFA

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General

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Gliding Publications

AIRBORNE MAGAZINE: Covering all facets of Australian & New Zealand modelling. The best value modelling magazine. Now \$60pa for six issues. Plans & other special books available. PO Box 30, Tullamarine, VIC 3043.

AUSTRALIAN HOMEBUILT SAILPLANE ASSOCIATION: James Garay, 3 Magnolia Ave, Kings Park VIC 3021. Ph: 03 93673694, [www.geocities.com/capecanaveral/hangar/3510].

FREE FLIGHT: Bi-monthly journal of the Soaring Association of Canada. A lively record of the Canadian soaring scene & relevant international news & articles. \$US26 for one year, \$47 for two years, \$65 for three years. 107-1025 Richmond Rd Ottawa, Ontario K2B 8G8 Canada, email: <sac@sac.ca>.

NZ GLIDING KIWI: Official magazine of Gliding New Zealand. Edited by John Roake. Read world-wide with a great reputation for being first with the news. \$A52 pa. Personal cheques or credit cards accepted. Write: NZ Gliding Kiwi, 79 Fifth Avenue, Tauranga, New Zealand. Email: <gk@johnroake.com>.

SAILPLANE & GLIDING: The only authoritative British magazine devoted entirely to gliding. 52 A4 pages of fascinating material & pictures with colour. Available from the British Gliding Association, Kimberley House, Vaughan Way, Leicester, England. Annual subscription for six copies £17.50.

SAILPLANE BUILDER: Monthly magazine of the Sailplane Homebuilders Association. \$US29 (airmail \$US46) to 21100 Angel St, Tehachapi, CA 93561 USA.

SOARING: Official monthly journal of the Soaring Society of America Incl., PO Box 2100, Hobbs, NM 88241 USA. Foreign subscription rates (annually): \$US43 surface delivery; \$US68 premium delivery.

TECHNICAL SOARING/OSTIV: Quarterly publication of SSA containing OSTIV & other technical papers. Annual subscription: 70DM. OSTIV c/o DFVLR, D82234 Wessling, Germany.

VINTAGE TIMES: Official newsletter of Vintage Gliders Australia, edited by David & Jenne Goldsmith, PO Box 577, Gisborne VIC 3437, Membership \$15 pa.



HGFA

Classifieds are free of charge to HGFA members up to a maximum of 40 words. One classified per person per issue will be accepted.

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PO Box 157, Hallidays Point NSW 2340. The deadline is 25th of the month, for publication five weeks hence. Submitted classifieds will run for one issue. For consecutive publication, re-submission of the classified must be made, no advance bookings. When submitting a classified remember to include your contact details (for prospective buyers), your HGFA membership number (for verification) and the State under which you would like the classified placed. (Note that the above does not apply to commercial operators. Instructors may place multiple classified entries, but will be charged at usual advertising rates.)

All aircraft should be suitable for the intended use; this includes the skill level required for the specific aircraft being reflective of the Pilot's actual Rating and experience. All members must adhere to the maintenance requirements as contained in section 9 of the Operations Manual and as provided by manufacturers. Second hand equipment should always be inspected by an independent person, an instructor wherever possible. Advice should be sort as to the cond, airworthiness and suitability of the aircraft. It should include examination of maintenance logs for the aircraft. It is unethical and a legally volatile situation for individuals to provide aircraft which are unsuitable for the skill level of the pilot, or aircraft that are unairworthy in any way.

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What's on	BBQ Saturday night, Hang Gliding, Aero Tow, Car tow
Trike Flying Contacts	Dynamic Flight 0353492845 (Paul, Rohan & Sandra)
Date	29 - 30 Oct 05
Location	Porpunkah Airstrip
Local Hosts	Microlight CFIs Steve & Lisa Ruffles, Gregg Withers
What's on	BBQ Saturday night, Trike Flying Aero Tow Hang Gliding.
Contacts	Bright Microlights 0357501555 (Greg) Eagle School of Microlighting 0357501175. (Steve & Lisa)

Some of our activities subject to change. Check the Airborne Website often at:

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