



TUESDAY 30th MAY - GLADIATOR MOVIE NIGHT

8:30 pm at Norwood Cinema. Drinks & Dinner at Finn Mac Cools (Norwood Hotel) at 7:00 pm.

An official publication of the Adelaide University Gliding Club Inc.

PRESIDENT'S RAVINGS

Hi everyone.

So far things have been progressing well within the club. The club's new aircraft, Whisky Victor Alpha, a *Pik-20D* has been well received by all of the senior pilots that have an opportunity to fly it. I can personally testify to its pleasant handling and significantly better high-speed performance. I am sure others will experience its pleasures (and maybe even write about them) in due course. For those intermediate pilots, there will be a delay in conversions to the new glider while the instructors debate about the best way of converting pilots with no previous flap experience to the aircraft.

The ridge season has started very well this year. Most people who flew on the Queen's Birthday long weekend will testify to that (especially those who flew on the Sunday). Congratulations go to **Matt Fenn**, who achieved his Silver C with a 5-hour flight on the ridge. **Matt** also recently received his passenger-friend rating after being subjected to all of the nasty tricks that I could think of. He has already exercised his new rating by taking his girlfriend flying.

A lot of things have been happening up at the airfield recently. Notably, the clubhouse has two new fridges (which make a lot less noise than their predecessors), the clubhouse rainwater tank has been cleaned out and the clubhouse generally tidied and cleaned. Thanks go to **Justine Thompson** and **Kathryn Glancy** for all of their efforts. I ask that everyone make the effort to keep the clubhouse clean. One of the easiest ways of doing this during the winter is to take your shoes off before going into the clubhouse and not trudge mud everywhere.

Very soon further work will soon be done around the airfield. The most obvious of this will be the digging of the new foundations for the bunkhouse extension, the laying of crushed rock in the mud pit / car park in front of the club house and the delivery of a rainwater tank for the new hangar.

On an operational note, I ask that *everyone* (including instructors) phone **Matt** on a Thursday night to let him know if you are intending to come up on the following weekend. It saves a huge amount of organisational problems if he has an accurate idea of who and when.

I hope to see you all flying soon,

Anthony



EDITORIAL

Hello, and welcome to the much more timely May issue of Uni Gliding. I hope you're enjoying them, because if you aren't, then suddenly I'll have a lot more spare time.

Much good stuff has been happening in the club. The new *Pik-20* was flown on field and declared good. The Instructors' panel are being *very* thorough in their determination of its flight characteristics. It's thankless tasks like these that mark our instructors as special people, willing to put duty before all other considerations. Special thanks must go to the CFI, **David Conway**, for sacrificing time with his children to test-fly the *Pik*!

I find myself printing labels and mailing copies of the magazine to people I've not met. I come up to Lochiel regularly now, so this can only mean these people aren't. To those who have yet to come to Lochiel: Give it a go! You've already paid, you might as well get your money's worth. Winter is actually *good* weather for this club – with a strong westerly wind we get ridge lift, which means we can fly for hours on end.

I am continually pleased by how contributive (if that's not a word, it ought to be) people are feeling towards this magazine. I am beset with article ideas and in some cases, actual full-blown articles. Many more are promised. And this is good – keep it up! If you've ever had an idea for an article, let me know. Even if you don't write it, it may motivate me to write it myself.

I just hope I can keep this momentum throughout my entire term as editor. I may run out of flight-related Calvin & Hobbes cartoons to plagiarise, though.

The Month Of May On Field

Saturday 6th / Sunday 7th

Matt Fenn got a five-hour flight on the ridge. It was the first serious ridge day of the season!

Saturday 13th / Sunday 14th / Monday 15th

The *Pik* was flown at Lochiel for the first time ever. And the first flight was a good, long one, with **David Conway** at the controls. There was excellent ridge flying weather, with the only spoiling note being occasional rain clouds sweeping through. Much fun was had throughout the weekend, as **Dave Hichens** organised one of his famous BBQs and a roast chicken dinner for Sunday night!

Saturday 20th / Sunday 21st

Unfortunately on Saturday the winds, despite being the promised Westerlies, ended up being easterlies. And even when they were westerly, they were not enough to provide much lift. **Simon Hackett** got the longest flight in the *Pik*, and everyone else was stuck doing circuits, **Cathy Conway** not managing to escape the *Puchatek* all day. **Matt Fenn** took his girlfriend **Jane** on his first passenger flight; apparently she enjoyed her circuit so much she's threatening to come up to Lochiel again! Sunday was the day but I wasn't there. So I won't mention it. Evil aren't I.

You know you're an AUGC pilot when...

Written by *Brad Carletti, Scott Lewis, Dennis Medlow, Anthony Smith*

Yes, the promised list. The promised prize? Publication in this esteemed magazine, of course. What, did you think I'd actually spend money on something?

You know you're an AUGC pilot when...

- You don't know what a Terry-Towel Hat is.
- You re-enact Dawn Flight every time you fly the ridge.
- You fly with only one finger on top of the control stick.
- You have seen Dawn Flight 357 times and still think it is the best flying movie ever made.
- You think anyone over 35 is an old fart.
- You can easily diagnose and fix any winch problem in under 15 minutes.
- You run away very fast whenever you see **Redmond Quinn** anywhere near a LPG cylinder.
- You think a *Club Libelle* is a 'hot' glider.
- You fly in any sort of bad weather, just so that you can fly.
- You don't go to Lochiel for the weekend – you go to Adelaide during the week.
- You help clean the clubhouse but your home is a mess.
- Your two-year-old child loves the *Bergfalke*.
- **Dave Hichens** asks you for BBQ advice.
- You are **Dave Hichens**.
- **Bernard Eckey** tells you to stop gloating about your height gain and shut up.
- You do beat-ups in the pie cart.
- You fly circuits on ridge days for the rush of winch-launch.
- Your aircraft has colour-coded matching seat cushions with the aircraft registration sewn onto them.
- Your glider's trailer has custom rego plates matching your aircraft.
- You get your glider modified like a speedway car to make it really good at turning a certain way, for heavy thermalling.
- You transfer to Adelaide University to avoid paying redundant Sports Association fees.
- You have considered teaching a Bachelor's in Environmental Aeronautics at Adelaide University.
- You have taught a Bachelor's in Environmental Aeronautics at Adelaide University.
- You have taught a PhD in Environmental Aeronautics at Adelaide University
- You write a "You know you're an AUGC pilot when..." list.

You know you're an AUGC President when....

- You develop an obsession with wearing two sets of shoes.
- Your browser home page is set to www.bom.gov.au (Bureau of Meteorology)
- Your residential address is listed as "West Beach shed".

More to come next month!

THE FUSS ABOUT FLAPS

Written by *Anthony Smith*

With the arrival of the clubs first flapped aircraft, a *PIK-20D*, the club now needs to teach pilots about what flaps do and how to use them. So what is all the fuss about?

Flaps are on the trailing edge of the wing between the ailerons and the fuselage. Like ailerons, they allow the pilot to alter the shape of the airfoil by moving the trailing edge up or down and hence alter the amount of lift the wing can produce. But unlike ailerons, which move in opposite directions to each other, flaps move in the same direction. Why is this so good?

When we are flying slowly, we are mostly using the shape of the airfoil to produce lift. When we are flying fast, we are mostly using the speed of the air over the wings to produce lift. Hence if we can alter the shape of the airfoil in flight, we can optimise it for the speed we are flying at: high lift for low speed flight, low drag for high-speed flight. An airfoil without flaps is typically compromised somewhere between high lift and low drag.

Now for a little bit of mathematics: a typical airfoil without flaps eg. the Wortmann FX S02 like on the *Bergfalke* and *Puchatek*, has a maximum lift co-efficient of around 1.5; a typical flapped airfoil eg. the Wortmann FX67-K-170, like on the *PIK-20*, has a maximum lift co-efficient of around 1.7 with the flaps fully down. As a result, a flapped aircraft will need 12% less wing area (1.5 divided by 1.7) than an unflapped aircraft of the same weight, to have the same stall speed. This is a big saving in weight as well as drag (approximately half of a gliders drag is from the wings). But wait there's more!

At high speed, the flaps can be moved up (put into negative). This reduces the drag co-efficient of the airfoil. A flapped airfoil with the flaps in negative will have around two thirds of the drag co-efficient of a non-flapped airfoil at high speed. Not only does a flapped aircraft have less wing area to drag through the air at high speed, the airfoil has less shape-drag too. As a result a flapped glider will lose a lot less height (around 22% less) than a similar non-flapped glider when moving fast.

If flaps are so good, why aren't they on all gliders? For a start, flapped aircraft are a bit more complex, which means the aircraft is a bit harder to build and hence a bit more expensive. Obviously, to fly a flapped glider properly, you will need to change flap settings every time you change your speed. You need to set the flaps for take-off, often change them during different stages of take-off (especially aerotow with those long slow ground rolls), change them when you are thermalling, change them when you are cruising between thermals, set them for landing, change them after you touch down, etc etc etc. The pilot workload is a lot higher if you want to get the full advantage of the flaps.

What happens if I ignore the flaps and leave them in zero setting? Not a lot really. You can fly around quite normally at zero flaps. But, you won't be getting all of the performance out of the glider when you thermal or fly fast. The most important thing is that your stall speed will be higher and you will have to land a little faster.

REMINDERS: TUESDAY 30th MAY - GLADIATOR MOVIE NIGHT
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FLINDERS RANGES ORGANISATIONAL MEETING – JUNE 7TH.
Contact Cathy Conway for details closer to the date.

Operations Notes.

Stating the obvious, it is now winter. After a days worth of rain, the airfield will get very boggy and slippery. Whilst this can be fun, or at least mildly amusing (like trying to see how many full 360 degree spins you can get out of your car with the engine off), a number of rules will now apply on the airfield for muddy and slippery conditions:

- Don't drive directly at aircraft, cars or people. If you hit a slippery patch and can't stop, the results will be catastrophic when you slide straight into them (ask Redmond about the boot of his car one day).
- If you dig holes / ruts / doughnuts into the runway with your car or aircraft, **FILL THEM BACK IN!!** Don't let them set like that. It gets incredibly bumpy when you try to land on them after they have set and it may damage the aircraft's wheels.
- Leave a car at the front gate. It is really useful to tow the other ones out when it is time to go home. This is especially important if there is not a four-wheel drive on the airfield.
- Take care not to get other peoples cars full of mud. We rely on the goodwill of people to use their cars to tow aircraft around. Don't abuse this goodwill by trying to fill their footwells with half an inch of mud.
- Clean out the aircraft wheels at the end of each day! It is far easier to clean the mud out while it is still soft. If you leave it in there it will set like concrete and lock up the aircraft's wheel.

- Clean out the pie cart at the end of each day. The pie cart is often launch point's only refuge from sporadic rain.
- Keep the clubhouse interior clean. Take your shoes off at the door before you go inside (better still have an inside pair and an outside pair). No "ifs", no "buts", no "I am only going to just do this... ". If you do track mud into the clubhouse, clean it up after yourself.

THE DROP ZONE

Beware. It lurks, waiting.

The club recently purchased a new set of fridges. How was the executive committee to know that the fridges were *evil*?

A series of bizarre coincidences has been noticed in relation to these fridges. It seems they have created some sort of 'local gravitational anomaly', forcing objects out of the grips of people holding them for some nefarious purpose we cannot fathom.

On the weekend of the first flight of the Pik, items "dropped" in the Drop Zone included:

- A nearly full 2 Litre bottle of Coke (spot the stain!)
- A six-pack of Solo
- Various items of cutlery
- A half full bottle of Strongbow
- Apple strudel.

It is clear this must be stopped! We recommend using both hands to hold objects whilst in the Drop Zone, on the principle that if the Zone wants items on the ground, then we don't! Fight the spread of evil!

D.I. Aircraft the *Easy* Way!

By Brad Carletti

You've been partying all Saturday night, but you woke yourself up at some ungodly hour Sunday morning to haul yourself up to Lochiel. You want to get an aircraft up in the air before everyone just gives up entirely.

The aircraft was flown the day before, nothing nasty was put in the DI book – this is the sort of situation the **Inspired Daily Inspection Optical Technique** was created for.

The method is simple. Rather than root around in the structure of the aircraft, just use your eyes.

Bits – There should be no extra bits when the aircraft is pulled out of the hanger. The only exceptions are the ones painted bright red or yellow.

Ecology – There should be no animals or plants inside the cockpit.

Wings – There should be no less than and no more than two wings present. Wings are the big bits that come out the sides – the bits at the back don't count.

Tail – There should be no less than and no more than one tail present. Two tails are a sign of an impending Apocalypse and should be reported to the CFI and Airworthiness Officer immediately. CASA notification at your discretion.

Derek's Flight

Written By Brad Carletti

Concept by Derek Spencer

It was a typical ridge day. **Peter Temple** was instructing and I got my *Pik* of the aircraft. The winds were strong and we ZooMed across the gap, passing a few KROs.

Then a storm front blew in. We were cut off from Lochiel, "ET wants to go home!" I thought to myself in despair. We circled in buffeting ridge lift, and I started to feel a little QZ.

Then, at last, clear skies between us and Lochiel - but not for long, as more fog was quickly moving in to block us.

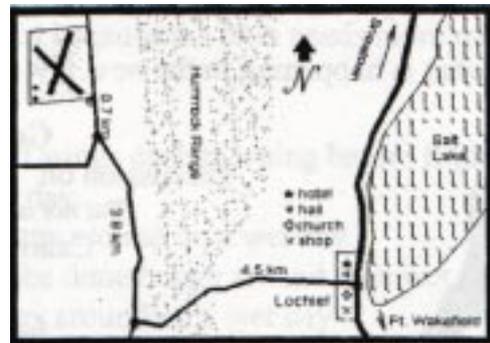
It was MI - Mission Impossible. Undeterred we WUZed through the gap, straight as an *Arrow*. The flight was TXing, but we eventually made it.

WEST BEACH

West Beach? What is West Beach? Well, it has nothing to do with McDonalds. It doesn't have a website. It's actually the club's aircraft and winch maintenance facility. At West Beach, the suburb.

It's a magical place where tired, unhappy gliders go and come back a few months later, happy and shiny and with new life breathed into them. How would you like to be a part of this wondrous process? Yes?

Well, just ring Anthony Smith on (08) 8393 3319 (or email at anthony.smith@adelaide.on.net) to let him know you intend to go up, and arrange a lift if need be. It usually operates on Monday and Tuesday evenings, 7:30ish. It's that simple! Do not send any money. It's free!



FLY, BE FREE!

Want to go flying this weekend? Just ring Matt Fenn on the Thursday before you, between 8:00pm and 10:00pm, on 0412 870 963. This is to make sure we can arrange instructors and transport for those needing lifts.

Lifts are available at the Adelaide University footbridge at 7:30am, from the Caltex Service station on Port Wakefield Rd, Bolivar at 8:00am, or from elsewhere by arrangement.

Remember to phone the contact person or you could be forgotten

Uni Gliding

If undelivered please return to
AUGC Inc.
c/o Sports Association
Adelaide University SA 5005