

February - March 2009



*Harry Medicott celebrating his 9th 1000km flight and Trevor West celebrating his first.
Their flights were made on Tuesday 6 January this year from Narromine.
Trevor's account of his flight is included in this issue.
Photos: Anne Elliot, GFA Sub Editor, Soaring Australia*

This newsletter is distributed by email to current Lake Keepit Soaring Club members, including recent Short Term Members. If others would like to receive this bi-monthly newsletter advise the Editor. Equally, if you are not a member or do not wish to receive it, email the Editor to take your name off the list.



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Editorial

Congratulations Harry on achieving your 9th 1000km flight, perhaps you have already done another one since! And congratulations Trevor on achieving your first 1000km flight. Trevor's description of his flight follows.

However **THE** task still remains to be achieved ... a 1000km flight returning to Keepit.

Black Hats

This edition contains a reprint of an article on **hyperthermia**, written five years ago by Dr Steve Markowski, a former Club member. Amongst other things he points out how dangerous it is to wear a black hat on the airfield on a hot day ... "try un-frying an egg" he says.

The article is well worth re-reading carefully.

Member Profile

Geoff Neely continues his excellent series 'Member Profile' this time as a result of an interview with Robin Walker.

Keepit Safari

The 2008 Keepit Safari happened ... really surprising after the bucketing rain and storms we had the two previous nights. It was fun as always, it was another adventure and it had its share of challenges; a write up is included later in this newsletter.

Ian Barraclough
Editor
(ian.barraclough@bigpond.com)

Keepit News

An email received by John Hoyer from Janina Galliani/Brown

Hi John

Yes there is a new addition to the family. I am surrounded by boys; even the dog is male (and a boofhead one at that!). Jackson is doing well; he was 10 weeks on Monday. Harrison has been a great big brother (so far); he is the first one to get up and go to Jackson when he cries.

I'm still flying. I was lucky to be offered a great full-time job as a first officer with Pionair Australia. I started in April and flew until I was 31 weeks pregnant (CASA reg). They are a great company, they have five Convairs, used for freight and charter. Most of the charter work is for mining companies. I have mainly been doing the freight runs they operate for TOLL ... Sydney-Melbourne-Launceston. It has been a great experience as most of the flying is Night IMC. I also had the opportunity to fly with Tom Payne as the Captain on a couple of shifts. Lake Keepit was well represented on the flight deck! Tom has now moved on to Qantas. I will be returning to work next week and am really looking forward to it.

All the best
Janina



Member Profile ... Robin Walker

by Geoff Neely

Robin Walker is keen to be part of the team. Whenever there are gliders to be pulled out, pushed in or retrieved ... or paving to be laid ... he is likely to be there. He was instrumental in obtaining the donation of pavers for the clubhouse.

He says that for the past six years gliding has been his life. He has returned to his love of gliding after a break and means to make the most of it.

It may be politically incorrect to ask why so many New Zealanders come to the West Island as they call it. In Walker's case chance played a part. After a divorce, Rob Walker wanted to glide in Australia but the money was not there. The tipping point came when he won a return fare and three weeks' holiday at a fundraising night. That was 22 years ago and the return ticket may be taken to have lapsed.

Rob was born at Hawera on the North Island of NZ. There was no family involvement in flying, no building of models, but his interest was sparked by family visits to air force displays at Tauranga (Australians will need a map). From the age of 16 he used to cycle 10km from home to the airport at Tauranga and eventually began power flying and did eight hours in Warrior and Air Tourer 115 (for those who might not remember, in 1987 NZ bought the rights to the Air Tourer designed by Henry Millcer in Melbourne and put into production by Mervyn Richardson's firm Victa).

Money became a factor again and flying ceased until he was able to begin training in K7 and K13, towed by DH82A Tiger Moth. Rob says it was generally hilly country but there were landing options. Power flying lost its attraction ... he felt that anybody could follow an engine and there speaks a true glider pilot. He saw gliding as challenging and different.



The airline fare that brought him to Australia was a blind prize auctioned at the end of the night and no one knew what the prize was to be. The projected three weeks gliding holiday stretched to 18 months and, not before visiting Narromine and Benalla, he settled in Adelaide and flew at Waikerie GC with Maurie Bradney and Keith Harrison.

Nothing competed with flying for Rob's interest but he had to give it up for 15 years during which he worked as factory manager for a tool company. In the meantime he worked on the money problem, developing properties in Adelaide. He says his stock market ventures did not do him any harm either.

In 2003 the travel bug bit again and Rob set out on a gliding tour to clubs from Southern Cross to Gympie. He had his first winch launch at Gympie and after nothing but aero-tow he did not like the winch. He appeared at LKSC with a travelling rig and looking for

a glider to buy. Since then as he says, “Flying has been my life.”

He has two diamonds on his gold badge. His longest flight was just over 700 km. Rob drove right round Australia with Robyn. When he sold his Adelaide house he bought a yacht and sailed the Whitsundays, a more attractive place in winter than Adelaide. One of his early jobs in NZ was selling yachts so he presumably knew which was the sharp and which the blunt end. He bought his present glider at Rockhampton.

Rob has maintained an interest in ballroom and Latin American dancing, which he practises as opportunity arises. Dancing attracts people of all ages, not only those who learnt in the past at the height of its popularity.

He thinks we should take advantage of the proximity of the Sport & Rec camp to promote the club to young people. Even if they did not have the interest or the money to fly with us they would spread the word. Rob would like to settle eventually in the Lake Macquarie district. He has a son Andrew, now 31, who lives and works in Adelaide.

Juho Rossi

Geoff Neely

The following is a Press Release submitted by Geoff to the Tamworth and Gunnedah newspapers.



Juho Rossi came to Australia from Finland to be Lake Keepit Soaring Club’s summer tug pilot.

Juho could be called a citizen of the world. Born in Finland, he went to school at Lusanne in a French-speaking region of Switzerland. He now lives in Fribourg and regularly returns to Finland. Juho made his first solo flight in a sailplane at the age of fifteen, in a memorable sunset flight. If he fails to find a position as an airline pilot in Europe he is thinking of trying South Africa. Typically for a Swiss educated person, in addition to Finnish he speaks French, English and a little German.

He became interested in Australia last year when he met the Australian team practising in Finland for the Junior World Gliding Championship to be held at Rääskälä in 2009. He searched the internet for full time gliding clubs in Australia and found Lake Keepit Soaring Club.

Would This Be the Day

Harry and Wendy Medicott and Jennie and I travelled to Narromine for the first two weeks of January to sample some different conditions and maybe some long flights. Six Queenslanders, three Hunter Valley pilots and a mixture of others were also there for their annual pilgrimage.

The weather was ordinary early, but improving forecasts had the pundits predicting a good day for Tuesday the 6th January.

Gliders were readied early and all eagerly awaited the news from the 9am briefing.

Weather man Mak Ichikawa's forecast was:

- . a trough line to the west
- . temperatures of 40 degC for the area
- . wind 15kt from the NW but light and variable at height
- . Cu's to form around midday from north of Forbes to the Gulf! going to 10,000ft
- . blue and different air/wind south of Forbes
- . 32 degC trigger temp
- ... all systems go for a good day.

Beryl Hartley took bookings for your launch time and had two tugs organised for the five early starters. At 9.45am Harry reported the temperature as 34.5 degC! He launched at 10.00am; Mak and Hanna (a Czech champion) at launched at 10.15am and I launched at 10:30am, closely followed by Bevan Lane.

I had decided to attempt a "free distance" 1,000 km task using three turn points, running south and north of Narromine. The air felt promising on tow and after release at 4,000 ft QNH, I headed cautiously south finding regular 2 to 3.5 knots to about 4,500 ft. Mak reported that he was low ahead ...ugh! About 45km south I suddenly got 6kts to 7,300ft and my hopes soared. But the next 55 km was only to 5,000ft with 4 kts at best. I passed just below Mak at 110km where he turned NW towards Bourke. I continued south and at Forbes ... bingo ... 8kts to 10,000ft. Back to the north the Cu's were popping so I pushed on south and it became

Trevor West (aka LP)



Trevor playing silly b... 's after considerable celebration, hiding behind his namesake

clear the forecaster was right (not so good), and turned back north at Garema (150km out).

The Cu was everywhere north of Forbes now and after climbing back to 10,000ft, it was foot down towards Walgett. Climb rates were not marvellous, 4kts to 6kts with the occasional better one, cloud base at 11,000ft and some good mini streets.

About 40km south of Walgett, my heart sank as thicker cirrus had moved across from the west as far north as I could see and the lift became softer as I moved on. I tip-toed into Walgett, topped up in 3kts and took stock. A touch over 540km done, 3.50pm ... still within schedule! Steadily back to the sun again where, after finding a 5kt climb back to cloud base, it was full throttle again south with the climbs being better also.

Approaching Narromine and continuing south, despondency set in as I could not find better than 4kts, the clouds were looking scrappy and it was blue south of Peak Hill (50km south of Narromine). I needed to go 110km south to make my third turn and land back at home. Hallelujah , a few kms south of Peak Hill I jagged a smooth 6 knotter to 13,000ft in the blue ...I might make it yet! I potted on south at 80kts, incredulous that my ground speed was reading well over 100kts! I realised later that

this was largely due to the effect of height on true airspeed, it being roughly 2% higher than indicated airspeed for each 1,000ft above MSL.

It soon became decision time for my 3rd turn point. Continuing south in order to finish the task (4th leg) at Narromine could mean arriving back at the cloud low and not being able to connect. So I made the 3rd turn 20km or so short and hoped to pick up the extra 40+km by continuing the 4th leg to a remote finish point to the north of Narromine (and maybe fly home from there).



Trevor peering anxiously at the screen waiting for confirmation that he really did do 1000K

On turning short of Parkes, I saw that the cloud had now spread out and formed almost total cover to the north. On reaching the edge near

Peak Hill I took 3.5 kts for what seemed like an eternity back to 13,000ft. After a top up west of Tomingley, I tip-toed on again in extremely buoyant air under the cloud mass, passing Narromine at 10,000ft with that “Toyota Feeling “ setting in. After completing 1,019km, I turned for the 45km back home with 1,000ft over final glide, having to lower the nose further and further to finish about 1,500ft over the field. I touched down at 8:14 pm having done 1,064km in total at an average of 110.46 kph. YIPPPPEEEEEEE!

Mak had completed his 1,000 km FAI triangle for a new Japanese record, Harry had done his 9th 1,000km flight, David Pickles in PIK 20B VH-GAY completed his first 750km triangle as did his Hunter Valley club-mate Ian Bogaard, who had done his Silver C only the week before! Frank (late to launch) Turner did 880km and Hanna over 900 km. John Buchanan and Pam Kurstjens had attempted a 750km record between and 1.00pm and 6.00pm, but climb rates let them down.

A highlight of the day was provided by the “SPOT” GPS tracking system, 10 units being still at Narromine after the Grand Prix. These gave all interested and anxious crew each individual pilot’s track and achieved speeds, updated every 10 minutes overlaid on a Google map of the area on the screen in the clubhouse ... a fantastic innovation.

And without doubt the greatest feature of the day, was the thoughtfulness and organisation of Beryl Hartley. Anticipating all the late finishes, she had been to town and bought all sorts of goodies including heaps of prawns and fish. She prepared a magnificent meal with entrees, ably assisted by super BBQ chef Arnie of course. Many thanks from all present Beryl.

Til’ next time (another 20 years?)
Little (a bit bigger now) Petunia

Airworthiness Notes

John Trezise

After agreeing to take on the role of Club Airworthiness Administration Officer in August, I carried out an audit of the documentation of the Club gliders to satisfy myself that everything was in order. Although I have previously worked as an airworthiness engineer for the RAAF and with Commonwealth Aircraft Corporation, this was my first experience with gliders. It proved to be an interesting experience and I thought it worthwhile making a few observations arising from this audit. Whilst these relate to Club gliders, the issues are no less relevant to the operation of privately owned ones as well.

Before getting started, I was fortunate that Bathurst Soaring Club was running an Airworthiness Assessment Course as this proved to be a very worthwhile accelerated learning experience. As well as providing basic training on all aspects glider inspection and maintenance, the course gave an excellent overview of the GFA airworthiness administration system. I came away with a high regard for this system which has been developed and refined over many years. I also gained a good insight into the problems faced in trying to run a “one-size-fits-all” airworthiness system for gliders.

As anyone associated with gliding would know, gliders present their own problems from an airworthiness viewpoint as:

- Most gliders are produced as a one-off models with each having flight and maintenance manuals unique to their serial number.
- Most gliders are being flown well past the original life intended by the manufacturer.
- Many manufacturers no longer exist, or are unable to provide on-going support for the gliders they built many years ago.

The GFA, in trying to steer a course between over-conservatism and recklessness, has instituted a number of measures to assist owners in achieving as long a life as can be sensibly justified by data and experience. The

airworthiness system has been developed incorporating principles which provide sufficient flexibility for it to apply to every glider irrespective of whether it is fresh out of the factory, or came from the works of a manufacturer who has long since disappeared.

My first point of concern with the Club fleet was that it appeared that the requirements of individual glider maintenance manuals were not being observed. It appeared to me that the annual Form 2 inspection was being relied on as a substitute to the manufacturer’s specific servicing requirements.

The GFA Manual of Standard Procedures (MOSP) Part 3 (Airworthiness) paragraph 2.12 states:

“The manufacturer’s manuals (Flight and Maintenance Manuals) are the primary source of maintenance information. Unless they are specifically overridden by an Airworthiness Directive, these manuals provide a source of approved maintenance procedures.”

Paragraph 2.13 covers the role of the GFA publication “Basic Sailplane Engineering” which ...

*“provides the approved procedures for inspecting and repairing sailplanes **where the sailplanes manuals are lacking on the subject**”.*

It goes on to establish the priority of procedures to be followed. These are in order:

1. Airworthiness Directives (which override procedures in maintenance manuals and Basic Sailplane Engineering).
2. Manufacturers Flight and Maintenance Manuals.
3. Basis Sailplane Engineering.
4. Advice from senior GFA airworthiness officers.

On the role of the Form 2, Paragraph 2.6 of MOSP Part 3 states that the form ... *“provides a*

checklist to assist in performing an annual inspection.”

Specific requirements for annual inspections are listed in paragraph 1.3.3 of Basic Sailplane Engineering. This section emphasises the importance of consulting manufacturer’s manuals, but also highlights the general nature of this inspection alone (*ie ... “the level of inspection required varies with a number of factors”...*)

As far as conducting and recording servicing to manufacturer’s requirements, paragraph 6.5 of MOSP Part 3 states:

*“Some sailplanes are subject to periodic inspections as well as the daily and annual inspections listed above. The most common inspections are 25, 50, 100 hour inspections required by the manufacturer or an AD. These inspections must be carried out and certified by a **log book** and maintenance release entry. Persons must be rated as Annual Inspector for the appropriate construction type.”*

Finally, there is the issue of life expiry, or life extension.

This is covered in general terms by AD 337 which as well as providing requirements for gliders with no published life expiry, or life extension programs affirms the GFA position that where a manufacturer has published life expiry, or a life extension requirement, this is what is to apply with no exceptions.

Whilst the above may appear to be a bit detailed, it shows the extreme importance of the information provided by the manufacturer in the maintenance and flight manuals.

So getting back to the Club gliders, what were the problems?

The greatest was that manufacturer’s maintenance requirements were not being followed and/or recorded in the log book. If a glider has a 50, 100, 250 hour, and even 1000 hour servicing requirement, these must all be

done and signed off. It is simply not correct to do a 50 and 100 hour servicing, and after the Form 2, just restarting the clock with another 50 servicing. I would suggest that it would be a good idea to incorporate the next significant servicing with the Form 2, but it must be signed off separate to the Form 2 in the log book. So going through the aircraft log book should show evidence of all these servicing having been carried out.

Life expiry, or life extension survey requirements were sometimes missed. These should be recorded in the maintenance releases so they are not forgotten. Last year, Tom Gilbert picked up that a life extension survey for the Junior was well overdue. And at the time of writing, it appears the Puchatek has been operating without a major life-extension servicing being carried out.

All future requirements arising from ADs (such as Action 2 on AD277 on Tost releases) need to be recorded in the maintenance releases to ensure these are not forgotten.

The log books were a mixture. Most Form 2 inspections were written up in great detail, sometimes over several pages, but there was often little else. There is a GFA requirement to update the log books at least monthly, and record all servicing and significant events. Whilst there are sections in the log book for various events and activities to be recorded, the preference seems to be to just write up everything in chronological sequence in the main body of the book along with the hours. Perhaps not a great concern, as long as the information is recorded.

Whilst it is possible to get away with cutting the corners from time to time, there are three occasions when log book information is likely to be scrutinised:

- During a review/inquiry following and accident or incident,
- During the sale process, and
- During the purchasing process.

It is virtually impossible to reconstruct this data, so it is important to record it as it happens.

Finally, I came across a number of occasions where I was made aware of a minor defect with a glider, but I could not find details of this defect recorded in the maintenance release. So, if you believe something is not right with a glider, please write it up as a defect.

John Trezise
LKSC Airworthiness Administration Officer

I am currently in the process of taking action to simplify the process of servicing gliders to manufacturer's requirements. This includes creating worksheets to detail exactly what has to be done, and in what sequence at each servicing; and providing the props required for the servicing to be completed in the most efficient manner. In the meantime, I am attempting to ensure that the maintenance releases contain all information concerning future servicing requirements.

At Keepit one January evening

This was the beginning of a party at Keepit that lasted all night for some. The French visitors from New Caledonia hosted a farewell dinner the night before they left ... it was delicious.



LtoR: Jim Staniforth, Yo Hasegawa, Robin Walker, Pierre Retaud, Guillaume Ged, Etienne Ged, Bart Hellemans, Juho Rossi and Paul Roche

The Keepit Safari 2008

Ian Barraclough

The 'Keepit Safari Drought Breakers' did it again ... this time rather well, with flooding in Gunnedah and water over the road into Keepit. Even though the rains came down on Saturday, we left on time on the Sunday and successfully made it over the flood waters to Narromine.



Flood waters nearing Gunnedah airstrip; the bridge into town is under water

Al Giles and Ross Duncan shared the front seat and trailer towing duties, with Garry Speight in the back seat of the Twin Astir. Ross Edwards flew his self-launching Nimbus with regular Safari participant Greg Dennis in the back seat. Justin Smith and friend Geoff Graham flew with the Safari in their Decathlon, and Greg Smith and Phil Anderton joined the Safari on the Tuesday for a few days, flying Greg's Maule. I launched the Twin each day with the C185 and did a few long distance aerotows.

After everyone departed Keepit, I flew to Coonabarabran to wait for the fleet to pass. Sitting in the Coonabarabran Aero Club with a cup of tea, I was able to listen on their radio to Christian Linnett give a running commentary while he was circling in his Cirrus overhead Al Giles, who was towing the Twin's trailer and trying to find a way around the flood waters at Gunnedah. In the end Al had to drive north to Narrabri to get ahead of the flood front and then

turn south west to Narromine ... he was late getting there!

The Nimbus made it to Narromine but the Twin ran out of lift later in the day and needed an aerotow retrieve from Gilgandra. It was that sort of day; a number of the Grand Prix fleet from Narromine outlanded, one of them at Gilgandra as we were preparing to depart.

The rest of us were able to watch the finish of Day One of the gliding Grand Prix after our arrival at Narromine. There were 25 competing pilots where only the first nine over the line score points and where only the first two for the week go on to the final of the World Grand Prix. Each glider carries a GPS transmitter and the position of the whole fleet is shown on a large screen for the spectators and crews back at Narromine. The technology is still evolving but it is an interesting concept and another form of gliding competition.



Greg Dennis, Ross Edwards, Al Giles and Ross Duncan preparing to depart Keepit

Next morning we attended the very professional Grand Prix weather briefing and afterwards

spent quite some time 'dithering' trying to decide whether to head south to Temora or north to Lightning Ridge. The latter won largely because the BlipMaps said that way would be hotter.

Ross Edwards and Ross Duncan (because Greg was not well) in the Nimbus had a great run, reaching 11,000ft and Lightning Ridge without trouble, but Garry and Al Giles in the Twin finally had to call it a day at Coonamble, so the Safari was split that night. Next morning we launched the Twin and went to all the cumulus clouds within reach on a climb to 5,000ft agl ... not one of them worked, there was absolutely no lift at all, so Garry and Al had a sled ride back to Coonamble. We de-rigged the Twin, Al drove the trailer north and Garry and Greg came with me in the C185 to Lightning Ridge.



LtoR: Greg Dennis, Justin Smith, Geoff Graham (rear), Ian Barraclough, Al Giles (rear) and Ross Duncan in the pool at the Crocodile Caravan Park in Lightning Ridge

Not surprisingly it was hot at Lightning Ridge and a slab of beer did not last very long around the pool that evening. Phil Anderton and Greg Smith caught up with us there.

We decided on Moree as the destination next day and were rewarded with a good soaring day. The motel that Phil Anderton knew and booked

for us, was next door to a Chinese Restaurant and this made a welcome change from bowling and RSL clubs for dinner. It was Ross Duncan's turn to tow the trailer; a broken 'U' bolt brought him to a sudden halt 15kms outside Collarenebri. He spent the next nine hours lying on thistles under the trailer making the repair and finishing the trip to Moree ... it took a fair bit of encouragement before he regained his relaxed disposition.

Next morning was Thursday; the various weather forecasts said that Saturday looked like solid rain over most of NSW and that would mean an aerotow or a trailer trip from our planned last night destination of Gulgong, back to Keepit for the last day. So we decided to fly to Keepit for that night and fly locally there if the Friday was good soaring weather.

Ahh, the vagaries of weather ... Garry and Ross Duncan took off in the Twin and made it to Keepit; Ross Edwards and Greg Dennis self launched 10 minutes later, found nothing and had to return to Moree for more fuel so that they could use the motor to get to Keepit. Alas, the trailer was well on the way carrying the special refuelling hose, so I ended up aerotowing the Nimbus back to Keepit.

Friday morning was totally overcast at Keepit and we patted ourselves on the back for making a sensible decision ... and of course the day got better and better whilst most of us drove home. By all accounts Saturday however did turn out to be a day with very little lift, so we felt our decision was vindicated after all.

So it was another Safari where very little went to plan, the weather variations were extreme, the country and destinations were new to many, the adventure was fun and company was excellent.

Some Long Distance Aerotowing

Ian Barraclough

*Based on an address given at the Tuggies Ball
on 12 September 2008*

I have aerotowed Geoff Sim in the ASH25 about 15,000kms ... more than the distance around Australia. The bulk of this distance was in four trips to Burketown and back to fly the Morning Glory; the round trip is 3,750kms and takes 20 to 24 hours flying time.

Our first trip to Burketown had a very important outcome. I towed Geoff there with VH-REN, a pretty basic C182A. Sitting under the mango tree at the Burketown Pub, XXXX Gold in hand, Geoff said "what you need Ian, is a 185" ... and the rest is history. Our subsequent three trips to Burketown have all been towing the ASH with the Cessna 185 VH-MIE.

An aerotow launch of a glider is usually a climb of a few thousand feet above ground level; on a typical day we might climb a total of 20,000 ft or 6km upwards. We do not worry how far we go, except for retrieves, and then the distance is measured in hundredths of a tacho hour. The two main considerations are to find a thermal to drop the glider in and to manage the cooling of the engine after release.

But when aerotowing over a long distance, a number of other considerations come into play.

Flight planning

To get to Burketown is straightforward; we go from Keepit via St George, Charleville, Longreach, Cloncurry to Burketown. The longest of these legs is Longreach to Cloncurry at 267nm or 500km. When we have had a tailwind we have been able to overfly St George; then Keepit to Charleville becomes the longest leg at 355nm or 660km. On our first trip we managed a 15 knot tailwind all the way to Burketown which gave us an average of over 100kts ground speed.

A flexible approach to where we stay the night on route is usual as fuel remaining, head or tail wind and last light all come into play, although we usually make Charleville for the night. As

we are travelling with Geoff, it is normal to be up before dawn, in the air to watch the sunrise and having an early breakfast in the Qantas Founders Outback Museum at Longreach.

Weight

The preparation requires a bit more than the usual DI and half fuel. I carry a spare tailwheel tyre and tube and a bottle jack as the C185's tail is too heavy to lift. We use a 120m rope to try to make it easier on the glider pilots and carry a spare 60m rope. Because we are going a fair way and for about two weeks there are a few extra things to carry. These include personal water in the cabin and a forced landing water supply, survival kit comprising jacket, strobe, spare battery, water purification pills, compass, EPIRB, handheld radio; a tool kit, a first aid kit, tie down gear, and when going to Burketown, a case of wine as the price there is outrageous!

Then there is luggage for 3 or 4 people for two weeks, the glider gear including the unwieldy tail dolly, wing stands, tie down gear, and 3 or 4 big blokes ... and full fuel.

Take Off and Climb

Then you have to get all this weight off the ground whilst towing the ASH. Takeoff downhill at Keepit is alright ... we will always get off; but the roll is much longer than we are used to. However, Morning Glory time is October or November and in the north where the temperature is already 30 degC or more, long airstrips are necessary.

At Kingaroy on one occasion, Dave Jansen and I picked up Geoff and Trevor West to go on to Burketown; they had been competing in the Nationals there. After putting all their gear plus the ASH gear into the C185 and taking off in the middle of the day, we were not much more than 100ft above the fence on RWY 34, which is 1600m long. Charleville's cross strip at 1067m is the shortest one we use; it gave us a nasty surprise one day. We cleared the tall trees at the far end with a bit to spare, but as we got to tree



top height we realised that there was nowhere to go if the noise stopped.

A 2 – 3 kt climb is typical. I put the one stage of flap away at a safe height and the airspeed is usually about 80 kts. However the climb is done by temperatures; mixture and airspeed are juggled to keep the cylinder head temperature of the hottest cylinder under 380 degF and oil temperature about 190 degF. Power settings are usually around 25" manifold pressure and 2500 rpm (25/25).

It usually takes about 40 minutes to reach 8,000ft or so. We climb via clouds looking for lift, but do not circle under them due to the long rope. We hope to get above the inversion to make the trip in the glider less bumpy and so reduce the large loops in the rope. For this reason we depart early, as close to sunrise as we can, but there is inevitably one afternoon leg where the bumps require a bit more concentration in both the C185 and the glider.

Power-assist

Unfortunately the GFA says we should not use the glider's self-launching motor at the same time as aerotow launching, as they do in Europe. I picked up Lars Zendher in the Nimbus 4DM one day out of damp paddock just the other side of the Kelvin Range from Keepit. His motor had been unreliable so he elected to land in a good long paddock and call for an aerotow. As the paddock was a bit soft, we agreed to try the launch with him using his self-launching motor to assist. Lars had his motor idling and after I was rolling with full power, he applied full power. It made a significant difference and we were in the air quickly ... until his engine failed again about 50ft up; but it did not matter, we were safely in the air and a long way from the paddock fence.

Cruise

As is usual, we ease gently into level flight, backing off power and ending up with a power setting of about 19/21. Maximum aerotow speed for the ASH is about 85kts and somehow we seem to creep a knot or two above that.

The two pilots in the glider share the flying with about 15mins on each. The controls become

quite heavy at this airspeed and the bumps require additional concentration. It is much easier in C185, particularly if I am lucky enough to have a B747 First Officer doing the flying; Dave Jansen is as steady as a rock. The only consideration is NOT to descend.

Navigation is straightforward using GPS; we have an IFR rated one in the C185, a Cambridge in the ASH and a few spare handhelds. The only problem we have had was returning one year and encountering bushfire smoke into and out of Kingaroy ... this required aerotowing for three hours on instruments as there was absolutely no horizon.

Refuelling

I would not like to have to calculate fuel remaining. Allowing for the much higher fuel flow on a climb of 40 or so minutes and a lower than usual rate in cruise, the normal rate after the glider has released and the notoriously inaccurate Cessna fuel gauges all add up to a lot of 'head down' time when staying level is critical. However this is made easy by the Electric International fuel flow gauge which is linked to the GPS. At a press of a button the instrument says how much fuel is required to get to the destination and what the reserve will be when we get there.

So our practice is to settle into the cruise then check fuel, last light and time to destination ... all at the press of a button with one eye out the window!

As we approach a destination Geoff decides when to release; this is often about 70km out. I then increase speed and race in to refuel. I check the windsock to see which end we will have to take off from, drop rope there and radio which end we will be using. Geoff lands as close as possible to that end, pushes back, collects and lays out the rope, by which time I have usually re-fuelled and taxi back, jump out to hook the rope to the back of the C185 and we are away.

If it is the last leg of a good soaring day Geoff may release a lot earlier to have a bit of fun. On one trip heading north, he released well short of Cloncurry ... the conditions were really good so

he did not bother landing at Cloncurry, but kept going direct to Burketown; about 500kms in under 5 hours.

On our first arrival at Burketown I thought it would be best to drop the rope across the piano keys rather than risk ripping a runway light out by landing with the rope attached ... it took me half an hour to find the 120m long rope in the short grass! So a better routine is to drop the rope just before landing lights, whilst flaring at the piano keys.

Radioing that you are "dropping a tow rope" ... can have mixed blessings. If the airport manager hears the call he or she will usually race to the scene with the rotating beacon flashing. The trick then is to convince him or her to run the wing.

Descending on tow

We usually release at height and when straight and level, but one early occasion we came head on to a storm cell in the middle of western Queensland. I eased the nose down ... well I thought I eased it but Geoff swears that within a second he could see the rivets in the C185's tailplane and released. We were in the middle of nowhere and wondering what to do next. We separately skirted around and then under the cell and by radio decided to head for Winton.

So, we developed the descending routine: I ease the nose of the C185 up and slowly back off power, Geoff cracks brakes as we slow down and the combinations starts descending; from that point Geoff controls the descent with the air brakes.

Garry Speight might remember a dual tow into Narromine on the first day of a Keepit Safari when we met a front with a wall of low cloud east of Narromine. We flew alongside the cloud until we were low enough to get under it and then headed to Narromine at about 1,000ft agl. We identified the golf course there and suddenly we were all in cloud ... but that is another story.

The Glory Itself

The aerotow trip to get to Burketown is an adventure in itself ... but flying the Morning Glory is another dimension of flying. We have all flown locally around Keepit and maybe flown cross country, perhaps we have flown in wave off the Kelvins, or even up the side of a cloud. Or maybe you have had a sunset flight ... that dreamy time when you are probably in a convergent zone only slowly losing height, while the sinking sun sets the clouds alight. Imagine the same thing before sunrise, watching the sun come up ... and not losing any height at all!

But the Morning Glory is another story for another time.

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Hyperthermia

Dr Steve Markowskei

Normal body temperature is maintained within a narrow range despite extremes in environmental conditions and physical activity as the thermoregulatory centre (located in the brain within the anterior hypothalamus) is able to balance heat production with heat loss. It is remarkably effective within a wide range of climates. Normal core temperature “set point” is 36.8 +/- 0.4degC.

Hyperthermia is an elevation of the core body temperature above this set point (as opposed to a “fever” when the set point itself rises and the body attempts to maintain a higher temperature). This is due to the heat losing mechanisms of the body being overwhelmed by environmental or exertion related factors. Thus heat gain > heat loss = hyperthermia.

Heat Loss

Heat is lost from the body by conduction (direct contact with a cooler object), convection (temperature gradient between body and ambient air), radiation (direct radiation or infrared radiation) and evaporation.

As the air temperature approaches 35degC evaporation becomes the only significant way of losing body heat. At 37degC and above it is the only method of heat loss. Evaporation is a powerful method of heat loss as the evaporation of 1 gram of water absorbs more heat than the melting of 7 grams of ice.

Heat gain

Heat is also gained from radiation, conduction and convection. Close the glider canopy on a hot day and sit there for a while, you will note how all three of these heat transfer factors will create a rapid net heat gain. In addition the body generates its own heat from metabolic processes, notably from muscle use and the digestion of food (that’s why you feel hot after a large meal).

Glider pilots are at risk of hyperthermia. There are several risk factors for hyperthermia ... most of them apply to us.

Lack of acclimatization

It takes 7-14 days to acclimatize to a hot environment. Coming from an air conditioned office/car (or worse a German winter) to the Outback heat at 40degC is less than ideal.

Exercise in temperature >35degC

Pushing Gliders in the Midday Sun. (Mad dogs etc...) It is important to note that hyperthermia can occur at any air temperature; it is more likely at high temperatures.

Relative dehydration

If you are dry you can not perspire. Studies have shown an acclimatized person can perspire up to 4 litres an hour!!! We might find ourselves short of water on the field or in the air. There are other factors, hopefully not related to gliding.

1 High relative humidity - more difficult to evaporate perspiration.

2 Children - perspire poorly, avoid fluids and are always at great risk of hyperthermia. Never, ever leave a child in a locked vehicle. In the United States during summer an average of one child dies every four days from being locked in a vehicle. Children locked in cars have suffered irreversible damage within half an hour as the internal car temperature reaches over 60degC within 5 minutes and may continue to rise over 40degC above the ambient temperature. If you notice a child locked in a vehicle in the hot sun unless you can locate the parents in less than five minutes, or if the child looks distressed, smash the glass opposite the child, open the doors and remove the child. DO NOT wait for police, NRMA etc.

3 Obesity - body fat insulates.

4 Medications - Diuretics, some antidepressants, alcohol.

5 Aged - also perspire poorly. They have very high death rates in heatwaves.

6 Poverty – the poor don't have the luxury of staying cool/minimizing exertion.

The Process

The body will attempt to defend the set point core temperature aggressively but if overwhelmed with exertion and/or high ambient temperature the core temperature will start rising.

At a core temperature greater than 42deg major changes begin to occur within the internal milieu of the body resulting in the commencement of multiple organ failure. Note this is only 5degC above the normal temperature. This is an ambulance/intensive care/maybe you die situation.

Marathon runners have collapsed and died with core body temperatures as high as 44.4degC. Few if any biochemical systems are functional at this temperature and even subsequent cooling may not restart them (try to un-fry an egg!). You need to take urgent action well before this!!

Symptoms

Many first aid texts refer to heat cramps, heat exhaustion and heatstroke and note various differences between them. I prefer to note these as series of syndromes along a continuous spectrum and from our point of view any increase in body temperature is to be avoided. The early signs are:

- . headache
- . feeling extremely hot (sounds silly but it is a really reliable guide)
- . yawning and tiredness and a feeling that "I need to stop"
- . nausea
- . confusion/agitation/lethargy
- . vomiting
- . collapse

- . shock
- . seizures
- . coma

Treatment

If you experience any of the early symptoms and feel you are overheating STOP WHAT YOU ARE DOING, SEEK SHADE and REST. You can push the glider to the hanger later.

This applies even (especially!!) if you are the tug pilot or the instructor with five people waiting. Remember, people are relying on your judgement and skill in these positions and this will rapidly deteriorate if you become hyperthermic. At Keepit we are not just playing cricket and might miss a catch!!

COOL yourself, apply water to your head, wet your hair and clothes. There is no danger of cooling too quickly.

DRINK some water.

TELL SOMEONE so they can keep an eye on you.

Usually in about an hour you will feel better and using common sense can resume what you were doing.

It is ignoring the early symptoms and "pushing on" that might see you in real trouble.

Prevention

Remain well hydrated with water. This is very important, however being well hydrated does not "prevent" hyperthermia. Drink 300mls prior to leaving the briefing room. Salt solutions or Gatorade type liquids offer no benefit other than taste.

Wear a hat that is white (black hats in summer = great way to cook your head).

Inspect and grid your glider in the cool of the day.

Wear white, loose clothing. Long sleeves and pants that are loose reflect heat and allow to you to perspire. The more you look like an Arab the better.

Pour some water on your head and clothes prior to and during exertion/flying - you will be amazed at the difference. Water at the bus with a cup just for wetting clothing is a good idea.

Remember that evaporation is the only way that you can lose heat when the air temperature is 37degC or above. Also remember that if you permit heat gain to be greater than heat loss then your core temperature will rise. Do not allow yourself to get into a situation where this happens.

Watch other pilots and visitors closely on hot days, especially those from cooler climates. Most hot days I notice someone who should stop for a while and cool down. If someone is confused or irrational force him or her to stop and seek help from other Club members.

Conclusion

I hope this article has been informative and next time it is over 35degC at the Club you will ensure that (after flying) the author is kept cool, rested and well hydrated with the appropriate liquid (Crown Lager).

Early Cross Country Experience

John Trezise

The following is an abridged exchange of emails in which John Trezise is telling Dave Shorter his impressions of a few days cross country soaring.

“I really enjoyed the three days ... a real eye opener to the realities of cross country flying. There is never much time to sit back and enjoy the scenery. A lot of patience and good decision making is required.

I had a good flight with Garry yesterday, but very different from the flight with Jenny on Tuesday. We were able to complete the set task, just sneaking into the two circles. On the tow up, Garry directed Juho far west and we did not release until 4,000 ft. We found a cloud base of around 5,000ft. But further west, we found a good climb to a second cloud base of 8,000ft and tried to keep in the 6-8,000ft band for the task. Most of the time, we were within gliding distance of Keepit. We returned to Keepit after the first point, but got a good climb and headed west over Gunnedah and could final glide back from there.

It was a real eye opener ... the patience and forward thinking required made it more like a game of chess than a race around turning points, and the fact that no two days are the same

because of the conditions was also a feature. Whilst the flight with Garry was a little over three hours, the flight with Jenny, which lasted over five hours was just as amazing in its own way. As you probably already know, Jenny is a very skilled pilot and instructor/coach although she does not admit it. You can see the flight on the OLC ... at one point we went very close to out-landing but got away and made it into the task area (40k radius circle on Gurley) ... and got home.

Previously, I was of the opinion that there was a huge gap between being a solo pilot and a cross-country pilot. I am now of the opinion that the gap is even greater because there is just so much more to it than flying a glider. By the same token, I can see it is not a sport for everyone ... particularly people who want a lot of predictability in life. Jenny was keen for me to do a paddock landing check and head off alone, but I think I have a lot to learn still and hopefully do some more dual flights to learn more from these excellent instructors”.

Coming Events

Event		Contact
20-23 February	4 day Cross Country Weekend	Wendy Medlicott
13-16 March	4 day Cross Country Weekend	Wendy Medlicott
10-18 April	Easter Regatta	Wendy Medlicott
8-11 May	4 day Cross Country Weekend	Wendy Medlicott
5-8 June	4 day Cross Country Weekend (Queens BD)	Wendy Medlicott
10-13 July	4 day Cross Country Weekend	Wendy Medlicott
31 Aug – 3 Sept	4 day Cross Country Weekend (Bank Hol w/e)	Wendy Medlicott
11-14 September	4 day Cross Country Weekend	Wendy Medlicott
2-5 October	4 day Cross Country Weekend (Oct long w/e)	Wendy Medlicott
7-14 November	Possible NSW Championships	Wendy Medlicott

Contact Numbers for Instructors and Tug Pilots

Name	Home	Work	Mobile
Jay Anderson	02 9571 9592	02 9221 4938	0418 676 696
Phil Anderton	02 6785 2764		0427 493 107
Ian Barraclough	02 9948 7866		0428 410 010
Andrew Brumby			0404 043 386
Tim Carr	02 9801 7979		0414 405 544
Bruce Clark	02 4955 5041		0414 545 278
Ron Cameron	02 6721 0081	0428 659 637	0428 659 637
Rob de Jarlais	02 4677 1926		
Tony Esler	07 3350 5858	07 3881 2615	0412 770 526
Ken Flower	02 6761 3816		0406 716 574
Bill Gleeson			0408 443 009
Vic Hatfield	02 6765 7050	02 6766 9655	
John Hoye	02 6767 1033		0427 505 233
Wendy Medlicott	02 4365 3626		
Matthew Minter	02 6785 7399	02 6742 3998	0427 455 119
Geoff Neely		02 6769 7514	0419 563 233
Peter Sheils	02 6762 1377		
Michael Shirley		02 9439 2022	0427 108 040
Nick Singer	02 4365 5485	02 4384 2101	
Garry Speight	02 6785 1880		
Dennis Stacey		02 6760 7677	
Gerhard Stuck	02 9982 5248		0428 300 370
Charlie Szpitalak	02 6777 2154	02 6777 2040	
Dave Turner	02 9489 0841	02 9620 0893	0425 269 210
Darian Thom			0407 269 210

Instructor & Tug Pilot Roster ... Feb - Mar 09

Date		Instructor	Tug Pilot
February			
Saturday	31	Swap required ... see Vic Hatfield	<i>Volunteer</i>
Sunday	1	Peter Sheils	Geoff Neely
Saturday	7	John Hoyer	<i>Volunteer</i>
Sunday	8	Dave Turner	Phil Anderton
Saturday	14	Vic Hatfield	John Hoyer
Sunday	15	Garry Speight	Charlie Szpitalak
Saturday	21	Tim Carr	Greg Smith
Sunday	22	Dave Turner	Geoff Neely
Saturday	28	Nick Singer	Darian Thom

Date		Instructor	Tug Pilot
March			
Sunday	1	Peter Sheils	Jay Anderson
Saturday	7	John Hoyer	Ken Flower
Sunday	8	<i>Volunteer</i>	Charlie Szpitalak
Saturday	14	Tim Carr	Phil Anderton
Sunday	15	Garry Speight	Geoff Neely
Saturday	21	Dave Turner	Greg Smith
Sunday	22	Nick Singer	Andrew Brumby
Saturday	28	Vic Hatfield	Darian Thom
Sunday	29	<i>Volunteer</i>	Jay Anderson

Instructors are rostered by Peter Sheils and **Tug Pilots** are rostered by Phil Anderton.

You are responsible for finding your own replacements if it turns out you can not make your rostered day. Keep the Club Manager and Peter or Phil up to date with any change you make. When arranging your replacement remember that Level 1 Instructors must ensure that the Tug Pilot is a Level 2 or 3 Instructor.

Car Pooling: There is a Yahoo chat and message group (not officially sanctioned by the Club) for Club members. To join, either visit the chat group web page at <http://groups.yahoo.com/group/lksc> or email pjanderton@optusnet.com.au with your email details and he will fix it.