



Web Site [www.ddsc.org.au](http://www.ddsc.org.au) OR [www.gogliding.org.au](http://www.gogliding.org.au)

# Chaotic

## Darling Downs Soaring Club

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### Retrieves - David Nash

Today I had the pleasure of retrieving a lovely lady from a paddock after a successful outlanding. Before leaving I was given the following coordinates by the Duty Pilot:

*S26.51863 & E150.48888 with a caution that the above did reconcile with the near Brigalow description given by the damsel in distress. The coordinates indicated north of Chinchilla*

On reaching Warra we rang the pilot concerned and she gave us the following information:

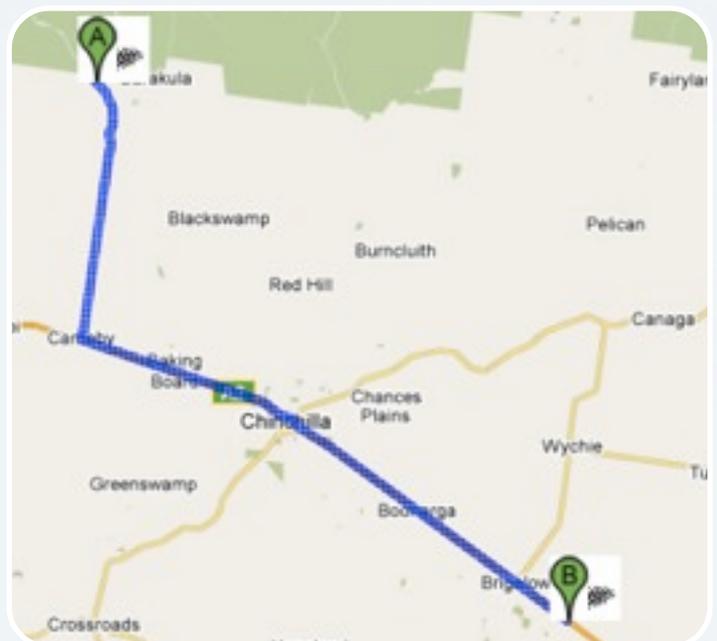
*S26 degrees 51.863 minutes & E150 degrees 48.888 minutes - 3.6km east of Brigalow*

If you are wondering how much difference there can be, see map right. ([maps.google.com](http://maps.google.com))

Be sure when GPS coordinates are given or received that it is clear what the format is (ie DD.DDDD; DD MM.MM; DD MM SS). Luckily both the Duty Pilot and the pilot concerned today both realised something was wrong. The retrieve crew could have easily driven many more kms than needed if only the original coordinates were used.

The extra locality info came in very handy to ensure the coordinates were in fact correct.

PS The use of a Spot does remove some of this human element.



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### **Darling Downs Soaring Club 50<sup>th</sup> Anniversary**

On 4<sup>th</sup> September 2010, Darling Downs Soaring Club will be having a celebration to commemorate 50 years since the club's first flight on 7<sup>th</sup> September 1960.

Fly-in or Drive-in - All are welcome to attend our special day, especially if you are a past member, or have flown with us, or would like to catch up with past and current members.

For planning purposes, please notify the DDSC Secretary, Richard Armstrong, of your interest in attending:

POST:

DDSC 50<sup>th</sup> Anniversary  
PO Box 584, Toowoomba.  
Qld. 4350

EMAIL: [info@gogliding.org.au](mailto:info@gogliding.org.au)

Check our website for updates and more details [www.gogliding.org.au](http://www.gogliding.org.au)

### **Report from WA state Champs at Cunderdin. Allan Barnes**

Hi all,

We are having a great time at the WA State champs - not quite the conditions they are getting at Waikerie but still very consistent flying.

After 2 days of good, blue weather, a trough with a very clearly defined edge came through and by the time we had gridded it was sitting maybe 30km to the east. No sniffer could get higher than 2500ft agl, so at about 1:30 the task was cancelled.



I was already airborne with a passenger, so we decided to do a downwind dash and try to connect with the trough. After a low grovel, our weak thermal got sucked into the trough and the thermal was suddenly 8kt to 13,000ft.

We decided to do a 300km O&R flight - the base quickly rose to 15,500 and we found an effective working height band was 11000-15000 stopping for nothing less than 10kt. Luckily the DG505 has oxy fitted! The trough started overdeveloping and just after the turn I headed under a particularly black cloud with a roiling base. Soon we were in a silky smooth thermal that ended up 15kt on the averager with a peak of 36kt!

About 1500 below base I decided it would be prudent to depart, and we headed for the edge of the cloud, just touching cloudbase as we got to the edge. On the way home, we were treated to a spectacular display of heavy rain from a cu-nim producing a gust front on the ground. A huge circular cone of dust spreading

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out from the base and travelling amazingly fast across the ground.

It would have been exceedingly unpleasant to be at low altitude there, but from 15,000ft it was just an amazing spectacle to witness. When lightning started to spark about 30-40km away we decided that we had had enough fun for one day. We then had about an 80km glide into a steadily increasing southwesterly headwind to get home. A fascinating day that reminds you how cautious you have to be flying with storms about.

Since then it has been back to the predictable blue days, with 4-5kt climbs to about 6000ft the order of the day. It looks like that should continue for the remainder of the comp.

It's been great fun coaching in a decent two-seater - the DG505 is a very impressive glider with no vices, great performance, comfortable and modern.

Cheers, Allan.



On finals - big runways, also note the salt!

### From the Cunderdin Briefings...

*Allan Barnes and Phil Ritchie* both flew to WA to coach in the WAGA state champs at Cunderdin in the DG505 and DG1000.

They both gave a short talk; I have condensed the 10 minutes each pilot talked for, into the salient points below. It should be noted that as such, it is no longer verbatim, but I hope that I have not changed any meanings.

Allans chat.

Allan talked for 12minutes and 43 seconds, covering differences in personal approach when competing in state champs compared to world champs.

### *Energy Management:*

The worlds is a 14 day comp, and longer really if you get there early and practise. Before 1st comp day, check weather and make a judgement about how many days will be flown. For example, a poor forecast and only 2 days expected, would require that you need to push harder than if you know its likely to get 6 days before the weather changes. Basically, the shorter the comp, the higher up the rankings each day you need to be if you want to win. Allan's view is that you go to a comp to win, not to compete or come 2nd. Another way of looking at this is; be an optimist, not a pessimist. That said, you still need to be a good comp pilot...



### Visualisation:

Allan relaxes and imagines the course and 'sees' the task legs, and stages, thinking about what will be occurring soon. A sort of dry run I guess. You need a good knowledge of the area to do this of course, and flying Condor (simulator) over the web with Mike Codling is how Allan (and Mike) familiarised themselves with Slovakia before going.

### Win by not making mistakes...

He then talked about the importance of pair flying and how it was achieved; a lot of clear communication over the radio for one. Allan and Mike have practised on Condor and also at DDSC whenever possible to hone their team flying skills. It is Allan's belief that to get 1st at the worlds is very difficult for a country that cannot field a team used to team flying. Most successful countries at the worlds do use team flying and practise team flying. In Australia this can be difficult as members may be hundreds or thousands of miles apart! (It is also the case that 'team flying' is not allowed at the National Competition, thus denying any potential pairs the chance to practice at a comp. Editor)

### Phils chat.

#### Awareness:

Particular attention needs to be applied to those gliders you haven't seen; either joining

the thermal or on glide. (A good point and worth repeating here.)

Phil then gave everyone the secret formula to 'how to be a top pilot'. Unfortunately as he pointed out, you already know the secret... However, his point was that if you apply the formula you will improve. The formula is 'actual airtime' multiplied by time spent thinking about flying equals improving skill level. The thinking includes analysis of your own flights, reading any flying books, such as 'Winning on the Wind' or the Brigliadori book, (sorry the title escapes me at time of writing).

$$\begin{array}{c} \text{'Think about it' X 'actual airtime'} \\ = \\ \text{'improving skill' level} \end{array}$$

On the airtime side, how much is he talking about? Well years ago Phil approached Bruce Taylor (skygod extraordinaire) and said 'you don't know me, but how do you do it?' Something along those lines anyway. Bruce said "fly a lot", and asked how many hours Phil had managed in the season so far. Phil thought he'd done a far bit, with his 35 hrs, but Bruce had done 170 already! It's pretty obvious, and pretty obviously true...

(Personally, I would add that even if you don't want to be a comp pilot, it is in your own interests to fly as often as you can. I believe that all forms of flying require that the pilot is as current as possible. If you only drove your car once every couple of months, would you say you were an experienced driver, ready to cope with anything? Editor)



### Putting together a soaring weather forecast

By Robert Hart. with additional images taken from Jenny Thompson's document about NOAA (DDSC website).

Taken off <http://the-white-knight-speaks.blogspot.com/>

#### *Introduction*

With time being a scarce commodity in our lives – and with travel costs to our gliding clubs increasing alarmingly, we need to make sure that we maximise our gliding fun and minimise the costs. Part of the solution is to make sure we minimise the time lost to unsoarable weather and maximise our ability to make use of promising weather conditions.

Having a look ahead at the weekend weather starting a couple of days in advance is a major help. Darling Downs Soaring Club now issues a weekend soaring forecast on Thursday mornings, updated on Friday morning. This has only been going for a relatively short time, but people are asking what resources are used to create this forecast. Hence this reason for this article. I have however expanded on this basic theme to include forecasts 'on the day' as well.

#### *Assembling the resources*

All the resources needed are on the web. The URLs for everything are listed below – but they (and this article) are also online at

<http://the-white-knight-speaks.blogspot.com/>

The resources used consist of:-

The Bureau of Meteorology surface chart and 4 day forecast chart: this gives the current weather picture and how that picture is expected to develop over the next 4 days (so on Thursday you can “see” Sunday). Also useful are the Bureau 500mb (20,000ft) and 300mb (36,000ft) charts as these give a picture of the upper atmosphere.

The Bureau of Meteorology infrared (IR) satellite loop: this gives you a feel of how the current weather has been developing over the last four hours – this helps put some flesh on the bones of the surface charts.

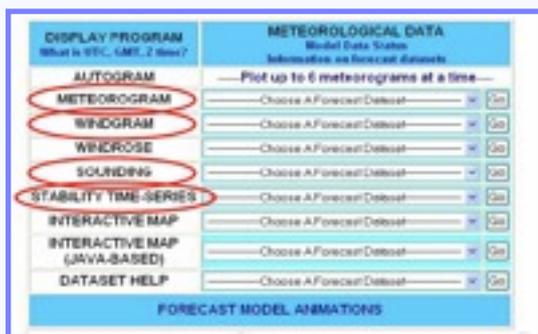
The Bureau of Meteorology 7 day rainfall charts: these will provide a feel for the wetness of the ground. Wet ground will suppress convection and can also make out landings/ retrieves a mite exciting!

*The Weather Zone* – if you become a free member, this site provides quite a bit of information that is presented in useful ways – including synoptic forecast charts that extend more than 4 days into the future.

NOAA\* global atmospheric model: this provides detailed information using global observations as an input and then applies a very sophisticated numerical model (running on supercomputers) to forecast the atmosphere in great detail for several days into the future.

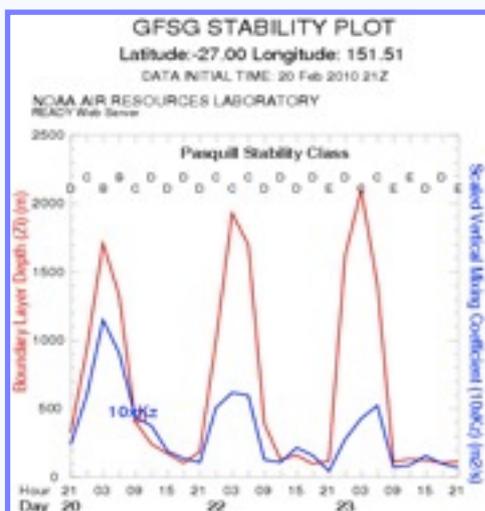


Several NOAA outputs provide input into our forecasting:

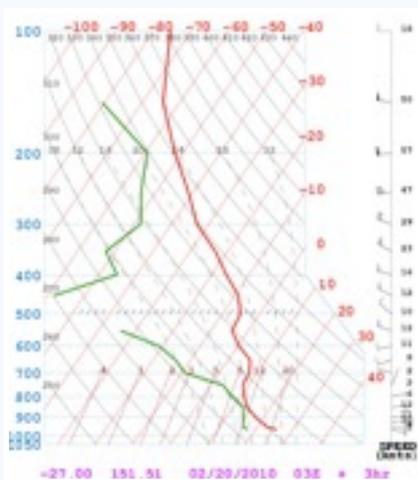


from the *meteorogram*, the surface temperature, the surface short wave radiation flux (the solar radiation reaching the ground – the basic input for thermal formation), cloud cover (a useful cross check), CAPE index (a measure of thunderstorm potential) and standard lifted index (a further thunderstorm indicator). (These items are selected from a drop down list when you go onto the meteogram page - Editor).

*Stability time series*– which gives a view of how stable/ unstable the atmosphere is and an indication of the maximum height of convection.



*Sounding*: a detailed chart providing a vertical view of the atmosphere which allows more detailed prediction of convection, cloud and wind.



AusRASP – the Regional Areas Soaring Prediction software provides a wealth of detail for all the soaring areas of Australia – but only for today, tomorrow and (available in the evening) for the day after tomorrow. It also provides access to yesterday's predictions so that you can compare them to what happened.

Air Services Australia area forecasts – these are essential reading as they provide additional information (such as wind vs height) and specific warnings. They also include the NOTAMs – which you as weather forecaster may be required to read and provide relevant extracts as part of your briefing. (The forecast and NOTAMs are really only useful in forecasts on the day – not for look ahead forecasts). Once you have the information assembled, all that remains is for you to



interpret it! Whilst there is a great deal of science involved, it is important to remember that weather forecasting is not yet an exact science (it has been described as 'horoscopes with numbers').

Furthermore, sometimes the various sources will appear contradictory. What this means is that you have to build up some experience with the various tools in your region. This means getting a feel for the the various data sources so that you can fit them together in a useful way. The following experience is based on about two year's experience using these tools in south east Queensland – so be prepared for things to be a bit different in your area.

BoM surface and altitude charts: a wealth of information is provided – it is well worth learning how to read and understand this. The variety of weather charts is available at <http://www.bom.gov.au/weather/national/charts/>

to get a start on reading these charts and speak to the weather gurus at your club for more detailed assistance. BoM also provides pressure charts at various altitudes up to the tropopause (approx 36,000ft), which are also useful as the jet streams at these altitudes are significant influencers.

BoM IR satellite loop: looking at this resource it is important to remember that what you are really seeing is the temperature of the water vapour in the atmosphere. This means that you can see the medium and high clouds but the

*low level clouds are practically invisible* as they are close to the surface temperature. So, an apparently clear sky may actually have quite a bit of low cloud. This resource is available at <http://www.bom.gov.au/products/IDE00902.loop.shtml>

Even with this limitation, this resource is useful as it allows you to put some 'flesh' in the form of clouds on to the synoptic chart, which helps understanding of what fronts and troughs may bring. It also helps to gauge the speed and direction that features are moving, which is important for a forecast. You can also see if systems are building or dying. A useful related resource is the combined synoptic chart/IR satellite picture available at the Weather Zone (see next page), which will help you understand how the charts and satellite picture interrelate. The other satellite views are also useful (black/white IR and visible in particular, but the visible is limited to daylight and there is no loop available).

BoM rainfall data: this is available in two places, but is being consolidated in January 2010 into the Australian Water Availability project are of the BoM website. At present, the detailed point data information is not available of those pages – and it is this that is most useful in terms of seeing just how much rain has fallen and where.



Of most interest is the rainfall data for the last seven days, and this is available at [http://www.bom.gov.au/cgi-bin/silo/rain\\_maps.cgi?map=points&variable=totals&area=aus&period=week&region=aus&time=latest](http://www.bom.gov.au/cgi-bin/silo/rain_maps.cgi?map=points&variable=totals&area=aus&period=week&region=aus&time=latest)

This allows you to drill down into the areas of particular interest and see exactly what has been recorded at which recording station. This is of more use to glider pilots than the 'smeared' maps as (at least in Queensland), rainfall from thunderstorms is very localised and only the point data will give you this very localised picture.

An important point to note is that this data is mapped up to 9am yesterday and yesterday's rainfall will not be included in an updated picture until about 11am (EST) today. The only way to get this more recent data is to look at the latest observations for your region. This is available at <http://www.bom.gov.au/weather/>

From here click on your state and then select Weather observations – All observations- (your state) and from here you can see the tabulated data of the regions in you state by observation site. So, for Queensland, the direct URL is

<http://www.bom.gov.au/products/IDQ60800.shtml>

and you can click on the region of interest to go straight to it in the listing.

The Weather Zone: there is a wealth of resources on this site, which is at <http://www.weatherzone.com.au/> Much of the data is a duplication or repackaging/ remixing of BoM data, but done in a way that aids understanding of what is happening in the weather. I strongly recommend that you become a member (free) so that you can access most of the resources. Some of the more advanced material requires a Silver membership, which costs \$5/month and I really don't see the value of this given the resources available from the BoM and NOAA for free.

Some of the resources I find useful here are:-  
Satellite map: which combines satellite and radar information, useful for tracking lightning and rainfall in the large systems (see the options at the bottom of the map to turn these features on/off). Remember, much of Australia is not covered by weather radar – so no visible rain may mean no coverage not no rain – know your local radar coverage – see <http://www.bom.gov.au/weather/radar/> for a map of weather radar stations. They also make a visible loop available, but the daylight limitation remains of course.

Synoptic charts: these are available by clicking Weather maps – Synoptic and provides a combined current synoptic chart and IR satellite view. It also gives 6 days of forecast synoptic charts, extending on the four available from the BoM.

Forecasts: these provide more detailed forecasts (including temperatures) than are

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available at the BoM – and for 6 days into the future.

Computer Models: I have only recently started exploring this area of the Weather Zone. It provides access to surface and other charts generated by a variety of models (including the BoMs models).

Next issue will continue with an instructional section by Robert of how to put together a Weather Briefing.

\*NOAA - additional details.

National Oceanographic and Atmospheric Administration: this is a US government site, but also an integral part of the World Meteorological Organisation (part of the UN). This site gathers together all the official meteorological observations from around the world and then uses them as the starting point for a global meteorological model that runs on its supercomputers. This resource is a key part of forecasting the soaring weather as it provides the detailed (i.e. with numbers and charts) and localised information that is needed. Some of the information (such as parts of the meteorogram and the sounding (SkewT/LogP) require more detailed explanation than is appropriate for this article (see specific articles on this web site).

### Duty Pilot Roster:

At the time of writing, we are trying to increase the number of volunteers on the roster. The roster will be extended beyond 21st March soon incorporating those additional people who have volunteered. The roster still needs more people on it, please volunteer if you are not already on the roster.

### Current Roster:

Sat 27th Feb - John Hook

Sun 28th Feb - Keith Allen

Sat 6th Mar - Richard Armstrong

Sun 7th Mar - Roly Sundell

Sat 13th Mar - Andrew Kloss

Sun 14th Mar - Graham Hennessey

Sat 20th Mar - Libby

Sun 21st Mar - Shane Roberts

A new look DDSC website is ready I believe, should be out in the wild soon...

The up to date rosters will be appearing on the website in the near future.

(Instructing roster is on next page)



### Instructing Roster:

Sat 27 Jeremy Thompson (L2/Coach)  
Paul Bart (L1)

Sun 28 Jenny Thompson (L2)  
Bob Flood (AE)

### March:

Sat 6 Peter Bell (L3/Coach)  
David Nash(AE)

Sun 7 Richard Hoskings (L2)  
Barry Daniel (L1)

Jo Davis (Coach/ AE)

Sat 13 Andrew Huggins (L3)  
Bob Flood (AE)

Sun 14 Alain Potier (L2)  
Pearce Mitchell (L1)

Sat 20 Charlie Downes (L2)  
Paul Bart (L1)

Sun 21 Ralph Henderson (L2/Coach)  
David Holbrook (AE)

Sat 27 Jeremy Thompson (L2/Coach)  
Greg Valler (AE)  
Mike Codling (Coach)

Sun 28 Jenny Thompson (L2)  
Chad Nowak (L1)