



GINNINDERRA CATCHMENT GROUP connects, supports and leads local communities to improve the health of Ginninderra Creek & surrounding environments

ACT and Region Frogwatch Program & the Ginninderra and Yass components of Upper Murrumbidgee Waterwatch operate from the GCG office

Website: NOW LIVE! <http://ginninderralandcare.org.au>; **Office:** Kippax Health Centre, Holt ACT; **Phone:** 02 6278 3309

GINNINDERRA CATCHMENT GROUP NEWS

AUGUST 2018

Please distribute this newsletter to others in your networks and groups.

From the Convenor

As advised in last newsletter, \$352,000 has been allocated from the ACT Government, across the three catchment groups (Ginninderra, Southern ACT and Molonglo) in 2018–19. A workshop with the Environment Directorate and Catchment Groups examined the value of catchment groups and potential future funding models. We are now close to finalising three projects to examine a future sustainable funding base for the catchment groups. With the support of the ACT Government, Frogwatch funding for this year has now been confirmed. Waterwatch funding is also secured for this year through ACT Government.

We recently provided a submission to an Environmental Impact Assessment on the Belconnen Trunk Sewer Project planned by ICON Water.

The next Executive meeting is planned for **Monday 17 September**. I wish Karissa well on her leave. Bernie Bugden will be replacing Karissa until early next year.

The newsletter again provides outlines of some of the wide level of activities being conducted across the catchment. Let's hope we get some serious rain soon.

Sandy Lolicato

[Acknowledgement of funding](#)

GENERAL GCG & LANDCARE – news from GCG Office

REMINDER: BERNIE BUGDEN STANDING IN FOR KARISSA

Bernie Bugden will be the Acting GCG Executive Officer while Karissa is on maternity leave. Bernie has over 20 years' experience in NRM and Catchment Management and is well-regarded within NRM circles in the ACT. **Bernie starts with GCG on Friday 7 September.**

REMINDER: GCG AT THE NATIONAL LANDCARE AWARDS: VOTE NOW!

The National Landcare Awards celebrate the achievements of Landcare volunteers around the country who dedicate their valuable time and energy into caring for the land and water that sustain us. GCG has been nominated for the National Fairfax Landcare Community Group Award. Lenore Hodgkinson, Convenor of the North Belconnen Landcare Group, has been nominated for the prestigious Individual Landcarer Award. GCG was also involved in the Green Army Partnership Program, which is nominated for the National Australian Government Partnerships for Landcare Award. 65 outstanding Landcare champions, across nine categories, make up the 2018 National Landcare Awards finalists.

Vote now for the People's Choice Award! This award is presented to the finalist who receives the most votes from the general public in the lead-up to the awards. The winner will be announced on Thursday 11 October at the Awards gala dinner. *Voting is now open and closes on Wednesday 10 October 2018.* Votes placed by 30 July 2018 will go into the draw to win a ticket to the 2018 National Landcare Conference and Awards and one entrant per state will win. Follow the link at <http://nationallandcareconference.org.au/awards/>

See [Around the Region, below](#), for conference registration details.

Karissa Preuss, GCG Executive Officer

WATERWATCH

WATER RAT (RAKALI) TALK

Thanks to everyone who joined us for a great talk on the biology and conservation of rakali, delivered by Geoff Williams, Director of the Australian Platypus Conservancy. If you do have sightings of rakali in our region, you can report them here: <https://platypus.asn.au/report-a-sighting/>

PLATYPUS MONTH

There is still time to participate in our platypus surveys: August is Platypus Month in the Waterwatch Program. If you are interested, please email Woo on waterwatch@act.gov.au to find out details of surveys. Good to hear some locals have spotted platypus at Lake Burley Griffin, more information in here: <https://www.canberratimes.com.au/canberra-news/platypus-calling-lake-burley-griffin-home-20180806-p4zvu7.html>

WATERWATCH EDUCATIONAL ACTIVITIES

Our Waterwatch educational activities will continue throughout 2018 and 2019 ☺.

If anyone is interested in educational activities for their kids' school, just contact Bruno at waterwatch@ginninderralandcare.org.au

WATER BUG SURVEYS

Coming soon: our Spring bug blitz (September/October), where we will be sampling macroinvertebrates (water bugs) throughout northern Canberra and Yass. This activity is part of our assessment of river quality because water bugs are good indicators of catchment health. You can register your interest by writing to Bruno at waterwatch@ginninderralandcare.org.au

Bruno Ferronato, Waterwatch Coordinator

FROGWATCH

FROGWATCH FINANCES

Frogwatch is back in business. We have received project specific funding from the ACT Government for the continuation of the Climate Change project and an extended re-run of the 2015 Bioindicator study. Both projects will contribute frog survey data for a total of 55 sites to the Frogwatch data base!!

In addition, many long-term volunteers have already put up their hands to continue their survey efforts around the FrogCensus time as per usual!!

This means that even without specific funding for the annual FrogCensus, data will be pouring in.

Frogwatch has also received much needed funding from Icon Water for the Tadpole Kits for Schools Program. The program has been booked out for a while and 120 teachers are looking forward to Term 4!!

GRAPHIC DESIGN FOR INFO BOOKLET

We are still in need of a graphic design savvy person – or someone that can use programs like CANVA – to spruce up the information booklet and make it visually pleasing!! Any takers??

VOLUNTEER NEEDED!

Frogwatch volunteer for Mulligans Flat needed!! For the Bio-indicator study, Frogwatch is looking for a dedicated volunteer interested in monitoring 2 ponds in Mulligans Flat, weekly for a 4 week period, starting on 1 October. The ponds are MFL007 and MFL016. These are best to access using a push bike because MFL007 is 650 m north east from the woolshed and MFL016 is another 1.8 km west from there. So unless you are keen on a 6 km walk I would recommend a bike ride – heaps of fun, especially when some bettongs hop into your light beam!!



In the map (on this page) the white marker shows MFL007, and the red marker the MFL016 site. In the blue circle you can see the woolshed. Walking in from the nearest car park is another 800 m. These are the coordinates for the two sites: MFL007 -35.163592, 149.163822. MFL016 -35.1665779, 149.178893.

NEW FROGWATCH PORTAL!

The new FW portal within the Canberra Nature Map is almost done!! You can actually start entering your data already.

Simply go to the Canberra Nature Map <https://canberra.naturemapr.org/>. Scroll to the bottom of the page and click on the (tiny) Frogwatch Icon. Create your log in (unless you already have a CNM log in). Go to 'Add a survey' > 'Frogwatch ACT Frog survey', and start entering your observations.

NEW FIELD DATA SHEET

With the new data portal, we have taken the chance and updated our field data sheet to better reflect the data that is needed most. Please see the new Field Data Sheet (2 images at the very end of this newsletter), or email me at frogwatch@ginninderralandcare.org.au if you would like to get your hands on it!! It has a few added parameters that we need to collect, such as the vertical drop in water level, evidence of mowing around the pond and width of exposed soil min/max. All parameters are explained on the back of the new field data sheet – so you will have them with you if you need clarification when in the field.

CALL ME! And keep on dancing...

Please let me know ASAP if you are either keen to help with the Tadpole kit booklet or with the Mulligans Flat monitoring!! In the meanwhile, please **keep doing rain dances!!** We so much need a good downpour!!

Anke Maria Hoefer

News from the catchment member groups

Reminder: ParkCare and Landcare display, Jamison Centre, 7–9 September

This annual display of what we do in our ParkCare and Landcare groups, mostly Ginninderra Catchment Group members, will be set up at 8 am on Friday morning 7 September. It needs staffing for ~8 hours each day until packdown at around 4.30 pm on Sunday 9 September. Please contact John Brannan (convenor@fotpin.org.au) to add your name to the roster of volunteers explaining our landcaring work to the shoppers. They are always *very interested* in what we do.

Mt Rogers Landcare (Spence, Melba, Flynn, Fraser)

Our next working bee is on Monday 3 September, meeting **at 9.00 am** in the **Wickens Place** carpark in Fraser.

Here are some snippets from our latest blog post, at <http://mtrogerslandcare.blogspot.com/>:

- There have been reports of Boobook Owls calling on Mt Rogers, and one dead young one found recently has now been accepted by the Australian National Wildlife Collection (website <https://www.csiro.au/en/Research/Collections/ANWC>). Please remember that **if you approach injured animals, use CAUTION. Wear gloves when handling dead animals.** To report injured wildlife (including its exact location and whether it's dead or alive), call Access Canberra (phone 13 22 81). Or you can call ACT Wildlife (phone 0432 300 033) for any injured wildlife, excluding kangaroos and snakes.
- Serrated Tussock plants have been being despatched by determined effort, with 200+ plants 'hitting the dust' in recent days.
- We thank the TCCS crew for removing our honeysuckle debris, and we shall be notifying them about our ivy infestations which are too difficult for our volunteer team to control.
- At least two people have reported seeing Echidnas on Mt Rogers.

Rosemary Blemings, Convenor

Friends of Mount Painter (Cook)

On a cool and windy day, 19 August, **we planted 250 grass and lily tubestock in the Wildflower Triangle.** Nineteen brave people turned out to plant, including some passers-by, newly arrived in Canberra who decided to join us. The purchase of the plants from Greening Australia's nursery was funded from Evoenergy's Tree Planting Fund. We are very grateful to Evoenergy for supporting us. And we thank the rangers, Marty and Michelle, for augering the holes for us, and the extra help from Persephone, a student



who has adopted the planting for a project for her conservation management course.

The planting is part of the grassland restoration project that Friends of Mt Painter and the Parks and Conservation Service are running. After the hazard reduction burn in



March, we sprayed the exotic grasses in part of the reserve, and it is there that we planted the natives. We also made an experimental planting of the contents of several large polystyrene boxes of Chocolate Lily bulbs that we were lucky enough to be given.

Our next activity, on Sunday 2 September, is a joint work party with Friends of Aranda Bushland. We will join them to plant along an eroded gully on their patch.

On Sunday, 16 September, 9 am–12 noon Friends of Mt Painter will be holding a **small extra work party** for the extra enthusiastic: weeding in the Old Road Reserve just south of the Community Garden on Bindubi Street.

Sarah Hnatiuk, Convenor, m. 0424 263 565



Friends of Mulligans Flat

The Friends of Mulligans Flat has over 500 members who have registered on our MyVolunteer database. It is through this database, supported by the Woodlands and Wetlands Trust, and FaceBook that we communicate news updates about the Mulligans Flat Wildlife Sanctuary, upcoming events and activities. Apart from the 'standard' park care activities (weeding and rubbish) the Friends can get involved in turtle relocation, echidna counts, bettong monitoring, bush-stone curlew feeding and assisting in a range of ANU projects.

Monthly Work Party:- held on the second Wednesday of each month. Meet at the Woolshed at 9:30am.

Seasonal Work Parties:- held on a Sunday morning once each season, actual dates are advised closer to the activity. We usually meet at the Woolshed at 10:00am.

MULLIGANS FLAT SANCTUARY EXTENSION

With the predator proof fence surrounding the Goorooyarroo extension to the Sanctuary nearing completion, the Friends of Mulligans Flat will have a significantly larger area to help look after – another 800 hectares!

AUGUST MONTHLY WORK PARTY

The August work party focused on the main priority in the new Sanctuary: namely, removing feral and exotic pests and predators, in particular rabbits. Our first foray into the extension was to search for signs of rabbits – burrows, warrens, diggings scratching and dung. With a detailed picture of rabbit activity and locations the Rangers can then target the pests, using the best and most efficient methods depending on the situation. It will be a long project!

UPCOMING ACTIVITIES

Spring Bird Walk: Our annual Spring Bird Walk is scheduled for **Sunday 9 September**, commencing at **9:00 am** from the Amy Ackman Street Carpark, Forde, and finishing about 11:30 am at the Woolshed in time for a cuppa. It is a leisurely walk suitable for all ages and there should be lots of avian activity as we move into the (slightly) warmer weather.

Monthly Work Party: The next monthly work party will be on **Wednesday 12 September from 9:30 am to 12:00 noon**, meeting at the Woolshed.

Mark Smith, Convenor

Friends of Aranda Bushland

Our work parties are on the first Sunday of the month, between 9 am and 12 noon. See our website for details: <http://friendsofarandabushland.org.au>

Our winter work parties have been devoted to keeping our bushland and grassland looking good. We spent two sessions on track maintenance, which involved clearing out rollovers with mattocks and rakes – quite hard work, but very warming.

The other activity was in the lower grassland, removing dead dry saffron thistles. They are terrible prickly and still contain many seeds, so we collected them using thick gloves, and stuffed them into wool bags for



the rangers to take away.

Our upcoming September work party is a joint session with Friends of Mt Painter. We do this every year, alternating between our two areas. This time we will be planting *Lomandra longifolia*, *Poa labillardieri* and *Acacia dealbata* to stabilise the banks of an eroded gully.

Lately we have removed six mature *Arbutus* trees from the bushland, which presumably have been there for years, and a few *Sollya heterophylla* as well. The photos show the

Arbutus before (left) and after removal. Note the huge bulbous root (right).



Jenny Andrews, Convenor

NOTE:

To contact the Landcare or ParkCare Group Convenors, email or phone the GCG office. The groups' webpages will be up again on the GCG website **when it has been rebuilt**: www.ginninderralandcare.org.au > Landcare > Landcare groups

Around the region

Stand Against Extinction. Threatened species day event, 7 September

Friday 7 September, 8.30 – 10 am, Parliament House lawns, Canberra.

NOTE. This was previously scheduled for Monday 10 September, but the date was changed late on Thursday.

The Conservation Council is supporting a call for 2000 people to attend this rally.

Alternatives available are:

- Sign up to show up via Facebook or Eventbrite.
- Part of a group, organisation, union or workplace? Get your members to turn out.
- Invite your friends! If you can't invite them face to face, send them a link to the Facebook or Eventbrite pages.
- Questions, support requests and creative ideas welcome: talk to info@placesyoulove.org

More information is at the Eventbrite page where you can register.

<https://www.eventbrite.com.au/e/stand-against-extinction-registration-47545813809>

Talkback: Community groups that help the environment while feeding the soul - Life Matters - ABC Radio National (Australian Broadcasting Corporation)

Intangible achievements come out in the open.

<http://www.abc.net.au/radionational/programs/lifematters/talkback:community-groups-that-help-the-environment-while-feed/10174262>

21st Australasian Weeds Conference, 9–12 September, Sydney

The Weed Society of New South Wales Inc., on behalf of the Council of Australasian Weed Societies Inc., is hosting the 21st Australasian Weeds Conference at Manly, in Sydney from 9 to 12 September 2018. To discuss new developments, go on field trips, and share information about cutting-edge and best weed management practices, register via <http://www.21awc.org.au>.

'Striving for Restoration Excellence', 25–28 September, Brisbane

This is the conference of the Society for Ecological Restoration Australia, for people who care about the bush, sea & waterways: scientists, managers, practitioners, policy makers & planners. Details:

<https://www.sera2018.org/>

National Landcare Conference 2018, 10–12 October, Brisbane

'Landcare – Building a Better Tomorrow' is the title of this year's conference. Registrations are now open for the conference and awards. Details are at <http://www.nationallandcareconference.org.au>. GCG and one of our group convenors (Lenore Hodgkinson, North Belconnen Landcare) are nominated in the national awards, so it would be great to have lots of GCG landcarers at the conference! Pip Courtney, host of *Landline* on ABC TV, will MC the conference and awards gala dinner.

Biodiversity and Climate Change Roadshow – 31 October Queanbeyan

The Biodiversity Node of the NSW Adaptation Research Hub is running a series of free roadshows, on the theme 'How can we conserve species from the impacts of climate change?'. This is a day of tailored training with leading climate adaptation researchers and practitioners, which will suit conservation practitioners at all levels. Explore interactive adaptation web tools; ask questions, engage in discussion & connect with other adaptation researchers & practitioners. More information: Victoria Graham, phone 02 9850 6298 or email Victoria.graham@mq.edu.au

To register: <https://www.eventbrite.com.au/e/biodiversity-climate-change-roadshow-queanbeyan-tickets-47943605615>

12th Australasian Plant Conservation, Conference, 11–15 November

'Moving house – a new age for plant translocation and restoration' is the title of this week-long conference at CSIRO Canberra ACT. If you join the ANPC you receive a discount on the registration fees. Find out more about APCC12, and register, at <http://anpc.asn.au/conferences/2018>.

Ginninderra Catchment Group is grateful for support from

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SCROLL DOWN to find the NEW FROGWATCH DATA SHEET (2 pages) as 2 images.

SUMMARY OF DATES IN THIS NEWSLETTER

2 Sept	Joint planting day for Friends of Aranda Bushland and Friends of Mt Painter, 9 am
3 Sept	Workparty for Mt Rogers Landcare, 9 am
7 Sept	Bernie Bugden starts as Executive Officer while Karissa is on leave
7 Sept	Rally for Threatened species day, 8.30 – 10 am
7–9 Sept	Landcare and ParkCare display at Jamison Centre
9 Sept	Bird walk at Mulligans Flat, 9 am
9–12 Sept	Australasian Weeds Conference, Sydney
12 Sept	Workparty for Friends of Mulligans Flat, 9.30 am
16 Sept	Workparty for Friends of Mt Painter, 9 am.
17 Sept	Next GCG Executive Meeting
25–28 Sept	Restoration conference, Brisbane
10–12 Oct	National Landcare Conference, Brisbane
31 Oct	Biodiversity and Climate Change day at Queanbeyan
11–15 Nov	Australasian Plant Conservation conference, Canberra



Frogwatch Field Data Sheet – August 2018

Please complete Field Data Sheet for each survey, for instructions, refer to the back of this page			
Site Code:		Date:	
Observers:			
WEATHER (Please tick the appropriate box that best describes the current conditions)			
SKY CONDITION	<input type="checkbox"/> Clear or a few clouds <input type="checkbox"/> Partly cloudy or variable <input type="checkbox"/> Cloudy (broken) or overcast <input type="checkbox"/> Fog <input type="checkbox"/> Drizzle <input type="checkbox"/> Showers		
	<input type="checkbox"/> Still= smoke rises vertically <input type="checkbox"/> Light breeze= wind direction shown by smoke drift <input type="checkbox"/> Light wind= wind felt on face, leaves rustle <input type="checkbox"/> Windy= leaves and branches in constant motion		
AIR TEMP:		°C	WATER TEMP: °C
HABITAT-			
WATER DEPTH:	<input type="checkbox"/> < 30 cm <input type="checkbox"/> > 30 cm <input type="checkbox"/> unknown <input type="checkbox"/> dry		
POND IS:	<input type="checkbox"/> FULL <input type="checkbox"/> NEARLY FULL <input type="checkbox"/> Bank VERY EXPOSED <input type="checkbox"/> NEARLY DRY <input type="checkbox"/> DRY		
WATER FLOW:	<input type="checkbox"/> Still <input type="checkbox"/> Slow <input type="checkbox"/> Moderate <input type="checkbox"/> Fast		
VERTICAL WATER LEVEL DROP to nearest 25 cm		_____ cm	
AREA OF EXPOSED SOIL (Highwater mark to current edge of water)		Min: _____ meter	Max: _____ meter
VEGETATION			
EMERGENT AQUATIC VEGETATION COVER OF POND	<input type="checkbox"/> none <input type="checkbox"/> just localized <input type="checkbox"/> <25% <input type="checkbox"/> <50% <input type="checkbox"/> <75% <input type="checkbox"/> <100% <input type="checkbox"/> entire pond		
FRINGE/EDGE VEGETATION COVER (along the highwater mark)	<input type="checkbox"/> none <input type="checkbox"/> just localized <input type="checkbox"/> <10% of edge <input type="checkbox"/> <25% of edge <input type="checkbox"/> <50% of edge <input type="checkbox"/> <75% of edge <input type="checkbox"/> <100% of edge <input type="checkbox"/> entire edge		
POND AREA SHADED BY TREES (AT LEAST PART OF THE DAY)	<input type="checkbox"/> none <input type="checkbox"/> <10% <input type="checkbox"/> <25% <input type="checkbox"/> <50% <input type="checkbox"/> <75% <input type="checkbox"/> <100%		
EVIDENCE OF MOWING:		<input type="checkbox"/> yes <input type="checkbox"/> no	
WIDTH OF UNMOWN BUFFER AROUND POND:		<input type="checkbox"/> <1m <input type="checkbox"/> 1-5m <input type="checkbox"/> >5m	
INVENTORY OF SPECIES: Estimates of numbers: 1 – 5 6 – 20 21 – 50 51 – 99 >100			
Species Detected	Number	Comment	
<i>Limnodynastes tasmaniensis</i> (Spotted grass frog)			
<i>Crinia parinsignifera</i> (Plains froglet)			
<i>Crinia signifera</i> (Common eastern froglet)			
<i>Limnodynastes dumerilii</i> (Eastern banjo frog)			
<i>Litoria verreauxii</i> (Whistling treefrog)			
<i>Litoria peronii</i> (Peron's treefrog)			
<i>Uperoleia laevis</i> (Smooth toadlet)			
<i>Limnodynastes peronii</i> (Brown-striped frog)			
<i>Neobatrachus sudelli</i> (Spotted burrowing frog)			
Other species??			
ADDITIONAL COMMENTS:			
Please take this sheet with you and fill in all the survey details. Submit the data and recording online. Contact us for assistance: P: 6278 3309, 0429066046, frogwatch@ginninderralandcare.org.au , PO Box 446, Holt, ACT 2615			

Further details about collecting data: A survey will take approximately 15 mins.

To do a survey at your chosen Frogwatch site(s) you need a

- Field data sheet
- Torch
- Recording device (e.g. phone, mp3 recorder)
- Thermometer (provided by FW)
- Watch, a ruler or marked stick until you get used to estimating distances

During a survey you need to collect all requested parameters AND a 3min recording (even if no frogs are calling). State all observations, the time, date and site code at the beginning of the recording- then start the 3mins.

1. How to determine the pond level (depth of pond):

This will provide important information about the holding capacity of the water body. Simply guess if the pond level is <30cm or >30cm, then decide which of the below describes the pond best:

POND NEARLY FULL = distance to plant cover less than 25cm

POND BANK VERY EXPOSED = large area of exposed mud, gravel etc.

POND NEARLY DRY = just a muddy puddle left in a large area of dry or damp clay, silt etc.

POND DRY = dry cracked clay, no water

2. Waterflow

Is the water flowing- if yes then how fast?? Ponds are generally STILL

3. How to measure the exposed soil between high water mark and current water's edge:

Cast your eye along the edge of the water, all the way around the pond. Find the spot with the largest and with the shortest distance between the highwater mark and the water's edge. Measure the distance and enter your results onto the field data sheet. If a pond has fringe vegetation that covers the distance between edge of the pond and the highwater mark your measurement will for the shortest distance will be 0m. All measurements should be in meters.

4. Vertical water level drop

Instructions for determining how much a pond water level has dropped:

Go right to the edge of the water and look back towards the bank. Find the highwater mark and squat down so that your eyes are in line with it. Now estimate the vertical difference between the highwater level/your eye level (pond full) and the current level (where your feet are) by 'eye-balling' it to the nearest 25cm.

How to train yourself to get it right:

You can train yourself by taking along a 1m ruler (or a piece of wood 1m long) and standing it at the water's edge (you can tape the ruler onto a sharpened stake that can be pushed into the mud/clay without it covering up part of the ruler - alternatively you can just take a stake and mark the 20 cm increments on it but leave some of the stake so it can be pushed into the clay. Then squat down behind or beside the ruler so your line of vision is about level with the highwater mark to make the visual estimate.

Then tie a string at the sighted level, run it across to the nearby highwater mark, level it (with a line-spirit level, \$5 at the hardware store) and read the measurement- this will be a good practise to find out if your estimates are good enough. It doesn't need to be too accurate – just to the nearest 25cm.

1: Full; 2: 1 to 25 cm down; 3: 26-50 cm down; 4: 50 - 75 cm down; 5: 76-100 cm down; 6: greater than 1 metre down).

5. How to determine the effect of mowing:

Can you see if there is any evidence of recent/regular mowing within 10m of the pond? Answer

No or **yes**. If yes then go into a bit more detail about the width of unmown buffer around the pond? Is it
 <1m 1-5m >5m?

6. How to determine the amount of emergent aquatic vegetation:

This will describe the percentage of current pond surface area that is covered by vegetation above the water. Your estimate will have to fit into one of the following categories:

NONE	JUST LOCALIZED	COVERS <25% of pond	COVERS <50% of pond
	COVERS <75% of pond	COVERS <100% of pond	COVERS the entire pond

7. a) How to determine the amount of fringe/edge vegetation and b) the amount of shading by trees:

a) This will describe the percentage of vegetated pond edge, i.e. how much of your pond edge is covered with vegetation? If the pond is less than full you will still need to look at the **fringe vegetation at the HIGH-WATER MARK**- NOT next to the current water level!! Your estimate will have to fit into one of the following categories:

NONE	JUST LOCALIZED	COVERS <10% of edge	COVERS <25% of edge
COVERS <50% of edge	COVERS <75% of edge	COVERS <100% of edge	ENTIRE edge vegetated

b) This describes the percentage of pond surface that receives shade from surrounding trees/bushes for at least part of the day. No trees close to the pond will mean no shade. Naturally, trees on the northern edge of a pond will provide good shade, whereas trees on the southern side will not. Tall trees provide more shade than small trees or bushes.

8. Weather conditions

Observe the sky and wind conditions as described, measure the air temperature first. The water temperature is measured at the side of the pond, at an arm's length and 5-10cm below the water surface.

9. Inventory of species

Give it a go!! Try to identify the species you might have heard, and their abundance.