



David De Angelis is our April guest presenter with *“Surveys of coastal wetlands in far East Gippsland for aquatic vertebrate fauna”*



David is a naturalist, zoological consultant and environmental educator with particular interests in herpetology and the survey, conservation and ecology of freshwater fauna. In consultation with Parks Victoria and with support from colleagues and Holmesglen Institute, a number of wetlands along the far East Gippsland coast have been rapidly surveyed for aquatic vertebrates, mainly focussing on fish and frogs. Some of these wetlands have not previously been surveyed for aquatic fauna, or

are otherwise infrequently visited by ecologists due to their remoteness. David will talk about the trapping methods used to survey for fish and tadpoles, and provide an overview of the results from these and broader observational surveys for fauna in coastal wetlands from Cape Conran east to the New South Wales border. Several threatened species were recorded, further highlighting the importance of protecting these unique habitats, including from deer impacts.



Top: A roadside wetland near Cape Conran. Middle right: Striped Marsh Frog *Litoria peroni* from near Cabbage Tree Creek. Lower right: Green Stream Frog *Litoria nudidigita* from Cabbage Tree Creek. Lower left: Young Creek north of Orbost. Photos: Greg Martin

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A big thank you to the ANGFA members that continue to attend our field trips - it is always great to get out into the natural world. Field tripping is fun!

Enjoy this edition and we'll see you at the next meeting on Friday 5th April for a relaxed evening of learning, of fun, plenty of chat time and catching up with fellow fishos!

President's Report April 2024



Welcome to VICNews 134! At our club meeting of 2nd February, Dr Rob Walsh gave a terrific presentation on *microinvertebrates* - a whole world not usually visible with the naked eye - but incredibly important in the ecology of any wetland system. His photos of these small critters were extraordinarily good and we were given a comprehensive look into this amazing minute world.

Our raffle on the night was pretty special: Chris Lamin had brought to the meeting a bag of 10 captive-bred Yarra Pygmy Perch as a raffle prize. We think this is the first time that this endangered species has ever been offered in the trade and the bag was won by John Coates (Coatsey) pictured with Chris Lamin (right). Perfect.

The weekend of 10th and 11th February 2024 was an overnight trip to the **upper-mid Goulburn River** to collect eDNA samples, looking for *Galaxias rostratus* DNA, as part of the NCCMA funded eDNA collection effort. It was a most enjoyable 2 days and you can see some of the beautiful spots we visited in the pictorial article starting on page 4.



Possible Flathead Galaxias *Galaxias rostratus* habitat? A billabong on the Mitta Mitta River that we sampled for eDNA on our weekend of eDNA sampling in north east Victoria. Hopefully, when the collected eDNA samples are processed, we'll get an answer. Photo: Greg Martin



Dr ROBERT WALSH

Aquatic Micro-Invertebrate Ecologist/Taxonomist



Snaps from Dr Rob Walsh's presentation on 2nd February. Microinvertebrate photos by Dr Walsh.

Field Trip Files: eDNA collection trip to north-east Vic, 10th - 11th February 2024



eDNA collectors, left to right: Peter Rose (NCCMA), Rod Wubben, Will Honybun (NCCMA), Peter Richmond and Glenn Briggs at Seven Creeks, just northwest of Euroa, north central Victoria. Photo: Greg Martin

As described in **Detection and management of the threatened Flatheaded Galaxias (*Galaxias rostratus*) - Testing eDNA and physical sampling, and analysis of population genetics** by Tarmo A. Raadik, Daniel J. Stoessel, Nicholas Murphy, Peter J. Unmack and Peter Rose from June 2023, “Flatheaded Galaxias (FHG) is a small native freshwater fish species which has undergone a dramatic decline in range and abundance in the Murray-Darling Basin. It is now considered extinct in South Australia, and critically endangered nationally and in New South Wales. Most remaining populations are in northeastern Victoria, where the species is rarely encountered, but due to sampling difficulties, locations of self-sustaining populations are unknown. In addition, the species biology/ecology and habitat requirements are very poorly known. Consequently, due to poor knowledge and lack of effective detection, conservation management has not commenced.”

Flatheaded Galaxias are also one of the “Magnificent 6” small-bodied native fish species from the lower-Murray corridor which are being targeted for intensive conservation efforts in recent years: Southern Pygmy Perch, Southern Purple-spotted Gudgeon, Murray Hardyhead, Yarra Pygmy Perch, Olive Perchlet and Flathead Galaxias.

Dr Tarmo Raadik and colleagues from Arthur Rylah Institute have developed an eDNA probe using actual DNA from Flatheaded Galaxias and this is being used to help detect the presence FHG in locations that either have historical records of FHG or meet the criteria for a ‘likely to have FHG present’, in an effort to find viable populations in the wild that can be used to start breeding programs in surrogate dams and eventual repopulating of suitable wild sites.

Dr Peter Rose, project manager at North Central CMA, with help from traditional owner groups, landcare groups and other volunteers organisations like ANGFA Vic has been continuing on with the eDNA

work initially undertaken by Arthur Rylah Institute. This has involved systematic eDNA collection from likely sites carefully chosen across north east Victoria. Our field trip over the weekend of 10th and 11th February was helping with eDNA collection at some of these sites.

After meeting at midday at Euroa for lunch we headed to our first site (site 20), Seven Creeks northwest of Euroa. In an impromptu onsite training session North Central CMA’s Will Honybun carefully ran us through the eDNA collection method with. The process involves

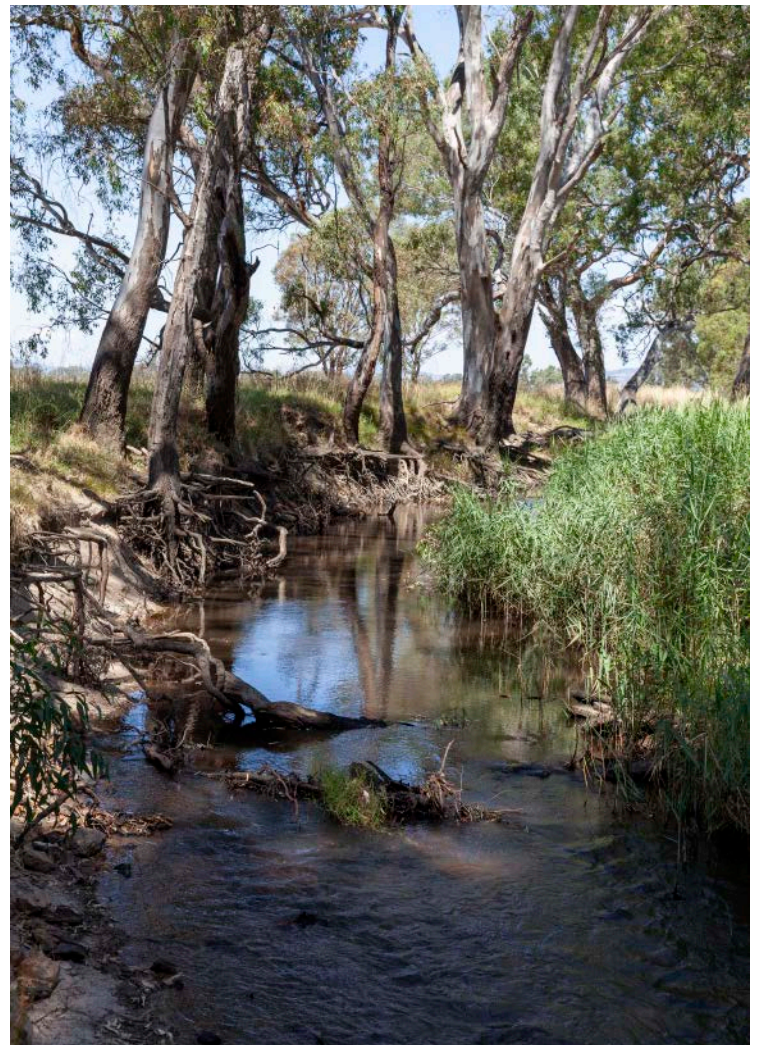


Will Honybun from NCCMA demonstrates using a syringe to push water through the eDNA collection filter. Photo: Greg Martin



Above: Seven Creeks, downstream (above) and upstream (below right) of the Leckies Road bridge. Photos: Greg Martin

gloving up and using a large syringe to push water through a 'Sterivex filter' - a clear cartridge containing special paper that traps eDNA from the water. As the water gets harder to push through the filter you switch to using a caulking gun for the last part. The volume of water pushed through the sample is recorded. Then the cartridge is purged of water by syringing air through it. Then a fixative is injected into the cartridge. Finally the cartridge is carefully capped and bagged. Three samples are taken at each site from upstream, in the middle and downstream of the site. After this, and to make the best use of the available human resources, the 6 of us split into two groups of 3 so that we could collect eDNA from all the sites earmarked to be sampled over the 2 days allocated.



Above: Will Honybun showing us how to carefully seal off the filter after collecting eDNA. Photo: Greg Martin



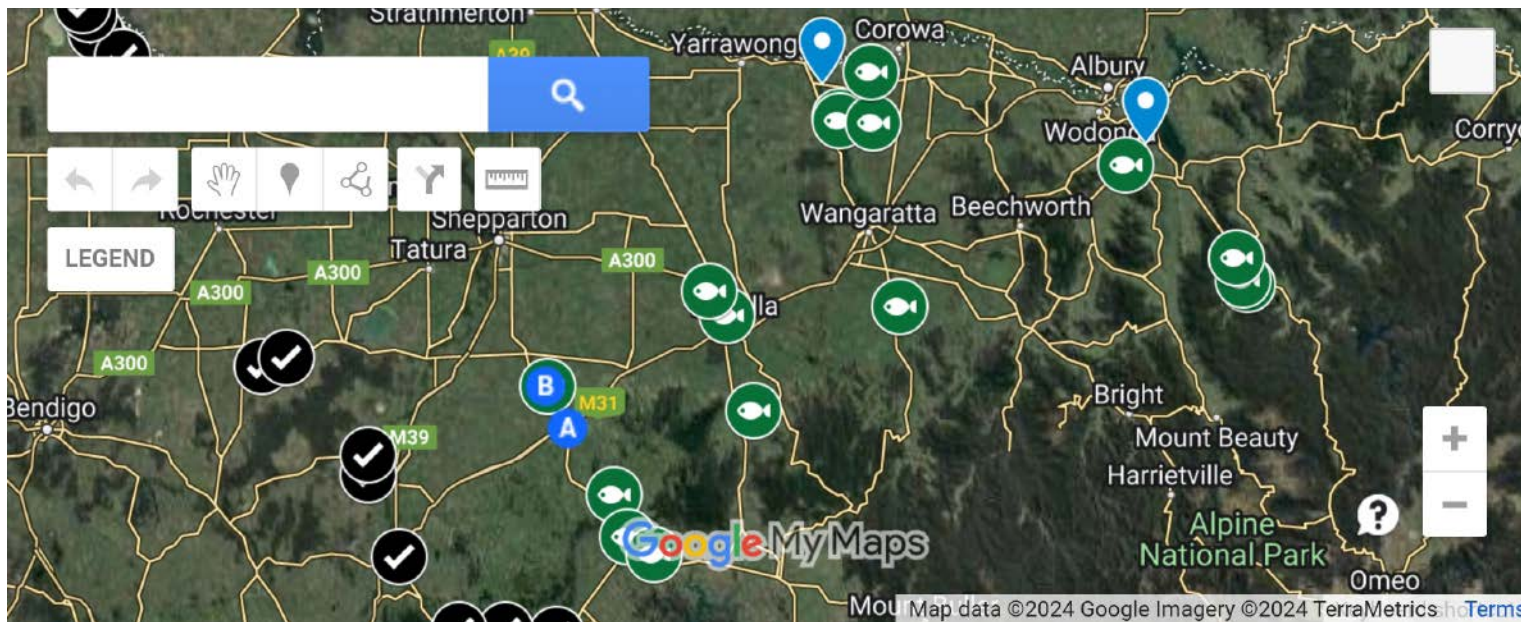
The group I was in one the first day (with Will Honybun and Peter Richmond) then drove east to take samples from Castle Creek in Moorngag, south of Benalla - Site 25 on our map from Peter Rose.

Castle Creek was not flowing but there was evidence of recent huge flows: tree stumps, logs and branches were piled up below the bridge and a section of fence was missing. In the still brown water below the bridge we saw a lot of Gambusia. We took the 3 water eDNA samples and photos upstream and downstream for our records.

Our next site was a billabong by the King River in Docker, south of Wangaratta - Site 9.



Above: Castle Creek at Castle Hill Road, Moorngag: downstream (above left and right) and upstream (top). Photos: Greg Martin



Above: Flatheaded Galaxias CitSci Project map, showing the sites we looked at (in green).

After a hard afternoons eDNA sampling, we headed up to Wangaratta for dinner and a comfortable hotel for the night (thank you Peter

Rose!). First item on the evening’s agenda, after checking in, was some quiet beers as we waited for the other team of 3 to arrive. The Quality Hotel Wangaratta Gateway is very nice with great service and appears to be the main quality dining in the area with steaks folks travel from far and wide for. The weather was warm and we sat outside to dine. The beers was much appreciated. The company terrific. And to top it all off, my vegan meal was good too!



In the morning we carefully checked that each eDNA kit had all the items required (this had been an issue the day before and we had to borrow different missing items from the spares bag). We split once again into 2 groups of 3 (a different combination this time) and headed out.





Above: Yackandandah Creeks on Lindsay Road, downstream (above) and upstream (middle right). Photos: Greg Martin

Our first site was a long drive northeast - Site 33, Yackandandah Creek, on Lindsay Road, Staghorn which is south south east of Wodonga.

After this site we headed over the Kiewa River and headed up the Lockharts Gap Road and across the range to Tallandoon on the Mitta Mitta River.



Above and lower right: Taking records of water volume put through the filter, site name, location and other important information. Photos: Greg Martin



Above: Yackandandah Creeks on Lindsay Road, downstream (above) and upstream (middle right). Photos: Greg Martin

Site 50, a billabong alongside the Mitta Mitta River, looked very much like the sort of habitat that (we imagine) Flatheaded Galaxias would live in, and Peter Rose could barely contain his quiet optimism. It is a long stretch of water with cumbungi (Bull Rush) at the north end but a lot of open water in the section we took the samples in. We saw a

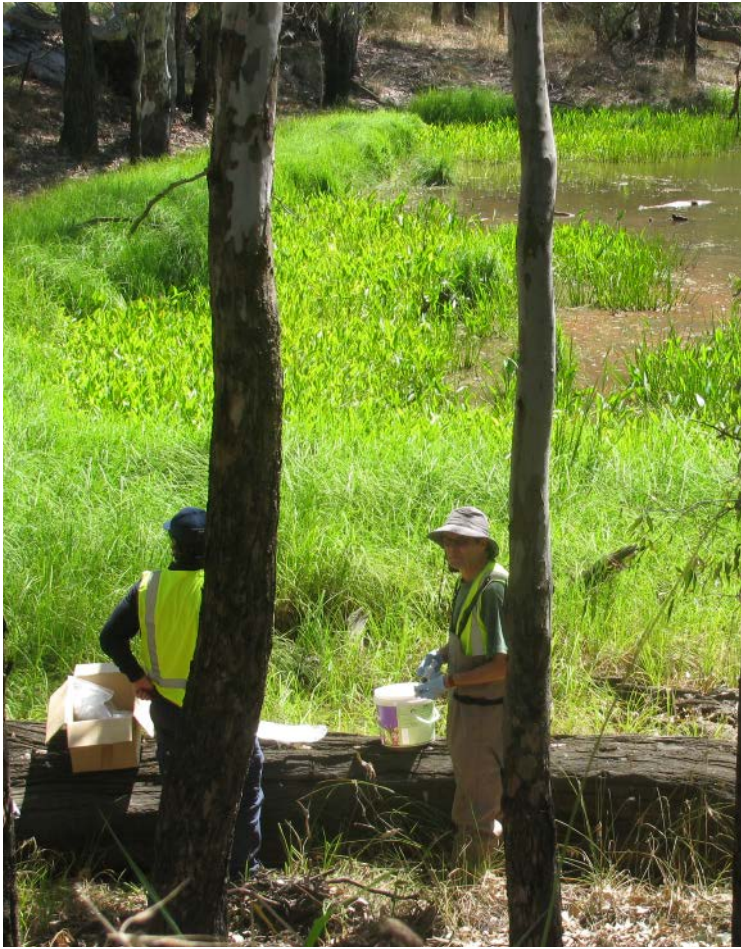
few *Gambusia* along the edges and watched a couple of curious Water Skinks on a log at the water's edge.



Left and bottom: Phil Littlejohn about to embark on digging up a crayfish burrow along the bank of the Heazlewood River. Top right: an enormous Water Spider (*Pisauridae?*) sitting on a stump by the river. It could be spotted a fair way away as the leg span, front to back, was every bit of 150mm. Photos: Greg Martin



Top and above: Polly McQuinn Weir. Inset: Syringing fixative into the eDNA sample. Photos: Rod Wubben



Top: Parolas Bridge on the Ovens River north of the Murray Valley Hwy. Back up site number 2. Above: Lower Ovens River. Photos: Rod Wubben

Club meeting details and key contacts of ANGFA Vic

Office Bearers 2023

President: Greg Martin 0407 094 313
Treasurer: John Lenagan 0413 730 414
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Field Trip Coordinator: Greg Martin 0407 094 313
Field Trip Safety Officer: Rodney Wubben 0409 890 866
Membership Officer: Rodney Wubben 0409 890 866
Committee members: Chris Lamin, Paul Byham, Gybe Forster, Matt McGee, Sunny Syme and Peter Gauci
VICNews: Greg Martin

ANGFA VIC CLUB MEETINGS
are held at the
Field Naturalists Club of Victoria
1 Gardenia Street Blackburn, Victoria

Doors open at 7.30pm

Meeting dates for 2024:

Friday 2nd February 2024
Friday 5th April 2024
Friday 7th June 2024
Friday 2nd August 2024
Friday 4th October 2024 (Includes our AGM)
Friday 6th December 2024

Victorian ANGFA National LIFE MEMBERS

Past

Ron Bowman and Barry Crockford

Present

Neil Armstrong, Glenn Briggs, Ken Smales and Tony Tucceri

Other fish groups in Victoria

Plant Study Group Contact: Eddie Tootell (03) 9337 6435
Aquarium Society of Victoria Contact: Daryl Maddock (03) 9874 1850
Native Fish Australia Vic. Contact: Tim Curmi 0417 419 765