

FROM THE PRESIDENT

We've got a bit of a Growling Grass Frog special for you this edition. Also known as the Southern Bell Frog, the species is gorgeous, charismatic, and like so many other frog species, at risk around the state. I hope you enjoy reading this issue as much as I did! Big thanks to all our contributors for your great articles.

A massive thanks to all who supported our mini-conference again this year. A great mid-winter treat. If you missed it, the videos will be on the website soon. Keep an eye open for them. It was a fabulous night with such a great variety of talks and a massive display of enthusiasm from all!

Lastly, a reminder that we love to hear your feedback. If you have any suggestions, requests or compliments, our tympanic membranes are always keen! Email info@frogsvic.org or give us a shout through our [contact page](#).

Thanks for your ongoing support.

For the frogs,
Lynette Plenderleith



AGM WRAP-UP

A massive thanks to everyone who turned out for the AGM! If you want to read the minutes, check them out at www.frogsvic.org/agm

A few changes to the committee saw the election of Candice Sexton and Danielle Wallace and the role of Vice President not filled. Massive thanks to Nick Clemann for his all his previous work since the founding of Frogs Vic and hope (and audaciously expect!) that he will rejoin the committee at a later date. More details about the committee can be found at www.frogsvic.org/committee



2023 Elected Committee

President: Lynette Plenderleith

Secretary: Colin McHenry

Treasurer: David De Angelis

(Extra)Ordinary Member: Matt Clancy

(Extra)Ordinary Member: Danielle Wallace

Events Sub-committee: Maggie Haines (Events Coordinator); Candice Sexton; David De Angelis

FROGS ON IN VICTORIA

August

3rd Nick Clemann, [Frogs of Victoria – A new resource for fighting extinction](#) Elgin Inn, Hawthorn; **Frogs Victoria**

17th [Winter Frog Census](#) Nangak Tamboree Wildlife Sanctuary, Bundoora; **Nangak Tamboree Wildlife Sanctuary**

23rd [Frog Walk](#) Yarran Dheran Nature Reserve, Mitcham; **Friends of Yarran Dheran**

September

7th Peter Griffioen and Louise Durkin [Frogs Vic September Event](#) Elgin Inn, Hawthorn; **Frogs Victoria**

October

5th [Frogs Vic October Event](#) Elgin Inn, Hawthorn; **Frogs Victoria**

16th [Spring Frog Census](#) Nangak Tamboree Wildlife Sanctuary, Bundoora; **Nangak Tamboree Wildlife Sanctuary**

29th [Frog Walk](#) Yarran Dheran Nature Reserve, Mitcham; **Friends of Yarran Dheran**

November

2nd [Frogs Victoria End of Year Social](#) Elgin Inn; **Frogs Victoria**

3rd-12th [FrogID week](#) Nation-wide; **Australian Museum**

26th [Frog Walk](#) Yarran Dheran Nature Reserve, Mitcham; **Friends of Yarran Dheran**



Got an upcoming event?

Submit it to pobblebonk@frogsvic.org and we'll include it next time!

AROUND THE (PIT) TRAPS

[FrogID week 2022 results announced](#)

[Southern Toadlets in Western Port Woodlands](#)

[Environment Victoria's "Doomed Without a Drink" report claims frogs at risk in the Murray basin system](#)

[Citizen scientists reveal new information about frog call "accents"](#)

[Wetlands Revival Trust, a conservation-minded group of farmers, build a wildlife haven in a swamp](#)

[The frogs of Holey Plains](#)

Got a news story? Email us at ed@frogsvic.org

TWO DECADES MONITORING GROWLING GRASS FROGS ACROSS NORTHERN MELBOURNE

Dr Geoffrey Heard, Terrestrial Ecosystem Research Network and Centre for Biodiversity and Conservation Science, University of Queensland

In November 2001, Peter Robertson, Michael Scroggie and I began what has become a two-decade long effort, setting off on our first surveys for the Growling Grass Frog (GGF, *Litoria raniformis*) across the northern suburbs of Melbourne. Our start was in response to a crisis. The Victorian Government had committed to a gas-fired electricity plant on the western side of the Merri Creek, necessitating a pipeline be dug from Epping across to Somerton. The alignment went through prime GGF habitat, and after protests by Friends of the Merri Creek and Friends of the Earth, the Victorian Government agreed to fund research on the GGF populations of the Merri and surrounding catchments.



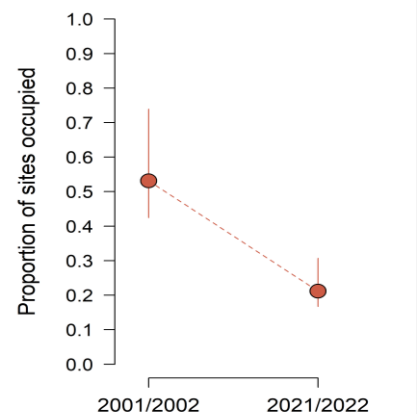
Left: A metamorph Growling Grass Frog from the Merri Creek in Somerton.

At that time, the status of GGFs across the region was uncertain. Our task was to complete surveys to clarify the species' regional distribution, and to undertake statistical analyses that could shed light on its habitat requirements. In that season, with the assistance of a small team of volunteers, we completed surveys at 136 sites. We identified key metapopulations in Bundoora and Wollert (Darebin Creek), Campbellfield, Somerton, Donnybrook and Merriang (Merri Creek) and Broadmeadows (Yuroke Creek).

Since that initial season, we've continued our work on GGFs across northern Melbourne under various guises and with a large team of collaborators. We've monitored key sites intensively in some years and returned to attempt a full re-survey every 5 years. The 2021/2022 season represented the fourth such re-survey, 20 years after the initial work. Backed by funding from the Victorian Department of Energy, Environment and Climate Action, Melbourne Water and the City of Whittlesea, we assembled a dedicated team of froggers to go once again into the breach. What we discovered was something of a shock.

Our long-term work has revealed that GGFs have been declining steadily since our initial surveys. In 2021/2022 however, estimated occupancy rates among the 118 sites we could survey in both 2001/2002 and 2021/2022 were a mere 21%, down from the initial figure of 53%. That's a decline of 60% in two decades among this set of sites (Figure 2). A much more drastic decline than we had expected.

Right: Estimated occupancy rate for *Litoria raniformis* among 118 sites across northern Melbourne during the 2001/2002 and 2021/2022 seasons. Dots are median estimates and vertical lines 95 % credible intervals.



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TWO DECADES MONITORING GROWLING GRASS FROGS ACROSS NORTHERN MELBOURNE

(Continued from Page 3)

Why? The reasons are various, but urbanisation and the ongoing impacts of chytridiomycosis are key. Since 2001/2002, the region has been transformed by the construction of entire new suburbs and industrial precincts, with associated freeways and massive road duplications. All this has led to significant habitat change. Filling of significant quarry refuges has led to the loss of entire metapopulations, and much instream habitat is no longer suitable as urban runoff has transformed clear, languid pools with rich aquatic vegetation into turbid, polluted reaches in which invasive fish thrive (below). Livestock grazing has also been removed from key locations, leading to choking of terrestrial habitat by weeds and invasive emergents, like *Phragmites* (below).



Above: A pool along the Merri Creek in Somerton comparing habitat conditions in 2001/2002 with those in 2021/2022. The rich aquatic herbfield has been lost due to urban runoff, and the terrestrial environment is now choked by vegetation following the cessation of cattle grazing.

Turning to chytrid, we've long known that GGFs remain susceptible to this pathogen. Swabbing during my PhD revealed that infection prevalence can be high, with important effects on survival rates. The particularly low occupancy rate during 2021/2022 was likely influenced by chytrid, being the second La Niña year in a row. Chytrid displays maximum killing power during cool conditions, and we have little doubt that there was increased mortality in those years. These spikes in mortality can be fatal for instream populations in La Niña years, as high flows lead to recruitment failure as well. It was among instream sites that occupancy rates were particularly low in 2021/2022.

That's the bad news: GGF have been declining steeply across northern Melbourne and are at risk of regional collapse. The good news is that after two decades of work, we now have a solid understanding of the species' conservation requirements and know that we can create wetland networks with just the right set of characteristics to preserve metapopulations long-term. We are buoyed that the Victorian Government has committed to habitat design standards for GGF that are informed by this work and used our metapopulation model to guide significant investment in wetland construction in dedicated conservation corridors across Melbourne. Our modelling tells us that these programs have a good chance of conserving GGFs around Melbourne if implemented in full and with ongoing management of the habitat. The key is ensuring that conservation efforts are not outpaced by the dual impacts of urbanisation and chytridiomycosis. Our long-term monitoring across northern Melbourne suggests this is a clear risk, particularly under an increasingly volatile climate.

AMPHIBIAN GENOMICS CONSORTIUM (AGC)

Dr Tiffany Kosch, University of Melbourne

Are you interested using genetics or genomics to learn more amphibian ecology, evolution, or conservation? Would you like to meet other scientists from around the world working in this field?

Come join us at the Amphibian Genomics Consortium (AGC). We're an international initiative dedicated to promoting the advancement and wider application of genomics tools in amphibian research and conservation. We plan to achieve this by facilitating the generation of high-quality genomic resources and providing the tools and resources for people with different scientific backgrounds to use them.

To join us, please complete the member sign-up form on our website and join us at our next monthly virtual meeting : <https://mvs.unimelb.edu.au/amphibian-genomics-consortium>

Join AGC



SHOW US YOUR FROGS!

Have you got an idea for a talk? It doesn't have to be scientific, it doesn't have to be long, it just has to be about frogs!

We are looking for speakers for 2024 and would love to see you talk. Please email events@frogsvic.org

GROWLING LOUD IN WINTON WETLANDS: REWILDING THE GROWLING GRASS FROG

Dr Lisa Farnsworth and Lance Lloyd, Winton Wetlands Committee of Management



Growling Grass Frogs (GGF), *Litoria raniformis*, were once common, but are now a threatened species in Victoria (Vulnerable under FFG Act), and elsewhere in their natural range (Vulnerable under EPBC Act in Australia). The northern subspecies (*L. raniformis raniformis*) was once present across northern Vic, southern NSW and SA. Isolated populations still exist, but these are in danger. As predators of other frogs and insects, GGFs are functionally different from many other frog species and therefore an important species in an ecosystem. They are large and a crucial food source for predatory wetland birds. Ultimately, rewilding of GGFs will help secure the species locally and regionally, increase biodiversity, and restore critical ecological functions and processes to Winton Wetlands.

At our 2016 Science Forum, we examined the potential of re-introducing species we had lost at Winton Wetlands, as a component of the actions we were taking in our restoration program, especially those struggling to recolonise the site due to their patchy and distant distribution, such as the GGF. We assessed the feasibility of rewilding GGFs based on habitat suitability and disease risk in an initial project, funded by Wettenhall Environment Trust. We monitored the wetlands using audio recorders to be more confident of the species' absence and completed translocation risk assessments and designed infrastructure to allow the breeding and re-introduction of the species. All of this confirmed that translocation of GGF onto our site was a feasible restoration action.

Move forward to 2023, Winton Wetlands has now established a custom-built quarantine and laboratory facility to receive frogs (and other animals over time), as well as outdoor breeding habitat pods, which will allow the production of tadpoles and metamorphs (juvenile frogs) for stocking onsite. In order to gain permission to move frogs, we also had to prepare extensive documentation around this project which included facility licenses, ethics approvals and applications for the Threatened Fauna Translocation Evaluation Panel, the Department of Environment, Energy and Climate Action, and the EPBC Referral Gateway for Commonwealth Government approval (no mean feat!). If you are planning a translocation of any species, but particularly an EPBC listed species, we would advise reviewing these requirements upfront as there is a lot of information required by the authorities.

We have recently successfully translocated our first cohort of GGFs from the Bendigo Water Reclamation Plant to our quarantine facility at Winton Wetlands. The GGFs translocated to date are doing very well and are now ready for movement into their outdoor breeding facility in early spring.



Left: Dr Lisa Farnsworth holding a Growling Grass Frog in the Winton Wetlands quarantine facility.



Right: Lance Lloyd with a Growling Grass Frog caught at the Bendigo Water Reclamation Plant.

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GROWLING LOUD IN WINTON WETLANDS: REWILDING THE GROWLING GRASS FROG

(Continued from Page 6)

We have established “Taskforce Growler” alongside our translocation, breeding and release program, to provide a region-wide initiative to support the work at Winton Wetlands, broaden region-wide education on frogs and wetland ecosystem restoration, and to expand the work regionally with various partners such as Catchment Management Authorities and land & water managers.

“Growing Grub for Growlers” is a community-based program of Taskforce Growler that involves community volunteers to raise wood roaches and leafy greens for the frogs, and tadpoles as they are kept in captivity and then start breeding.

Another subset of “Taskforce Growler” is the GGF Practitioners' Network where Winton Wetlands is facilitating an online Forum (3-4 sessions a year) to bring all experts on GGFs across SA, NSW and Vic together to share information on our project and learn from others. This group will consider other actions needed to secure the status of the species, including developing a new Regional Recovery Plan.

If you would like to join any of our Taskforce Growler initiatives, please fill out our [Taskforce Growlers Expression of Interest form](#) on the Winton Wetlands website.



Above left: Winton Wetlands outdoor breeding enclosure. Above right: Growling Grass Frog quarantine facility.

Our next steps for the project aim to integrate the participation of the community, researchers, land managers and other stakeholders to enhance the status and conservation outcomes for the GGF in northern Victoria. Our plans involve three elements which build on past work:

- A. Enhancing Science and Breeding through the establishment of a genetically diverse, viable and sustained population of wild GGFs at Winton Wetlands. We hope our future population can be used as a source for translocations to other suitable areas in northern Victoria.
- B. Maximising Detections through identification of other permanent freshwater wetlands in northern Victoria that may support GGFs and are within their previous known distribution, and to identify and establish potential areas to translocate GGFs to.
- C. Regional Community Engagement through Citizen Science and Community Involvement. The team will collaborate with Swamps, Rivers and Ranges to establish a GGF Practitioners Network and review the national recovery strategy for the GGF. The team will engage the community through information sessions, press articles, and grant applications, establish a donations program, and upskill volunteers in habitat and/or FROG ID skills, with school programs at Winton Wetlands and incursions across northern Victoria. The team will provide training materials and send regular updates to keep everyone informed.

Acknowledgements: We thank the Winton Wetlands Committee of Management, the Wettenhall Environment Trust, the Ross Trust, the Goulburn Broken Catchment Management Authority (GBCMA) and the Murray Darling Basin Authority (MDBA) for the funding for stages 1-3 of our project, and Swamps, Rivers and Ranges for their support in delivering the community engagement aspects of this work. Dr Geoff Heard and Dr Matt West have provided the authors with great support throughout and we acknowledge their significant inputs into the project.

INTRODUCTION TO “FOR FROG’S SAKE”: A DIRECTOR’S NOTE

Derek Ho, Filmmaker



A chance encounter led me to Lynette Plenderleith during the 2019 Australian International Documentary Conference. I remember thinking to myself, how could one person love frogs that much! The obsession was weird and fascinating to me at the same time.

When the ABC and DocSociety came calling with an opportunity to make a climate change based documentary, I embraced the challenge. I reached out to Lynette and we canvassed many potential frog based stories. Hearing about [Danielle Wallace’s story](#), I knew that was the one to tell: a science story with a big heart.

Fast forward one year. Trekking through the deep dense forest in Gippsland Victoria with both Danielle and Lynette was an eye opening and immersive experience. More importantly we gained a new found respect for these two female conservationists in what they do when they are out in the field.

My director’s intention for making this film is to generate more awareness about frogs and their importance to our local biodiversity. The end goal is to get more people engaged in protecting and conserving the frog population, which had been severely impacted not least due to Chytrid fungus and the devastating recent bushfires. More importantly through Danielle’s story, I want to inspire the younger generation, especially aspiring female students, that they can be a part of the conversation and play an active and important role in shaping the future of our local biodiversity and climate change.

For Frogs’ Sake premiered at Sydney Film Festival and is currently available on ABC iView, watch it here: iview.abc.net.au/show/for-frogs-sake

For Frogs’ Sake, featuring Frogs Vic President, Lynette Plenderleith and (Extra)Ordinary Member Danielle Wallace, and directed by Derek Ho (right) premiered at Sydney Film Festival and is currently available on ABC iView, watch it here: iview.abc.net.au/show/for-frogs-sake



Derek is an award winning documentary filmmaker based in Melbourne. Find him on Instagram @derekhofilms

INTRODUCING FROGS OF VICTORIA: A GUIDE TO IDENTIFICATION, ECOLOGY AND CONSERVATION (CSIRO PUBLISHING)

Nick Clemann, Co-Author: Frogs of Victoria: A guide to Identification, Ecology and Conservation

These days we're not exactly lacking books about Australian frogs. From the legendary tome by Hal Cogger, the even more encyclopaedic work on tadpoles by Marion Anstis, through to sundry books listed variously as 'photographic field guide', 'naturalists' guides, other Australia-wide field guides, and, of course, regional guides (some getting down to the level of ecosystems, or even particular river basins; the former being quite useful if you're working in that ecosystem).

I've long been a fan of state-level field guides. While the works of Cogger and Anstis are brilliant resources, and unmatched in usefulness, for anyone but an expert sitting in an office or lounge room, they have two drawbacks: their sheer size and weight mean that they can't really be carried in the field; and when trying to identify a frog you've just encountered, it can be daunting trying to work through dozens of similar-looking species, necessarily jargon-heavy keys, and tiny distribution maps that cover the entire continent.

State-level field guides, on the other hand, cover much less geographic area and fewer species, which means they are physically smaller and lighter, the distribution maps can be more detailed, and, with far fewer species, they can be easier for a novice to zero-in on the species they have encountered.

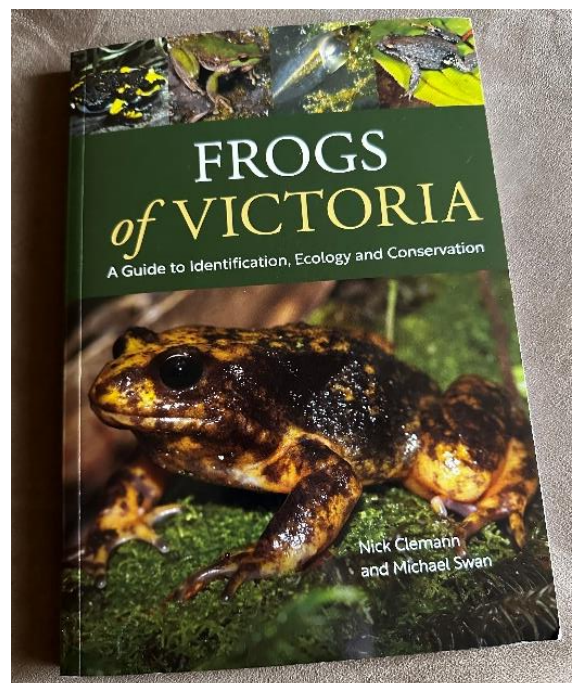
So, what guides exist to Victorian frogs? If you dig deep into older scientific journals, you can assemble useful guides to Victorian frogs, and their eggs and tadpoles. The problem is, this information is now mostly quite dated (and therefore no longer reflects the full diversity of Victorian frogs), it is dispersed between old journals, and it is often targeted at professional biologists.

Fortunately, a field guide to Victorian frogs does exist. In 1991 the *Frogwatch Field Guide to Victorian Frogs*, written by Marc Hero, Murray Littlejohn and Gerry Marantelli, was published. This book remains enormously useful for identifying Vic frogs. However, 32 years on, there have been numerous taxonomic changes, new species have been discovered in Victoria (or become established here), range extensions have been discovered, and, sadly, too many species are declining towards extinction (some rapidly so!). It's also getting harder and harder to find the *Frogwatch* book, as it hasn't been printed in many years.

So, the time is right for an updated field guide to Victorian frogs. And, given the accelerating biodiversity crisis, I believe it is crucial that a modern guide contains detailed consideration of not only the status of declining frogs, and not only the threats that are driving these declines, but also clear guidance on what is needed to arrest the declines, and recover our declining frogs.

So here we draw back the curtains on a new book: *Frogs of Victoria: A Guide to Identification, Ecology and Conservation* (Nick Clemann and Michael Swan, CSIRO Publishing).

The new book came about when I was approached by Mike Swan. Mike already had an agreement with the publisher to produce the book. I agreed to get onboard. So over the last few years, Mike mounted numerous field missions to photograph frogs, while I set about writing.



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INTRODUCING FROGS OF VICTORIA: A GUIDE TO IDENTIFICATION, ECOLOGY AND CONSERVATION (CSIRO PUBLISHING)

(Continued from Page 9)

From the outset I was determined that the book be authentically useful in two key areas: identification of Vic frogs; and being absolutely clear about trends in these species, the reason for the trends, and what must happen (or stop happening!) if these species are going to persist over biologically meaningful periods. And, for that last point, I wanted to ensure that the vested interests who so often censor and sugar-coat the narrative around the impacts of their actions (think claims like “no nett loss”, or promoting dubious offsets and supposed ‘mitigations’ to grease the wheels [and palms] of habitat destruction) don’t get to sanitise the truth behind preventable threats.

So what does this book contain, and what are the key differences with other field guides? (in other words, why put down \$50 of your hard-earned money for yet another wildlife guide?).

Here’s what you get:

- the story of the remarkable achievements by Frogs Vic Patron, Murray Littlejohn, and his colleagues and students. It’s not overstating things to say that the work of Murray’s group underpins or has inspired much of the information in the book;
- nuanced information on each species directly from the most relevant experts - those involved on the frontline of frog conservation, research, and management in south-eastern Australia;
- significant input from long-standing gurus on Victorian frogs: Murray Littlejohn, Angus Martin and Peter Robertson;
- a guide (informed by all of these experts) to not only the threats that have resulted in 50% of Vic frogs being listed as threatened; but also clear direction for the actions needed to stem losses and facilitate recovery. Essentially, the book contains an overarching guide to conserving Vic frogs;
- detailed consideration of the status of each species, the threats of most concern to each species, and species-specific conservation directions;
- background to the remarkable efforts of the team who are leading conservation of these frogs, as well as the conservation breeding programs that are vital elements of this conservation management;
- all the tools needed to identify Vic frogs, including keys and descriptions;
- a detailed profile of each species that includes:

Finally, a curse that befalls all such books is that, even between submission of the manuscript and its publication, some elements already need updating. For example, since the publisher finalised the manuscript, the taxonomy of the Growling Grass Frog has changed (splitting the species into two subspecies); and we are aware of some (fortunately very minor) refinement of our understanding of some species’ distributions.

Perhaps later editions will address these changes; but for now, I need a little nap...



Above: Nick (pictured on the left), co-author of Frogs of Victoria was also a co-founder of Frogs Victoria!

Frogs of Victoria is in bookshops now! Alternatively, order a copy here: www.publish.csiro.au/book/7950/

HERP DRINKS

Jessica Fenker, Museums Victoria

Looking for another opportunity to socialize with frog lovers? Some Museums Victoria staff are organising a social initiative to bring together ecologists/herpetologists from across Melbourne institutions.

The idea is to meet monthly (usually the last Thursday of every month or so) and rotate around some cool bars and pubs. The event is not sanctioned by any departments/ universities- it is an informal event aimed at creating a social setting where researchers with similar interests can chat about anything.

If interested, please email jfenker@museum.vic.gov.au, and you will be added to the mailing list to know about the following events.



Nick Clemann

MISSED A TALK?

Most of the Frogs Vic events are filmed and uploaded to the webpage. Check them out at www.frogsvic.org/events

If you have a technological touch and want to help out with the a/v side of things, please give us a shout at info@frogsvic.org. When it comes to technology, we're very good herpetologists!

MISSED AN ISSUE OF POBBLEBONK?

Check out the [newsletter page](#) of the FV website. All of our previous issues are published there.

GOT MEMBERSHIP?

Frogs Vic membership fees:

- Pay for speakers' dinners, drinks and gift
- Pay Frogs Vic admin costs (including Zoom registration for online meetings)

Thanks to everyone that supports us financially. We could not continue to operate without you!

If you are not a member and would like to help support Frogs Vic, it's easy to sign up at www.frogsvic.org/membership Current pricing is \$40 Full Membership / \$20 Concession.

Have something you'd like to contribute to Pobblebonk? If you have an idea for a newsletter article, or a photo you'd like us to include, please email the editor: ed@frogsvic.org

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