

FROG CALL

No. 200, December 2025



THE FROG AND TADPOLE STUDY GROUP OF NSW INC.

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MEETING AGENDA

Date: Friday 5th December 2025

Time: 7.00 pm: arrive from 6.30.

Location: Education Centre, Bicentennial pathway, Bicentennial Park, Homebush Bay, NSW.

6.30pm: Tea, coffee, raffle tickets, frog adoptions (if available)

7.00 pm: The main speaker is Shannon Kaiser who will tell us about the effect of aerial firefighting retardants on our frogs.

8.45 pm: Frog-O-Graphic Competition Prizes Awarded.

9.30 pm: Raffle, Christmas supper and a chance to relax and chat with frog friends and experts.

Email monicawangmann@gmail.com to send an article for FrogCall.

FATS MEMBERSHIP

Student: \$20 **Single:** \$30 **Family:** \$40. As a member you receive FrogCall newsletters, access to field trips, meetings, frog surveys, other conservation and community events, and entry to the Frog-O-Graphic photo competition. If you aren't a member but would like to join, it's easy to sign up! Please complete the membership form on the website <https://www.fats.org.au/membership-form>

If you are an existing member, and you haven't already done so, please renew your membership as soon as possible either via the website, bank transfer, or at the next meeting.

NB: Our bank account details have changed in May 2025. Please delete the old details and use the details below or we won't receive your payment. Account Name: Frog & Tadpole Study Group BSB: 082 001 Account No: 313 033 719. Unfortunately our bank won't accept cheques. Please inform us if this is a problem for you.

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Cover photo: Arthur White at the Greenacre site.

Photo: Nic Walker, courtesy Cooks River Alliance

President's Report

Michelle Toms

I joined FATS in 2010 after meeting Arthur on a training course he was presenting for Ecological Consultants Australia at Smiths Lake. At the end of the training, Arthur spruiked his 'little frog group' and the rest is history. After 15 years it is still my favourite Smith's Lake trip. I joined FATS for the wildlife, but I stayed for the community. I finally felt like I'd found my kind of people – friendly scientists with a love of the natural world. I could never have imagined to one day be president. I'm very grateful for the opportunity, it's definitely been big shoes to fill. It has been a great but busy year learning the reins, and I'd like to extend a heartfelt thanks for all the support the new committee has received.

I'll start by thanking the brave souls who joined me in taking up positions on the committee for the first time. **Peter Spradbrow**, our vice president, who with a newborn, had limited availability, but still attended meetings where he could and fielded many phone calls and questions. **Cassie Thompson**, our secretary/membership officer, who spent a lot of time and effort learning the membership process, mailing our lovely new members, while simultaneously completing her PhD (congratulations Cassie!). **Rhys Cairncross**, our chairperson, who has been as involved as possible despite spending a substantial amount of time working away, and while also working on his PhD. **Hugh Speck**, our webmaster, for all his work on the new website and fielding all my silly IT questions. **Harriet Potter**, our Frogwatch Helpline coordinator, for providing advice to the community and organising frog rescues. And **Peter Vickery**, a general committee member, for invaluable assistance with public meetings and exhibitions.

The committee has succeeded this year largely due to the dedication of existing committee members who stayed on in 2025. Huge thanks to **David Potter**, our treasurer, who stepped up into the role despite being time poor with many other activities and commitments. **Kathy Potter**, our exhibitions coordinator, who dedicated a significant amount of time to attending events and exhibitions, as well as giving talks to raise awareness of Australian frogs. **Monica Wangmann**, our devoted editor, for her ongoing work in preparing the FrogCall newsletters we know and love. **Robert Wall**, our field trip coordinator, who organised field trips to see our wonderful Aussie frogs in the wild. **Jilli Streit**, our minutes secretary, for her input and effort during her time in the role. **Punia Jeffery**, **Luc Streit** and **Andre Rank**, our general committee members, for their enthusiasm and assistance at events and working bees.

I'd also like to thank those who stepped down from the committee in 2025 but have continued to be generous with their time and assistance. **Marion Anstis**, who beautifully composes the December FrogCall, our annual colour magazine. **Phillip Grimm**, who has been very kind in assisting the new committee, providing a detailed hand over of roles, fielding lots of technical questions, and continuing to run the Frog-O-Graphic photo competition.

Finally, deepest thanks **Arthur** and **Karen White**, who have been (and continue to be) the heart of FATS. They remain heavily involved in everything the organisation does, guiding the new committee on everything from legal requirements, to financial matters, to making the best baked goods!

We have had a great year, and I look forward to many more.

Sincerely,

Michelle Toms



Welcome to our Incoming Committee for 2025-26

At the recent Annual General Meeting in August, 2025, the following new committee members were elected. We would like to now give a **BIG WELCOME** to our new incoming committee, who continue to make it possible for FATS to continue as the wonderful and viable society that it has been for over 30 years!

President: Michelle Toms

Vice President: Peter Vickery

Secretary/Membership Officer: Cassie Thompson

Treasurer: David Potter

Editor: Monica Wangmann

Chairperson: Fabian Byers

Webmaster: Hugh Speck

Events Coordinator: Kathy Potter

Field Trip Coordinator: Robert Wall

Public Officer: David Potter

Committee Members:

Peter Spradbrow

Rhys Cairncross

Punia Jeffery

Luc Streit

Kieran Brown

President's Pad

Welcome to the December 2025 issue of FrogCall, the Frog and Tadpole Study Group's 200th newsletter! The newsletter has come a long way since the first issue back in 1991, which was just two pages long. The ongoing success of FrogCall is largely due to the dedication of our long serving editor Monica Wangmann. Heartfelt thanks to Monica, who has kindly volunteered her time to prepare FrogCall for over three decades! Deepest thanks also to Marion Anstis, who generously donates her time and expertise in preparing the December issue each year, including this one, for a hard copy colour publication. And to all our members and contributors, thanks for your ongoing support, and I hope you enjoy reading our 200th FrogCall.

Sincerely, Michelle Toms, President

The History of FATS!

Arthur White

1.0 Introduction

FATS is a community group. It includes people who are concerned about the natural world, especially frogs. FATS membership includes academics, professional and student biologists, consultants, amateur naturalists and families (Figure 1). It was always the intention with FATS that it be an inclusive organization (not exclusive) and that our interests should not be totally focused on frogs, but also other issues that affect the natural world. Having said that, we also were determined to be apolitical in our dealings with government agencies and the public.



Fig. 1: David Nelson shows a frog to a new frogger

I was pleased to be asked to write this history. I was one of the founding members of FATS and had the privilege of being the President for 25 years. During that time, a lot of people have passed through FATS. One of the real interests for me has been to watch the young people enter FATS, get infected with the joy of observing and learning about nature, and then go on to make a career in biology. We have had students go on and do research into frogs, do PhD's about frogs or simply turn up regularly at our community days and talk to the public about frogs. FATS has the unusual distinction of being responsible for the creation of a new national park in New South Wales (Wallingat National Park, see 3.15)

So, sit back and get ready for an exciting time. FATS is a dynamic society and its history is like no other community group in Australia.

1.1 In the Beginning...

In the beginning there was no FATS (can you believe that!). The seeds of FATS began in 1990. In those days, if you were interested in frogs, the only community group that had any overlap with frogs in Sydney was the Australian Herpetological Society (AHS). This group was full of fun people and they met regularly at the Australian Museum. The only problem was that most of the discussion was about reptiles, not frogs. While most of us had an interest in all native animals, there was no forum for frog fanciers to get together and discuss these brilliant animals.

Typically, what would happen at the AHS meeting was that at the end of the meeting, the froggers would sit in a huddle at the end of the room and natter away about their latest frogging ventures. At this time, a lot was happening in the frog world. In particular, frog die-offs around the world and in Australia had reached alarming proportions. In Europe and North America, scientific studies have shown that planetary pollution was partly responsible for the deaths. Frogs have thin, highly permeable skin, if frogs, or any other creature with a thin outer covering, comes in contact with toxic substances, such as the industrial pollutants that humans continue to pump into the air or dump into our waterways, they become sick or die.

But something else was afoot. Frogs were dying in remote parts of the world, well away from industrialised areas. There was a suspicion that the cause was a disease. And this disease was also in Australia! In 1991 frog fanciers in the Australian Herpetological Society began secret discussions about forming a special interest group for FROGS.

1.2 Planning FATS

The first meeting to discuss the new frog group was held on the 10th December 1991 at the Sydney Technical College, Ultimo. We met there because Harald Ehmann, who was a lecturer at the tech, worked there. We could get a room to ourselves, bring frog paraphernalia in and store books, files and other treasures there. It was Harald Ehmann who suggested the Frog and Tadpole Study Group

of New South Wales as the name for our group.

What would the group do? We knew that frogs were in trouble and that most people were unaware of the carnage that was happening around the world. We wanted to tell people about this without causing alarm or hysteria. What we really wanted was to trigger a systematic defense of Australian frogs – to do this we would need involve the public and eventually consider canvassing politicians and government agencies to get them to also tackle the problem of frog die-offs. I should point out, that in 1991, frogs were not protected animals in Australia. In fact, they weren't even listed as animals. Government acts only dealt with mammals, birds and exotic (feral) species. Frogs didn't get a mention. This **had** to change.

So FATS was formed and the first president was Harald Ehmann. Others founding members included Lothar Voigt, Martyn Robinson, Steve Kum-jew, Karen Thumm, David Miller, Danny Wotherspoon, Shane Gow and Arthur White. We were a small group but one that was determined to have an impact. If we were going to bring about changes in the legal protection and conservation of frogs, we would need to be well prepared. The trouble was, in 1991, there was very little published information about Australian Frogs. Universities and other institutions (such as the CSIRO) had other priorities. We needed to develop a database about Australian Frogs which would be scientifically rigorous and reliable. A longterm but important task for FATS.

1.3 The Presidents

Harald Ehmann 1991-1995

Harald was the founding President of FATS. He also lectured at Sydney Technical College (now the University of Technology Sydney) at Ultimo. He lectured in a diverse range of courses, including some of his own design (such as museum studies).



Harald Ehmann

Harald wanted FATS to be an inclusive and diverse society that included the frog-nuts, but also people who had wider interests in biology. The early years were frantic, particularly once FATS became involved in the Endangered frog Survey of New South Wales (EndFrogs: see 2.1).

Lothar Voigt 1995-1996

Lothar was a very beguiling computer engineer. He was born in Germany and had engineering and design genes. In the early days of FATS at the Australian Museum, he became famous as the “Broccoli Box Man” – Lothar could build frog enclosures with running water and self-filtering



Lothar Voigt

systems out of old, polystyrene broccoli boxes. The crowds that came to the museum were often greatly bemused by this tall man waxing lyrically about the virtues of broccoli boxes and how best to use them. But Lothar is probably best known for his “FrogMobile” creation. This was a mobile frog exhibition trailer (see within). The design of the trailer was another great testament to Lothar and it always drew curious crowds whenever it was set up.

Martyn Robinson 1996-1997

Martyn was the resident naturalist at the Australian Museum at the time. His knowledge of the various, and sometimes obscure, animal groups was breathtaking. Martyn was in constant demand by various conservation groups and he was often juggling many projects for different groups at the same time. He was a reluctant president and preferred to be in the back seat where he could help direct and encourage anyone interested in the natural sciences.



Martyn Robinson

Frank Lemckert 1997-1999

Frank was a research scientist at the NSW Forestry Commission (now NSW State Forests). Frank had completed a Ph. D. studying the diminutive Common Eastern Froglet *Crinia signifera*. Unfortunately for Frank, the research division of the Forestry Commission was wound up and Frank had to move into the world of private consulting (where he did very well). Frank's main passion was trying to get FATS to become better organised internally, as FATS often got involved in projects that were all consuming, and tended to let our structure



Frank Lemckert

flounder somewhat. This caused problems at times. I think that Frank retired as president because of increasing work commitments but also because he was getting frustrated with the over-eagerness of people to take on projects without fully considering the implications and mechanics of how to actually complete the job.

Arthur White 1999-2024

Like the previous Presidents, I was keen to maintain a scientific basis for FATS. Where possible, I tried to keep

the membership abreast of new developments and tried to get academic or semi-academic speakers as often as possible for our meetings. I also tried hard to get our members to also speak at meetings: this was more difficult than you might imagine. A lot of people do not like standing up in front of hall full of strangers and talking about some topic or interest of theirs. The only way that I was going to get more involvement in the meetings was to slowly train some of our younger members to get up and talk (for just a few minutes at first), until they became comfortable to stand up in front of a group. I also tried to make the public meetings as diverse as possible, this meant that not all speakers were talking just about frogs.

The other issue for me was that our membership was quite diverse. We had academic as well as non-academic members and they tended not to mix very well. The solution to this was to make the meetings (and all of our events) much more socially-oriented. Our meetings, for example, had a supper at the end where everyone could eat and chat. We promoted the idea that everyone had something valuable to say and it was up to the members to ensure that everyone had a chance to be heard. I was greatly assisted in this by Karen, my wife, because she was very social herself and is such a great cook.

During my time as president, I also was looking for practical projects that could be carried out by our members. The Rosebery Bell Frog project (see within) was good example of a project that required both the academic and non-academic people working side by side to achieve the desired outcome. The Frog Rescue Service, Cane Toad Alert program, community information days and workshops were increasingly manned by the general members of the society – they were becoming the face of FATS.



Arthur White

Michelle Toms 2025-2026

Michelle is employed in the Environment Section of Roads and Maritime Services. She was used to being organised and trying to organise other people. However, her first year as president was not an easy ride as I had been in for 25 years and people were used to my way of doing things.

But Michelle persisted and weathered the tough beginning to her time as our new FATS president. By taking on this job, she has saved FATS from ending.



Michelle Toms

1.4 Meeting Venues

For the first two years, FATS meetings were held at Sydney Technical College and were generally only attended by members of the executive and a few friends. We held meetings at Sydney Technical College from December 1991 to February 1993. In April 1993, we moved to the Australian Museum. Our meetings were held at level 4 or Peppermint Room (these were the same venues that were being used by the Australian Herpetological Society). We continued to use these rooms until February 1994, when we requested a change of venue because we were now having invited speakers and were drawing too large a crowd for these rooms.

In April 1994, we were relocated to the Australian Museum Theatre. This has a seating capacity of about 150 people. As our name became better known, we got to point where we could fill the theatre at a meeting and later, had to start turning people away as there was no standing space remaining. The size of our meetings was becoming a major issue as was the continued use of this venue. The Museum could no longer guarantee our free use of the theatre and we were relocated (sometimes at very short notice) to an alternate room. We were going to need a more secure meeting venue (that was free or little cost to hire).

While the meetings at the Australian Museum were well attended, there was no parking available and the venue could be taken over at short notice if the Museum had a paid function wanting the theatre.

In 2005, the Sydney Olympic Parkland Authority (SOPA) offered FATS the use of a large meeting hall at the Newington Armoury at Homebush. We accepted that offer, knowing that we would probably lose some members when we left the

Australian Museum and moved to Homebush. We used Building 22 at Newington from September 2005 to June 2012. The venue was spacious, had ample parking but was freezing in winter and boiling in summer. In August 2012, SOPA offered FATS an alternate venue: the Education Centre at Bicentennial Park Homebush (Figure 8). This venue had an associated kitchen area (which Building 22 lacked). We moved on August 2012 and have continued to use this venue to the present day.



Fig. 8: Education Centre, Olympic Park, Sydney

2.0 1991 Interim Protection Act

Around the world, various countries were beginning to introduce measures to protect threatened species. In Australia, we had no such legislation. Talk of such a move sent shivers up the spines of conservative politicians and both major political parties were wary of introducing this type of legislation. The solution was to have a non-aligned person introduce a bill, have it passed. Should the act prove to create more problems that it solved, the non-aligned person could be held responsible.

And so, in late 1991 a Private Members Bill was presented to the NSW Parliament. The Bill was enacted and was called the Interim Protection Act. The Act declared that frogs were animals and as such should be protected under NSW legislation.

This act also initiated threatened species legislation and called for a review of all vertebrate species in NSW. This review was undertaken for a select few species (koalas, some birds, crocodiles and a few mammals) but not frogs. If government agencies were not going to review the status of native frogs, we would have to do it ourselves, so the EndFrogs (Endangered Frogs) Surveys were begun.

2.1 1992 Endfrog surveys

In late 1992, FATS decided to have a major input into the listing of threatened frog species in NSW. To do this, extensive field surveys would be required that targeted frog species that were deemed to be in decline. As we were in contact

with froggers across New South Wales, we felt that we were in the best position to assess the dynamics of native frogs in this state. Our first task was to contact as many froggers as we could and start collecting information about the frog activity in their area.

As we received information back from our contacts (131 people responded and supplied frog data for their areas), we needed to collate the results. Firstly, we grouped the data according to species and recorded what percentage of people had recorded a decline in that species in their area. This provided a quick snapshot of the decline across the various precincts of New South Wales. If more than 10% of people noted a particular species in decline, we then checked back through all of the records to see if the declines were localized or were widespread across the entire distributional range of the frog species.

After considering the data supplied, the EndFrog Team chose 25 species as being of concern. It was now time to organise targeted field survey teams and ground-truth our concerns. This involved re-contacting many of the people (Figure 9) who supplied data and asking them to carry out frog surveys in particular sites in their local area. For some frog species, there was no-one in the local area that could do the surveys and so we geared up to do the surveys ourselves.

We drew up grid maps of New South Wales and marked out the regions that needed frog surveys. Having defined the target areas and the species of concern, we began preparing a survey schedule to ensure that each site was surveyed at least twice during favourable periods. The logistics of doing these surveys proved onerous. I, and many of the FATS people (Fig. 9) clocked up many kilometres visiting remote sites and recording the local frog fauna. Apart from recording the frog species



Fig. 9: Michael Mahony & Karen Thumm, EndFrog Surveys, 1994

present, we also prepared detailed notes about the habitats and threats that existed to the frogs in those locations.

In 1993 FATS received a National Estate Grant to cover field costs for this project. The money from the grant covered most of our fuel costs and not much else. The surveys continued for 4 years, with Harald Ehmann and Lothar Voigt doing the lion's share of the work.

In 1996, the EndFrog team met to consider how best to collate the result and review the status of the 25 frogs that we had targeted. A framework was developed and one person was allocated to a species. It seemed that the results would eventually end up in a stand-alone book that would be supplied to government agencies and conservation groups.

By the end of 1996, we had a group of eight people preparing the chapters for the EndFrog Survey Manual. They were Harald Ehmann (editor), Marion Anstis, Ross Knowles, Michael Mahony, Leanne Patterson, Jacqui Recsei, Karen Thumm and myself. By early 1997, we had our first draft ready and Harald sought additional funding to pay for the publication of the manual.

In May 1997, the first copies of "Threatened Frogs of New South Wales: habitats, status and conservation" rolled off the presses (Figure 10). These were quickly distributed to government agencies, especially the Threatened Species Unit of the NSW National Park and Wildlife Service.

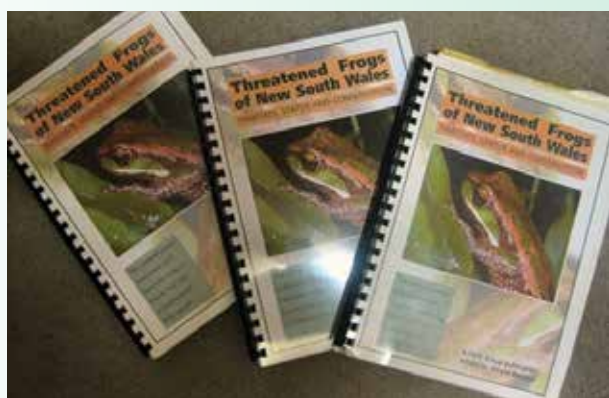


Fig. 10: Threatened Frogs of New South Wales: habitats, status and conservation.

Harald, Lothar and I attended a number of face-to-face sessions with representatives from government agencies to explain the data and to help with the potential listing of threatened frog species.

In 1995, the Threatened Species Conservation Act came into force in New South Wales. The Act had the capacity to evoke certain conservation measures for threatened species, but those species

had to be accepted by a scientific review committee before they were appended to the Act. Harald, Lothar and I prepared numerous submissions to this committee and I am pleased to say that the EndFrogs surveys proved vital for the listing of 20 threatened frog species in this state in 1996.

The EndFrog Manual was the first compendium of threatened species in Australia and remained in use as the chief reference book for threatened frogs in NSW Wales for another 15 years. It also set the standard for a lot of conservation studies that were to follow.

3.0 FATS gets Bigger

One of the consequences of the EndFrogs surveys was that a number of froggers quickly joined FATS and our membership began to swell. We had started with just 10 members and now we were approaching 100 members. In order to satisfy the membership and to keep the members up to date with frog events, the society's newsletter FrogCall had to be upgraded. In addition, FATS needed to spread the word about Frogs to the general public and so we started off on a quest to be part of as many community events as possible.

One of the other consequences of the increase in demand for FATS to attend various venues and functions, was the need for FATS to smarten up its presentations and publications. This would require money. Our membership was increasing but we needed a cash injection. Lothar was the only one in the group with a good business sense but he was already pre-occupied with the FrogMobile and its construction and running costs (see 3.3).

So, I undertook a series of jobs for the television and film industry, I became a frog wrangler. I provided frogs for filming, I posed frogs and encouraged them to jump or move at the appropriate time. Other executive members earned money for FATS by conducting Council-sponsored events.

The best money spinners were TV ads. I could make quite a bit of money for a day or two's work. Within a year or two, we had enough money to start producing bigger and better publications, including our newsletter FrogCall. The money also allowed us to commence a student grant scheme (see within).

3.1 FROGCALL

The first issue of FrogCall came out on the 21st December 1991. It was one page long and was prepared on a manual typewriter. In FrogCall, we described the events that unrolled with the

EndFrogs surveys, a synopsis of the results as they came in, and beckoned our members to become ambassadors for frog conservation. The early issues of FrogCall were a bit haphazard but within a few years we had a presentable newsletter.

The greatest event that happened with FrogCall was Monica Wangmann (Figure 11). Monica was a local mum and Ashfield resident. She adopted FATS quickly and soon got involved as a frog carer in the Frog Rescue Service. In 1998 she also put her hand and applied to be the Editor of FrogCall. She co-edited issue number 28 and has remained as Editor to the present day (the present edition of FrogCall is issue # 200).



Fig. 11: Monica Wangmann loves frogs!

Monica's brief was to supply topical information about frog conservation. This involved tracking down and summarizing articles about frog research and conservation and representing it in a palatable form in the newsletter. Monica did this with gusto although her methods involved a lot of retyping and photocopying. The advent of word processors and the web greatly assisted her task in later years.

FrogCall now came out six times a year. It was black and white, hard copy issue of between 4 and 12 pages length. Monica was somehow able to get the FrogCall out on time every time and has been able to do that for more than 27 years. This is a truly remarkable effort and one that FATS is eternally grateful for.

For the 100th issue of FrogCall (in September 2009), FATS decided to publish a colour edition that features some spectacular frog images. As many of our members were keen photographers we decided to print a full colour edition each December. The December issue contained the winning entries from our Frog-O-Graphic competition. The December issue requires a lot more care with layout and production and so Marion Anstis joined with Monica Wangmann to produce these colour editions that are now collector's items (Figure 12).



Fig. 12: December Colour FrogCalls

3.2 Public Displays and Workshops

As FATS reputation became more widely known, FATS was often invited to attend community days (such as Council Spring Fairs, Tree Planting Days, Environment Days or Community workshops: Figures 13 and 14). In addition, the Australian Museum asked FATS to become a regular participant in their Science Week program each August. As part of this program FATS would run classes for both primary and secondary school children, man stalls within the museum and associated venues (such as Cook and Phillip Park) and conduct small outdoor, demonstrations about frog biology and conservation. FATS started doing these presentations at the Museum in 1998 and are still one of the major drawcards for the Science Week displays. A great number of FATS members have volunteered to help with these displays over the years and they have helped present the scientific side of frog conservation to the public.



Fig. 13: Wendy Grimm manning a small FATS stall at the Berowra Fair, 2004.



Fig. 14: Karen White and Marion Anstis at Kuring-gai Wildflower Gardens 2001.

FATS has also conducted frog pond workshops for many councils in greater Sydney and Newcastle.

FATS had a stall at the Royal Easter Show in Sydney since 1997. Usually, FATS is at the Easter Show for 2 days only. Our stalls always attract a lot of attention and interest. For the last 10 years, the Easter Show displays have been managed by Kathy and David Potter (Figure 15) and they are always a credit to FATS.



Fig. 15: Karen White and Kathy Potter at the FATS stall at the Royal Easter Show in 2022.

3.3 FrogMobile

The FrogMobile was the brain child of Lothar Voigt. It was a display trailer designed to hold and house and number of frog tanks and information panels (Figure 16). The trailer was originally intended for FATS use at community events but



Fig. 16: Frogmobile at Homebush, 2006.

Lothar also hoped to use the FrogMobile for school visits. Lothar designed the FrogMobile and it became an instant drawcard at public events. The FrogMobile had fold-out panels suspended from the roof that created a large space for posters and information boards. The main body of the FrogMobile was devoted to the frog display enclosures.

Lothar Voigt not only designed the FrogMobile, but also sourced the funding for its construction. He obtained a grant of \$44,000 from Ozram Lighting to cover most of the construction costs (Figures 17 and 18). From 2005 to 2008, the FrogMobile was in high demand for several public events. Its popularity would eventually be its undoing. The FrogMobile generally needed at least six people to man the various panels, display tanks or associated displays. One of Lothar's favourite crowd

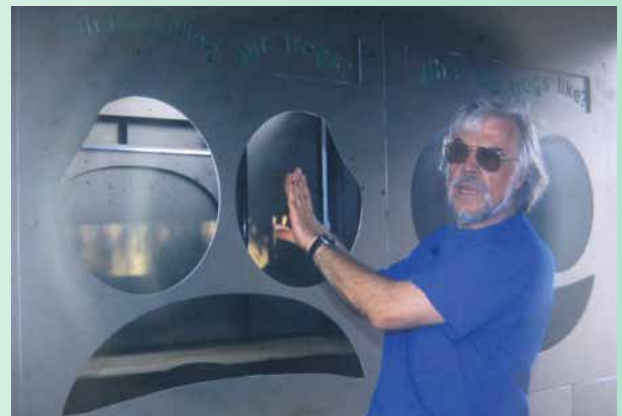


Fig. 17: Lothar assembling the Frogmobile.

attractions was to set up a small plastic pond near the FrogMobile, put some water and tadpoles in it and sit in the pond with a faceplate and snorkel on his head. People came from afar to see what this crazy man was up to! Eventually, the heavy demand for the FrogMobile exhausted Lothar and his band of helpers. The FrogMobile found a new home with the RSPCA.



Fig. 18: The Frogmobile at Centennial Park. A much younger Grant Webster looks on!

3.4 Frog Disease Workshops

The spread of Frog Chytrid Disease sent alarm bells throughout the entire frogging community. Not only were frogs dying in the wild, but the disease was appearing in captive populations as well. FATS pioneered the development of some basic treatment for Frog Chytrid Disease. Once the pathogen was recognised as a fungus, FATS (mainly Lothar Voigt and Arthur White) began trialling simple fungicides as potential treatments. The difficulty in these trials is that frogs have highly permeable skin, and fungicidal preparation applied using a water bath could easily harm the frog. A lot of trials were done using different strength solutions, working from weaker to stronger formulations. Some fungicides, such as itraconazole, were effective but costly.

Another agent that we tested was benzalkonium chloride. This was also moderately successful but expensive in its pure form. We discovered that benzalkonium chloride was an active agent in commercial disinfectants, such as Toilet Duck, and these were much cheaper to procure and just as effective. The problem with these chemical treatments was that they could be quite stressful for the frogs and that, while able to remove the active infection, chytrid activity often return as soon as the treatment was stopped.

We tested using table salt as a control measure in field populations of frogs. This resulted in a scientific publication describing the use of salt as a potential field agent in the control of frog chytrid diseases (White, A. W. 2006: A trial using salt to protect Green and Golden Bell frogs from Chytrid infection. *Herpetofauna* 36(2): 93-96.).

Later, in 2008 we started using heat treatment as means of curing chytrid in infected frogs and reducing the incidence of chytrid in uninfected frogs. This method was the least stressful on the frogs and relatively easy to do for captive frogs. At the time, we had no way of adapting this method for wild frogs. In 2023, Dr. Anthony Waddell from Macquarie University developed portable frog saunas that could be used in the field.

In the early 2000s, FATS ran a number of frog hygiene workshops to help froggers with captive frogs or field workers who were worried about spreading chytrid to their study animals. The potential for people to transmit chytrid was now recognised and a concerted effort was needed to inform the frogging community and get them to develop chytrid-safe practices.

The largest workshop that we conducted was held in 2001. It had almost 70 participants and it covered the gamut of frog diseases, including chytrid, how to recognise sick frogs and what to do about it, safe hygiene practices and the legal requirements when dealing with frogs (especially in the wild). I was the co-ordinator for the workshop, as well as the editor for the handbook that was produced later that year. We had invited speakers for the day including Dr Frances Hulst (frog diseases in general) from Sydney's Taronga Zoo, Dr Michael Mahony (frog chytrid disease) from Newcastle University, Lothar Voigt FATS: frog husbandry) and Mr Ross Wellington (NPWS: frogs and the law).

The handbook (Figure 19) that was produced paved the way for vets and froggers to start to protect their frogs from chytrid. More importantly, it enabled the National Parks and Wildlife Service NPWS (the government agency that was looking

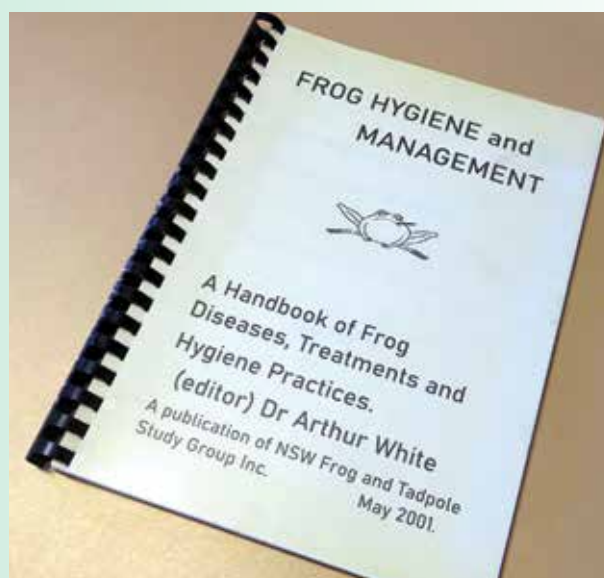


Fig. 19: FATS Frog Hygiene Handbook, 2001.

after native animals) to develop “Frog Hygiene Protocols” in 2006 for the protection of frogs in the wild and in captivity.

3.5 Inter-Government Panels

FATS' reputation was spreading far and wide. The NSW National Parks and Wildlife Service (NPWS) was in constant communication with FATS about frog issues, particularly those that affect members of the public. All frog queries were directed to FATS and we became the main voice for frog welfare in NSW. Most of the public issues that we advised on were matters such as: what to do if you find tadpoles and frogs in your dis-used swimming pool, what to do if you find a frog in your backyard, what to do if the frogs next door are too noisy, what

to do if you find and sick or injured frog, and we also advised on where you should go if you want to purchase a pet frog.

Because FATS was now seen as assisting the NPWS, we were asked to join a number of advisory panels to help the Service deal with frog-related matters. One of the big issues that arose was to be the allowed keeping of native frogs under a licensing system. FATS joined the Native Animal Keepers Advisory Committee in 1995 and we have been on advisory panels ever since.

Our job on the various committees was to advise about what frog species were suitable for keeping, what species required special conditions if they were to be kept and what species should not be kept. In addition, we prepared a set of the minimal husbandry requirements for each species and also made several submissions regarding the need for a state-wide frog hygiene standard (as a means of stopping the spread of frog chytrid disease). This was ultimately to be the trigger for the NPWS to issue their State-wide Frog Hygiene Protocols Document (Fig. 20).

The other big issue concerning frogs was Frog Chytrid Disease. Mysterious frog die-offs were occurring around the country and the cause was unknown. It was not until 1998 that Lee Berger identified the pathogen that caused these deaths. The culprit was a single-celled fungus called *Batrachochytrium dendrobatoides* (otherwise known as Bd). This fungus has an unusual property- it consumes keratin. Keratin is a common protein in vertebrates and is used as a stiffening agent in soft tissue. The spores of Bd penetrate frog skin and destroy the basal keratin layers in the skin, rendering the frog unable to cutaneously respire. In addition, chytrid lowers the frog's immunity and

makes it prone to many infectious diseases. Not all native frogs were susceptible to chytrid, but the native tree frogs were particularly prone.

3.6 Student Grants Scheme

While FATS tried to inspire young students through great field trips and interesting guest speakers at meetings, we felt that students, particularly those contemplating a research-focussed career, could be given some encouragement to consider researching frogs. One way to do this would be to offer small monetary grants for frog related projects. Research on frogs in Universities was very limited and needed some help.

In the first years of the scheme, we only offered grants to Honours students and grants were intended to offset expenses incurred during the project. In later years, the grant applicants could be higher or lower degree students or private researchers. A number of well-known frog researchers in Australia got their first research grant through FATS.

3.7 Frog Rescue Service

Another ongoing concern for FATS was the high number of frogs coming into Sydney from interstate. The fate of these stowaway frogs was often bad. For example, if they arrived at Flemington markets, Sydney's biggest fruit and vegetable receiving depot, they were put down (as were the other animals that had hitch-hiked their way into Sydney: Figure 21).

Concerned about the number of stowaway frogs that were killed in Sydney, FATS decided to start the Frog Rescue Service. The details of the operation of the Frog Rescue Service had to be thrashed out with the NPWS. The main concern



Fig. 20: Frog Hygiene Protocols, 2006.



Fig. 21: Dwarf Tree Frog in a box of lettuce from Victoria



Fig. 22: Karen White with a rescued frog

from the government agencies was how would we stop the spread of chytrid if we were taking in frogs from an unknown source on a regular basis. The solution was simple; all rescued frogs had to be treated as though they were diseased. This meant that FATS had to set up a quarantine and treatment procedure for all frogs that came through the service.

A number of FATS members volunteered to act as either frog collectors (Figure 22) or as frog carers. The carer would house the incoming frogs, away from other frogs and potential sources of Chytrid, for a minimum of 2 months. If the frogs showed any symptoms of disease, they were transferred to a carer who could then either treat the frogs or take them to a vet for further assessment.

The problem with vets was that many had never had any access to treating amphibians and often simply would euthanase a frog because they did not know what to do. The Frog Hygiene Workshop (see 3.4) was intended to provide vets with an introduction to the care and management of frogs. Our workshops and sessions with interested vets eventually yielded results. In 2008, Sydney University included a few weeks of veterinary work on frogs as part of the degree course in veterinary science. FATS was helped enormously in making this breakthrough by Dr Glenn Shea who

negotiated with the university authorities on our behalf and with us.

The FATS Frog Rescue Service commenced in 2000. Monica collected frogs from Sydney markets for 12 years and kept them in quarantine until they were adopted at our meetings. Since then, Lothar, Arthur, the Potters and others were involved and many thousands of frogs have been rescued.

3.8 Cane Toad Alert program

The Cane Toad Alert Program started as an offshoot of the Frog Rescue Service. Toads were regularly being picked up in Sydney and there was no government interest in the presence of these amphibians in Sydney.

In 1998, the first breeding toad colony in greater Sydney was found at Bushells Lagoon, near Windsor. FATS members visited the site every night for a week until no more toads could be found. FATS organized toad collectors to be on call and the Frog Help Line was established to receive incoming calls about toads and other frogs. FATS received toads from all parts of Greater Sydney, eventually the number of toads became so great that I published a scientific paper with Professor Rick Shine about the incidence of toads in Sydney and where they were coming from: White, A. W., and R. Shine (2009): The extra-limital spread of an invasive species via “stowaway” dispersal: toad to nowhere? *Animal Conservation* 12:38-45.

In 2000, FATS started a media blitz warning about cane toads coming into Sydney, but more importantly, asking the public to report all sightings to the Frog help Line (Figure 23). In addition, the public was asked not to kill any toads that they found, but to keep them alive. This request was made for two reasons: firstly, it became clear to us that many Sydneysiders were not



Fig. 23: Cane Toad information pamphlets produced jointly with the NPWS.

familiar with toads and could not distinguish a toad from common frogs; secondly, we had reports of toads carrying parasites (particularly lungworms) that may be transmissible to native frogs. The vets at Taronga Zoo were keen to get fresh material to work on and to test this idea that native frogs might becoming infected with parasites borne by toads.

Community information nights, radio interviews and newspaper articles followed. Over the next two weeks, we received 80 calls about cane toad sightings in Sydney. We followed up every call and discovered that only 13 of them were valid sightings. The majority of the remainder of the calls were cases of mis-identification. At the end of the toad blitz, we reviewed our results and decided



Fig. 24: Alarming newspaper headlines during the toad blitz.

that the blitz was the wrong action to take because instead of making people aware of toads and asking them to report any sightings, the blitz simply created hysteria (Figure 24). Newspaper articles tended to be overly dramatic about toads, and often reported incorrect information (such as toads spitting venom at people, or toads crawling into your beds at night).

All subsequent information events about toads bypassed the commercial media and targeted particular areas. In NSW, at the time, no government agency was interested in trying to control the movement of toads in this State.

3.9 Cane Toad Musters

As toad outbreaks became more common, FATS members, along with NPWS staff, got involved in trying to stop the spread of toads in NSW. The first joint venture between FATS and NPWS was a Cane Toad muster at Port Macquarie, on the mid-north coast of NSW. Cane Toads were being reported on a regular basis in areas to the south and west of Port Macquarie, particularly around the Lake Innes



Fig. 25: Jen Francis and Snifty, Port Macquarie, 2007

Nature Reserve.

In 2007, FATS volunteers met with NPWS staff, led by Mike Dodgkin to run the first joint Cane Toad muster in NSW. The aim of the musters was to get as many local residents interested in helping with the muster – the theory was that more eyes are likely to find more toads. The day before the first muster commenced, we had an information session where people who had registered to join the muster were briefed about how the muster would be conducted, how to safely pick up toads and how to transport them back to our meeting points.

In addition to the human army that would be collecting the toads, we also had Snifty (Figure 25). Snifty had been trained to detect Cane Toads and would go into areas where cane toads had either been reported, or suspected to be present, and sniff out the toads. Snifty was so well trained that she could signal when she found a toad track and her posture would indicate if it was a recent track or an old track.

Snifty did a lot of the follow up work after the main public musters. Using the human army, areas to the west and south of Port Macquarie were divided into grids and teams of people, armed with headlamps, gloves, collecting bags and maps trundled off into the night to search the area that they had been assigned.

At the end of the public musters, Snifty, and a small group of trained froggers (including FATS people) stayed at Port Macquarie to survey the difficult to access sites and to revisit sites where toad sightings had been made. The musters and the follow-up surveys massively reduced the number of toads in

the area. The final clean-up of toads was organized by Hastings Shire Council and the NPWS. A few experienced froggers (including myself) were engaged by the Council to visit the last remnant areas where toads were present and to assess the toad presence in these areas (especially if there was evidence of breeding in the area) and to collect any of the remaining toads if possible. Within 12 months, the toads at Port Macquarie had been reduced to a few individuals, the breeding sites around Port Macquarie were monitored and any indication of toads in these areas would trigger a rapid response team to go out and eradicate these last toads.

The following year, in 2008, FATS was again called out to do a frog clearance, this time at Carrington, near Taree. Fortunately, the toad population there was much smaller than at Port Macquarie and was confined to two small wetland areas. This population was exterminated within a week.

The biggest and most widely publicized toad outbreak occurred in 2010. This was the Taren Point outbreak and the eradication of toads at Taren Point took 3 years of intensive effort. Taren Point was a wake-up call to government agencies about the threat imposed by toads and after the Taren Point site had been cleared, the NSW Department of Primary Industries was finally given a brief (in 2017) to control toads in this state.

3.10 Toads invade the Sutherland Shire

In January 2010, Sutherland Shire Council raised the alarm over the apparent steep increase in the number of toads being found in the Shire – especially around Taren Point. There had been isolated instances of toads found in this area since 1996, but instead of one or two toads being found, dozens were being seen at night by residents. Toads were often detected at Taren Point as there were a number of small factories and businesses that



Fig. 26: Possible toad dispersal routes from Towra Point.

received shipping containers from overseas, such as Fiji and Papua New Guinea. Toads had been found in the shipping containers before.

FATS were immediately contacted and invited to assist. I prepared a Toad Control Plan for the Council that included the need to do wider surveys of Taren Point and nearby areas to determine the severity of the outbreak and to try to locate breeding sites. One of the greatest concerns with this outbreak was its proximity to two important environmental areas: Towra Point Nature Reserve (Towra Point Nature Reserve is an important conservation area for migratory birds and the presence of toads in this reserve could spell the demise of several, already-threatened bird species), and the Royal National Park (Figure 26). More pragmatically, Towra Point would be a difficult area to survey toads and an almost impossible area to eradicate them.

Some FATS members and I conducted preliminary searches at Taren Point with the Council's Invasive Species Officer Stuart Harris. We collected a few hundred toads (Figure 27) and had to report to



Fig. 27: Stuart Harris collecting cane toads at Taren Point, NSW 2010.

the Council that there were at least three age-cohorts of toads present at Taren Point. This was bad news for Council. Toads had been breeding at Taren Point for at least 4 years before these surveys and they were well entrenched in the area. We would need public musters and the help of sniffer dogs again.

In October 2010, the first public toad collections began. These were organised by Stuart Harris for the Council, but myself and a few other FATS helpers had input into the method of search and the location of the search areas. The public musters were well attended and raised a lot of local interest in the outbreak of the toads. The musters concentrated on public, open-space areas and areas where we suspected breeding sites might occur.

The musters did not survey private properties. This was done mainly by Stuart Harris and myself, after we had obtained permission to enter the properties at night.

The result of the first year's musters was the collections of a further 300 toads: all were collected

alive as they were later weighed, measured, sexed and dissected for evidence of parasites or disease (especially lung worm; Figure 28). Almost 50% of the toads dissected had lung worm infestation and Karrie Rose at Taronga Zoo undertook further



Fig. 28: Toad lung tissue infested with Lung worm, Taren Point 2010.

study to investigate the possible transmissibility of these parasites to native frogs. Two significant discoveries were made during the first surveys and musters: firstly, toads had not penetrated Towra Point Nature Reserve, secondly, all breeding appeared to have taken place on a single commercial allotment.

Toad collections continued at Taren Point until 2015 when toad numbers finally fell and breeding sites were destroyed. One of the great discoveries to arise from this project was the development of a toad tadpole bait. This bait was prepared from an extract from a toad ovary and was placed inside a funnel trap that was lowered into water that contained toad tadpoles. Tadpoles of other frog species ignored the baits whereas toad tadpoles swarmed into the traps. This discovery was reported in the scientific literature in 2018: Greenlees, M., Harris, S., White, A., Shine, R. (2018). The establishment and eradication of an extra-limital population of invasive cane toads. *Biological Invasions*, 20(8): 2077–2089.

3.11 Rosebery Bell Frog project

In 2004, Elaine Davies, a resident of Rosebery in the inner southern suburbs of Sydney, contacted FATS about frogs in her old swimming pool (Figure 29), which was due to be demolished. She was distressed that the local Council was forcing her to remove the pool as she was fond of her frogs. Lothar Voigt and I went out to her place and had a look; to our amazement, the frogs in her back



Fig. 29: John Davies and the old swimming pool at Rosebery.

yard were Green and Golden Bell frogs (*Ranoides aurea*), a threatened frog species. We promptly informed the local council of this as well as informing them that these frogs were protected by

law. The problem for Elaine and John Davies were the neighbours. The neighbours hated the croaking of the frogs at night and so called the Council to complain. To force the Council to act, they stated that the pool was full of mosquitos and so this was now a public health issue. So the Council issued the notice for the destruction of the pool. FATS entered into discussions with City of Sydney Council about how best to resolve these matters. The agreed solution was that FATS would demolish the pool but would collect and hold the frogs (Figure 30) until a suitable replacement habitat had been created in the Davies' backyard. FATS also started



Fig. 30: Lothar Voigt with some collected Bell frogs from Rosebery.

a letterbox to all of the neighbours in the local area about the importance of the discovery of the Bell frogs and asking people to report any sightings to the FATS Group.

The first question was where did the frogs come from? It did not take long to determine that the frogs were survivors from the nearby State Super Site. This old industrial site had become the focus of an environmental challenge because of the Bell frogs on it. Despite this, the site was demolished and a large residential complex developed there. A sub-set of Green and Golden Bell Frogs had been collected from the site (by me) and lodged at



Fig. 31: Robert Wall helping to construct the new frog area and bog garden at Rosebery.

Taronga Zoo. This became the first threatened frog species in Australia to be placed into a captive-breeding colony. FATS had several working bees at the Davies' place, demolished the old pool and reconstructed a breeding pond and associated bog garden foraging area (Figure 31).

Once the pool and bog garden were functional, the Bell frogs that had been collected from the Davies place were returned to continue living successfully in Rosebery.



Fig. 32: Arthur White with one of the primary school classes at Science in the City, 1999.

3.12 Science in the City

“Science in the City” events are hosted at the Australian Museum in Sydney. The events are timed to occur during Science Week and aimed at fostering interest in science amongst school children primarily. In 1998, FATS was asked to provide a science-based display about Australian Frogs. Lothar Voigt, Karen White and myself, prepared and ran the first displays at the museum.

The frogs were an instant success and so the Museum asked us if we would be prepared in creating and running classroom programs for primary and secondary school children. Again, we consented despite that fact that we were all working and had to forgo our wages for the week. The classes were again very popular and FATS was eventually invited to present a display at other related events, such as Science in the Scrub in western Sydney and Science in the Swamp at Centennial Park. In 2015, Kathy and David Potter took over the running of these events and have modified the presentations accordingly. These events, while draining on all involved, are important in fostering young scientists, and especially in making young people aware of what can be done to help conserve native species.

3.13 FATS Field Trips



Fig. 33: FATS Froggers on a field trip, 2005.

Seeing frogs in the wild is the best way to see frogs. FATS has always promoted frogs as yet another fantastic group of Australian animals that everyone should see and enjoy. FATS members had been conducting field trips since its inception, but most of these early trips were surveys as part of the EndFrogs Project.

It wasn't until 1995, that FATS decided to run a field trip especially for family members. The first field trip was to Darkes Forest, south of Sydney. I was the field trip leader and we had 15 hardy souls who came out to see frogs. Unfortunately, the night was cold and windy and so we had to struggle to find any frogs. Despite this, all who attended, enjoyed the experience and wanted more field trips.

For the next few years, we ran between 3 and 6 field trips (Figure 33) around Sydney. All of the sites had to be within relatively easy reach for the attendees. Field trips were conducted to the Royal National Park, Ku-ring-gai National Park, Darkes Forest, Stanwell Park, Helensburgh and Castlereagh State Forest in Sydney, and Ourimbah Creek, Brisbane Waters National Park and Strickland State Forest, north of Sydney.



Fig. 34: Robert Wall sterilizing his gum boots before frogging

In 2006, the Frog Hygiene Protocols were introduced (see 3.4). The Protocols (Figure 20) set out the methods that were to be used during field trips to prevent the spread of frog diseases, especially frog chytrid disease. For our field trips, this meant that all attendees sterilised their boots before entering the area,

all equipment was similarly sterilized (Figure 34). The underside of cars were washed down with disinfectants. No frogs were to be directly handled, if a frog needed to be handled it was done by a licenced member of the group who wore disposable gloves when handling the frog.

FATS tried to run one field trip per month between October and March each year but sometimes bushfires, floods or other circumstances caused us to cancel these events. The field trips became so popular that we had to establish a Field Trip Officer position on the FATS executive. The Field Trip Officer would organize field trip leaders, dates,



Fig. 35: Smiths Lake Field station, 1994.

send out notifications and maintain a register of participants. Our current Field Trip Officer, Robert Wall, has been doing this job for many years and liaises between FATS, NPWS and the public so that these trips run smoothly.

3.14 Smiths Lake Fauna Surveys

About 330 kilometres north of Sydney is the Myall Lakes National Park. In the northern part of the park, the University of New South Wales has its Smiths Lake Field Station (Figure 35). A number of the original FATS members had visited this field station as students and were aware of the high fauna diversity in the general area, both in and around the national park. I had long-term frog monitoring sites in the Myall Lakes National Park and I started taking a few FATS members along on my survey trips. It didn't take long before some of these people requested that there be a field trip to Smiths Lake. I assented, partly because I needed to recruit some helpers to monitor some of the survey sites that I had.

In November 1992, the first FATS field trip to Smiths Lake took place. Many of the people who attended Smiths Lake had diverse fauna and



Fig. 36: Froggers at Smiths Lake, 2010.

botanic interests and so we not only conducted frog surveys in different parts of the Myall Lakes – Smiths Lake area, but also started recording other fauna sightings, particularly vertebrate animals.

From 1992 to 2002, we ran one Smiths Lake field trip each year, usually lasting three days. From 2003 onwards, we usually have two Smiths Lake field trips each year. Members were accommodated in the dormitories at Smiths Lake and we often ate in the outdoor barbeque area (Figure 36).

After a few years, I made two of my sites (Sugar Creek Road quarry and the Twin Fire Dams in Wallingat State Forest), regular survey locations for FATS field trips.

Over the years a lot of fauna records were compiled for the northern part of Myall Lakes National Park, for Wallingat State Forest and parts of Batchelor State Forest. A number of sightings were the first record of threatened species in the region. All of this data was dutifully reported to the Wildlife Atlas maintained by the NPWS.

3.15 Wallingat National Park declaration

The massive amount of biological data that FATS members put into the wildlife atlas was to have



Fig. 37: Map showing the new Wallingat National Park, and Smiths Lake Field Station.

an unexpected benefit. In January 1999, most of Wallingat State Forest and parts of Batchelor State Forest were combined to form the Wallingat National Park. In announcing the new national park, the NSW Government paid particular attention to the fauna contributions of FATS and noted that the high number of threatened vertebrate animal species recorded in this area signifying its high bio-conservation value. So, FATS was largely responsible for the establishment of a new national park (Figure 37): this unusual outcome that stemmed from a citizen science project was duly recounted in the scientific literature: White, A. W. 2018. Wallingat National Park. The Product of Long-term Specialised Community-based Science. In "Long-term Data Sets and their Value", eds D. Lunney, B. Law and

M. Predavec. *Australian Zoologist* 39(4): 698–712. *Royal Zoological Society of New South Wales*, Mosman.

3.16 Greenacre GGBF Project

In 2019, I was contacted by Yvonne Yeun from Strathfield Council. The Council had about 2 hectares of derelict industrial land at Greenacre that they would like to turn into a conservation area. I went out with Council officials to view the site: it was a mess, the site was overgrown with lantana, coral trees, pampas grass, cestrum and every other horrible weed that you could think of. Eventually I said to the Council, that the site is useless in its present conditions, and to convert it into a conservation would require a full make-over. I suggested to Council that it could become a conservation area for Green and Golden Bell Frogs, these frogs historically occurred in this area and it would be fitting to return a lost species back to the area. Council wanted to know exactly what would be involved if the site was modified to become Bell frog habitat, so I prepared a plan (including costings) for the site restoration. It was not cheap. In the plan, I had two earthen basins and, in each basin would be three small above ground ponds



Fig. 38: Three above ground ponds in Basin A, 2021.

(Figure 38). I indicated that we would need to supplementary feed any Bell Frog tadpoles that were bred on site in an effort to improve their



Fig. 39: Broadcasting Bell frog mating calls into the night sky, December 2021

survivorship. I expected the Bell Frogs to breed in the basins (which would be dry most of the year, and flooded when we wanted the frogs to breed).

One of the artificial ponds would be a tadpole holding and feeding pond, the second would be a chytrid-control pond (containing very slightly salty water), and the third an escape pond for young froglets (Bell frogs are cannibalistic and the young frogs need to be able to escape from the presence of adult frogs if they are to survive). Of course, the biggest hurdle would be getting Bell frogs onto the site in the first place. I had several discussions with other frog people about this, as well as the NPWS Threatened Species Unit. I imagined that we would need to translocate young Bell Frogs from some other site in Sydney to the Greenacre site. The NPWS said that they would not give FATS a licence to do a translocation unless we carried out extensive frog surveys of the local area to see if any Bell Frogs were still present near Greenacre. If we did manage to find Bell frogs near Greenacre, we would not be allowed to pick them up and move them on the Greenacre site, instead we would have to devise a way to entice the frogs to move to Greenacre of their own accord. With the help of FATS members, I surveyed all of the historic sites known within a 5 kilometre radius of the Greenacre site. This took up the rest of 2020 and part of 2021. But surprise, surprise! We did find a small population of Bell frogs hanging on in a reserve (Cox's Creek Reserve) near the boundary of Greenacre and Bankstown.

In 2021 work started on clearing the Greenacre site. It took about 4 months to get the site contoured and then we had to start a replanting program. During late 2021, the new site was ready to receive frogs. Now was the time to announce the presence of this new habitat area to the Bell frogs in the Cox's Creek Reserve. In the October and November evenings, small amplifiers (Figure 39) were used to direct Green and Golden Bell Frog mating



Fig. 40: A Green and Golden Bell frog, Greenacre, January 2022.

calls towards the Coxs Creek Reserve, about a kilometre away. The sound wafted over the nearby factories and we hoped it was reaching the frogs far away. Within 4 weeks of playing the frog calls, the first Green and Golden Bell Frog appeared in the new site. It didn't stay long, but came and went over the next four months. Eventually other Green and Golden Bell Frogs began visiting the site and some even bred there! In 2022 and 2023, Green and Golden Bell Frogs continued to return to the Greenacre site and breed. There was now a small resident group of Bell Frogs on site, but others continued to come and go as they pleased. Bell Frogs are a highly mobile species and it was important to allow the frogs to be able to move freely about the local area. Now that we had resident frogs, we set about to try to increase habitat for the frogs outside of our conservation area. I made contact with neighbouring land holders, especially NSW Ports Authorities and FreightCorp (who owned land in Enfield Marshalling Yards) to see if they would be prepared to dedicate some land towards Bell Frog habitat. These discussions are ongoing. Frog movement corridors would also be required between the areas of frog habitat. The corridors needed to be made



Fig. 41: Froggers at an Auditory survey, November 2023.

frog-friendly, as too many frogs are killed while crossing roads at night, or are preyed upon by cats and birds. Residents living between the Greenacre site and the Cox's Creek Reserve will be asked to help make their backyards more frog friendly so as to make the movement of frogs around Greenacre less dangerous for the frogs. The Greenacre project is ongoing and has created one of the few green spaces in this highly industrial, residential heart.

3.17 Green and Golden Bell frog Auditory Surveys, Sydney Olympic Parklands

In 2006, Sydney Olympic Parklands Authority (SOPA) asked FATS if we could conduct auditory (frog call) surveys of their parklands. This entailed

visiting over 80 frog ponds scattered across the site four times (in November and December) to determine the whereabouts of the Bell frogs on their site. We have continued to do these surveys ever since. They have proved to be a popular introductory class for new froggers, as we are moving in easy-to-access areas, in a safe location and have relatively few frog species to deal with. It is also a great opportunity for the new members to start learning frog calls. Some members attend every year, while others attend less regularly, everyone enjoys the experience (Figure 41).

3.17 Extra Special FATS Members

Over the years we have had a lot of people join FATS. Some have developed a real passion for frogs and frog conservation and have turned this passion into a practical outcome. The first person that I will highlight is **Lothar Voigt**, Lothar was a founding member of FATS and was instrumental in getting FATS to be well-known throughout Sydney. During the EndFrogs days, Lothar and I spent a lot of time trying various concoctions to cure frogs of frog chytrid disease (see 3.4). He converted several rooms in his house into frog quarantine areas and he did many radio interviews about frog



Fig. 42: Lothar Voigt and the FrogMobile at Centennial Park, 2007.

disease. But Lothar was also a showman. As the creator of the FrogMobile (see 3.3), he knew how to draw a crowd! He did numerous public displays and information days around Sydney and was the public face of FATS for many years.

Marion Anstis

Marion was a high school music teacher with a passion for frogs, and especially tadpoles. When FATS started, very few people could recognise any of the native tadpole species. Marion was one who was fascinated by the larvae and dedicated years to studying them. In 2002, she published "*Tadpoles of South-eastern Australia*" (Figure 43). This was a ground-breaking book because it not only allowed



Fig. 43: Marion signing her first book at the 2002 book launch, and receiving the Whitley Silver Medal Award from Rick Shine in 2003 for *Tadpoles of SE Australia*.

the reader to identify tadpoles, but it provided ecological data about the lives of these tadpoles.

Not content to only cover south-eastern Australia, Marion had many requests to describe tadpoles of frogs in other States, so at New Holland's request to write a book on the whole of Australia's tadpoles, she set out in 2003 to find as many Australian tadpoles as possible.

This involved recording the various tadpole growth stages to metamorphosis, egg deposition and investigation of the various, and sometimes, bizarre ways that Australian frogs breed, including those breeding on land. In 2012 she submitted her book for a PhD at Newcastle University, and in 2013, her magnum opus was published by New Holland: "*Tadpoles and Frogs of Australia*". At this time, Australia was the only country in the world that had its tadpole fauna described (others have followed suit since!).

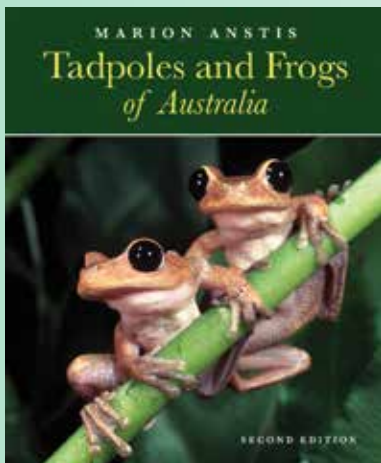


Fig. 44: Second Edition of *Tadpoles and Frogs of Australia*, 2017.

The first edition of "*Tadpoles and Frogs of Australia*" was partly subsidised by FATS and also by Taronga Zoo, and it became a surprising big seller, despite its weight of nearly 4kg! So much so that in 2017, the publishers requested a second edition.

Marion then updated it, adding five newly described species, and this volume has since sold out. This year, Marion has completed a fully revised third edition which should be out in early 2026, if not by late 2025.

Jodi Rowley

Jodi Rowley joined FATS as a teenager (Figure 45). She had little experience with frogs but quickly became enamoured with them. She was determined to spend her life working on frogs, and she has achieved her dream. After obtaining a degree in Environmental Science (Honors) at the University of New South Wales, Jodi completed her Ph.D at James Cook University, where she radio-tracked rainforest frogs to help understand why some frog species were declining from disease and others weren't.



Fig. 45: Young Jodi Rowley entering the world of frogs



Jodi Rowley with a friend as she sets up FROG ID

In 2006, she moved to Cambodia and began conducting amphibian research in Southeast Asia, focusing on expeditions in remote forested mountains there and training young amphibian biologists. In 2008, Jodi moved back to Australia and began working for the Australian Museum and UNSW Sydney as the Curator of Amphibian and Reptile Conservation Biology. Jodi has conducted expeditions in search of amphibians in Australia, Southeast Asia and the Pacific, and co-discovered more than forty frog species new



Fig. 46: One of our regular supper gatherings at FATS meetings.

to science, including the vampire flying frog. One of her greatest achievements has been the development of the highly successful **FrogID** app set up in 2017, which through continued citizen science participation, has greatly increased our knowledge of Australian frog calls and distribution. Her most recent work includes discovering and scientifically describing new species of frogs from Australia, searching for frog species that are feared extinct, and investigating the cause and impact of a widespread mass mortality event in Australian frogs. Jodi is based jointly at the Australian Museum and the University of New South Wales.

3.18 The Future of FATS

FATS is a vibrant organisation and has a history that is second to none. Now that many universities and government agencies have begun to focus on frogs, FATS' role is changing. In the early years, we needed to do our own basic research on frogs and frog disease because no-one else would take this on in Australia. In more recent times, FATS has

focussed more on local frog conservation issues and still retains as one of its guiding principles, the need to better inform the public, politicians and academics about the plight of frogs. But above all, FATS people want to enjoy life and each other's company. (Figure 46).

Finally, any society is only as good as its members. If the members are willing to be part of the society and help with events, as well as enjoying activities that the society can offer, the society can flourish. In FATS, we have been fortunate to have active members, people who are ardently interested in the world around them and in frog conservation, and who want to share that elation with others and encourage protection of our frogs. There are many people who have contributed time and effort to FATS, and I cannot possibly name them all – some special ones have appeared in the text of this article, while others are wonderful workers, without whom FATS would not exist.



Arthur White in his element – the Green and Golden Bell Frog habitat at Greenacre, Sydney, NSW. Photo: Nic Walker, courtesy Cooks River Alliance





Tyler's Tree Frog
Pengilleyia tyleri
© Ken Griffiths

FATS Frog-O-Graphic



Above: BEST WILD FROG IMAGE: Tyler's Tree Frog, *Pengilleyia tyleri*

Ken Griffiths

Below: PEOPLE'S CHOICE: Crucifix Frogs in amplexus, *Notanden bennetti*

Cassie Thompson



Competition WINNERS



Above: BEST PET IMAGE: Some young Splendid Tree Frogs, *Pelodryas splendida*

Karen Russell

Below: MOST INTERESTING IMAGE: Fleay's Barred Frog, *Mixophyes fleayi*

Narelle Power



Borneo and Beyond, a decade of talking about frogs

Kathy Potter

In August 2024 I went to the World Congress of Herpetology conference in Borneo to present a talk about my current research project on frog flash colours. With 1400 delegates and an abundance of frog species to seek out, it was a special event, and one of the highlights of my academic career to date. Considering how FATS helped me to attend this event, got me thinking about the 13 year journey I have taken with FATS from a vague interest in frogs to a Master of Research in Biological Science and a long step towards a PhD.

But first frogs!



1. Grass frog (*Fejervarya limnocharis*)



2. Cinnamon tree frog (*Nictivalus pictus*)



3. File-eared tree frog (*Polypedates ottilophus*)



4. Long-nosed horned frog (*Pelobatrachus nasutus*).
This is the frog I really wanted to see, and there she was, a massive female sitting right near the path.



5. Dark-eared tree frog (*Polypedates macrotis*) this one is wearing a fetching caterpillar hat. All tree frogs in Borneo pose like this, even for terrible photographers!

While I was in Sabah, before the conference, I was asked to give a version of my conference presentation to a local high school, which was also a wonderful experience, sharing my enthusiasm for frogs and science is a real privilege.

This leads me neatly back to the beginning of my FATS history with exhibitions and science outreach. My first contact with FATS was an article in the Sydney Morning Herald featuring



Kathy with local high-school students where she gave a talk about her Conference presentation

a charming photo of Monica Wangmann with a green tree frog, suggesting that FATS needed people to adopt rescue frogs. So, I did. From there it was a steep learning curve as I started taking on talks, exhibitions and anything else that would bring in donations for FATS and give me an opportunity to talk to people about frogs without sounding crazy (context is important when you are passionate about unusual subjects). Not long after I started all this, Godzilla the green tree frog turned up, making appearances in all sorts of unlikely places, including a photo shoot for the Australian Women's Weekly and as an advocate for FrogID. Our FATS cane toad (Mr Toad) has also been something of a celebrity appearing in a Queensland commercial as a racing toad, an American TV show and the controversial film *The Deb* which hasn't been released yet (not his fault). Following in the footsteps of FATS giants like Lothar Voigt, Arthur and Karen White, Punia Jeffery and so many more, I have been building associations with Councils, parklands organisations in Sydney, schools and environmental and education groups which has seen me talking to audiences from pre-school to retirement age, helping with curriculum development, identifying frog calls for Ann Jones



Godzilla, the FATS Green Tree Frog Star became an advocate for FATS and Frog ID

on the BBC, talking to Costa about frog ponds on Gardening Australia and even doing a 10 minute stand up comedy routine based on my frog research at the Sydney Comedy Festival this year.

From adopting a rescue frog to learning and talking about frogs all over the place, the opportunities kept coming and I was so lucky to get a job at the Australian Museum Research Institute with the legendary Jodi Rowley.



Kathy at work in the laboratory at Macquarie University

This is when I finally discovered that I love research as much as I love frogs. So, the next logical step was to go back to uni, which I did. I am still happily working away in Martin Whiting's Lizard Lab (as a cuckoo frog maybe?) at Macquarie University, and I am still volunteering with FATS taking any opportunity to raise funds and talk about frogs!

The wonderful people of FATS have supported me throughout this journey and I would encourage anyone who has been helped in their science careers or personal journeys by FATS to share your stories too!



Sydney Comedy Festival 2025 program

Note from Editor:

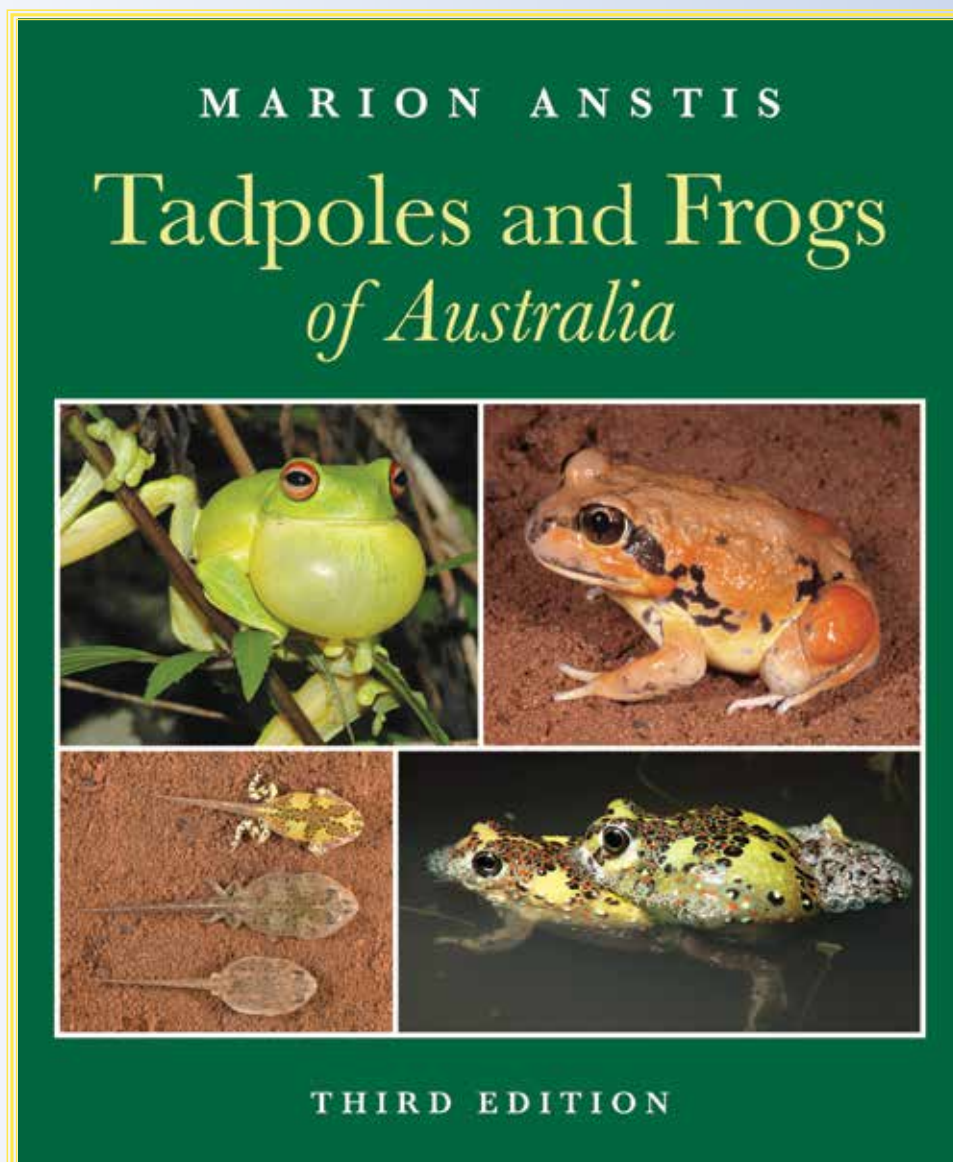
Kathy Potter and her wonderful family have been managing all public displays for FATS for a number of years now, channeling public interest in frogs and greatly assisting promotion of FATS in the wider public, as well as sparking the interest about frogs in children who visit the Science Show at the Australian Museum each year.

The Third Edition of Tadpoles and Frogs of Australia

Marion Anstis

At last the third edition is in the hands of the publisher, and hopefully will be out early in 2026. I have been waiting **four years** for the new taxonomy of Pelodryadidae to be published so that I could then include the new 22 tree frog genera in this third edition, as the second edition sold out two years ago. This edition also includes the 21 new species (including subspecies), and one new myobatrachid genus, plus two New Guinea microhylid genera very recently discovered to occur within Australia's northernmost Qld border just off the coast of New Guinea! So this edition is a *complete* revision. Apart from the new species and genera, there are revised keys including mini photographs of tadpole species to help identification, a section on various frog breeding habitat sites, updated and new text and many new photos.

By the time you read this, you will probably have seen this cover on the FATS Facebook page or elsewhere. I hope you will be pleased with the book once you get used to the new layout and genera, as it has been a huge effort getting it ready in the past few months since the Pelodryadidae publication came out!



The New Taxonomy for Australian Tree Frogs

Marion Anstis

Reference: Donnellan, S. C., Mahony, M. J., Esquerre, D., Brennan, I. G., Price, L. C., Lemmon, A., Lemmon, E. M., Gunther, R., Monis, P. Bertozzi, T., Keogh, J. S., Shea, G. M., Richards, S. J. (2025). **Phylogenomics informs a generic revision of the Australo-Papuan treefrogs (Anura: Pelodyadidae)** *Zoological Journal of the Linnean Society*, 204, zlaf015.

This 2025 monograph is a milestone in the history of Australian frog taxonomy, as it assigns the Pelodyadid frogs of Australia and Papua New Guinea from the original single genus *Litoria* into 35 genera.

Within Australia there are now 22 genera of pelodyadid frogs, including the genus *Cyclorana* which remains unchanged, and the genus *Litoria*, which is now assigned to 13 related Australian ground-dwelling species.

The genera have been split on the basis of:

- Adult size and morphology
- Call
- Extensive phylogenetic (mtDNA) studies
- Tadpole morphology
- Distribution, habitat and breeding site selection
- Adult osteology and myology
- Form of the egg mass and features of the eggs

This revision of our tree frogs is long overdue, given the great variety of frogs we have, as indicated initially by Tyler and Davies (1978), who grouped like species in Australia into 22 species groups, but retained the genus *Litoria* for all.

The new genera in the current revision include a mix of historical and new generic names and the use of these names has required rigorous taxonomic research to ensure they are valid. Anyone observing our Australian tree frogs will soon notice there are species which look similar to each other. Here are the 22 genera summarised, including the retained genus *Cyclorana*. A photograph of one example from each genus is provided. The third edition of *Tadpoles and Frogs of Australia* will adopt the new genera, and includes all new species.

Australian Pelodyadidae genera (2025)

1. *Carichyla*

Northern Sedge Frog. A single small species belongs to this genus: *Carichyla bicolor*. Arboreal, occurs in swamps or ponds with sedges. Mostly continuous white lateral stripe helps distinguish it from *D. fallax*.



Northern Sedge Frog, *Carichyla bicolor*

Tim Hawkes

2. *Chlorohyla*

Red-eyed Tree Frogs. Tree frogs with similar features – green colour, orange or red eyes, arboreal, similar tadpoles.



Red-eyed Tree Frog, *Chlorohyla chloris*

Chlorohyla bella, chloris, gracilentia, xanthomera

3. *Coggerdonia*

Slender Tree Frog. A single species, *Coggerdonia adelaidensis*, found only in South Western Australia. Arboreal, frequents swamps and sedges.



Slender Tree Frog, *Coggerdonia adelaidensis* Narelle Power

4. *Colleenneremia*

Bleating Tree Frogs. Seven species (of which four are new), arboreal, similar call, size, colour and morphology.

Colleenneremia balatus, dentata, electrica, larisonans, pyrina, quirritatus, rubella



Screaming Tree Frog, *Colleenneremia quirritatus*

5. *Cyclorana* – the existing genus unchanged.
Thirteen species, all burrowers, no discs on digits.



Striped Burrowing Frog, *Cyclorana alboguttata*

Cyclorana alboguttata, australis, brevipes, cryptotis, cultripes, longipes, maculosa, maini, manya,

novaeahollandiae, occidentalis, platycephalus, vagita, verrucosa

6. *Drymomantis*

Sedge Frogs. Three small arboreal species, similar call, colour, features and tadpoles.



Eastern Sedge Frog, *Drymomantis fallax*

Drymomantis cooloolensis, fallax, longburensis

7. *Dryopsophus*

Green Riverine Frogs. Ten species. Small to medium, mostly green, arboreal stream-dwelling frogs. Similar tadpoles, eggs and breeding sites.



Green Stream Frog, *Dryopsophus phyllochrous*

Dryopsophus barringtonensis, citropa, daviesae, kroombitensis, nudidigitus, pearsoniana, phyllochrous, piperata, spenceri, subglandulosus

8. *Eremnoculus*

Australian Lace-lid. Single species. Medium to large size and arboreal Distinguished by morphology, distribution, tadpole stream-dwelling adaptations.



Australian Lace-lid, *Eremnoculus dayi* Daniel O'Brien

9. *Litoria*

Ground Frogs. Thirteen species, one new. Small to medium, distinguished by morphology (no webbing between fingers, reduced discs), adults mostly brown or grey with or without darker areas, smooth or warty skin, tadpoles and eggs all similar.

Litoria axillaris, coplandi, freycineti, inermis, latopalmata, nasuta, nigrofrenata, pallida, personata, spaldingi, staccato, tornieri, watjulumensis



Tornier's Frog, *Litoria tornieri*

10. *Mahonabatrachus*

Little Chirping Frogs. Four species. Small size, two terrestrial, one terrestrial/arboreal, one arboreal. Distinguished by call, morphology, distribution, tadpoles and DNA.



Long-snouted Tree Frog, *Mahonabatrachus longirostris*

Mahonabatrachus aurifer, longirostris, meiranus, microbelos

11. *Megatestis*

Dahl's Aquatic Frog. Single species. Large size, aquatic, distinguished by morphology (mega testes!), habitat adaptations and tadpole. Adults look like a cross between *R. aurea* and *Cyclorana platycephala*.



Dahl's Aquatic Frog, *Megatestis dahlui*

David Nelson

12. *Mevillihyla*

Cape Melville Tree Frog. Single species. Large size, terrestrial, distinguished by morphology, distribution/boulder hill habitat and tadpoles.



Cape Melville Tree Frog, *Mevillihyla andiirmalin*

13. *Mosleyia*

Torrent Tree Frogs. Semi-aquatic frogs that live in fast flowing rivers of north Qld. Four species, one extinct. Medium to large size, distinguished by morphology, tadpoles, myology.

The tadpoles have large suctorial mouths which can suck onto slippery rocks in the fast-flowing water of rivers.

Mosleyia loricata, nannotis, nyakalensis, rheocola



Armoured Mist Frog, *Mosleyia lorica*

14. *Pelodryas*

Green Tree Frogs. Four Australian species (+ one in PNG) of easily recognised medium to large, green arboreal frogs, well known as captive species. They have smooth skin, golden eyes, a broad head with bluntly rounded snout and large finger and toe discs. Some have scattered white spots.



Splendid Tree Frog, *Pelodryas splendida*

Pelodryas caerulea, cavernicola, gilleni, splendida

15. *Pengilleyia*

Laughing Tree Frogs. A genus of four medium to large arboreal frogs in Australia (plus three in New Guinea). Best known for their calls, most of which can be likened to the sound of human laughter. Mostly brown with variable darker patches, green spots in some and bright yellow and black flash colours on inner limbs. Large discs on digits.

Pengilleyia peronii, P. ridibunda, P. rothii, P. tyleri



Peron's Tree Frog, *Pengilleyia peronii*

Josie Styles

16. *Ranoidea*

Bell Frogs. The Green and Golden Bell Frog group. Four species and recently, two subspecies – *R. raniformis* has been split into two subspecies. Large, mainly aquatic/terrestrial frogs, distinguished by morphology, call, distribution, habitat and tadpoles.



Motorbike Frog, *Ranoidea moorei*

Mark Clancy

Ranoidea aurea, castanea, cyclorhyncha, moorei, raniformis major, raniformis raniformis

17. *Rawlinsonia*

Brown Tree Frogs. Eleven species (5 new). Small to medium arboreal frogs, distinguished mainly by morphology, call, breeding sites and eggs. The subspecies *R. verreauxii alpina* is no longer used.

Rawlinsonia calliscelis, corbeni, eungellensis, ewingii, jervisiensis, littlejohni, paraewingi, revelata, sibilus, verreauxii, watsoni



Eungella Tree Frog, *Rawlinsonia eungellensis* Stephen Mahony

18. *Rhyaconastes*

Stony Creek Frogs. Four species endemic to Australia. Medium to large size terrestrial riverine frogs associated with streams in forests, heathland and woodlands in eastern Australia. Distinguished by morphology, habitat adaptations, call and tadpoles.



Eastern Stony Creek Frog, *Rhyaconastes wilcoxii*

Rhyaconastes booroolongensis, *lesueurii*, *jungguy*, *wilcoxii*

19. *Saganura*

Tasmanian Tree Frog. Single species, endemic to Tasmania. Medium to large, arboreal frog, distinguished by distribution morphology, call and tadpoles. Has suffered decline across its range as a result of chytrid fungus, and is now considered near threatened.

Saganura burrowsi



Tasmanian Tree Frog, *Saganura burrowsi*

David Nelson

20. *Sandryana*

White-lipped Tree Frog. Single species (within Australia, 13 in New Guinea). Very large, arboreal frog, distinguished by morphology, call, distribution and tadpoles.



White-lipped Tree Frog, *Sandryana infrafronata*

Sandryana infrafronata

21. *Spicicalyx*

Fringed Tree Frogs. Three species (one endangered), medium to large size, arboreal frogs which breed in streams, distinguished by fringed edges of limbs, call, tadpoles and distribution. They all have a fringed edging on their limbs.



Fringed Tree Frog, *Spicicalyx eucnemis*

Martin Cohen

Spicicalyx eucnemis, myola, serrata

22. *Sylvagemma*

Green-thighed Tree Frog. Single threatened species, endemic to Australia. Medium size mostly terrestrial frog, distinguished by morphology (colour), call, distribution and tadpoles.



Green-thighed Frog, *Sylvagemma brevipalmata*

Ben Revell

Sylvagemma brevipalmata



The reason this genus *Spicicalyx* is described as medium to large in size can be seen here, with the great difference in the size of the adult females compared to males!

Tim Hawkes

Hopefully now it will become clearer to us all as to why these new genera were needed. The differences between the groups of species listed above is obvious when size, behaviour (arboreal, terrestrial etc.), call, features of the body, adaptations to a particular habitat and tadpoles and eggs are considered. Thankfully, at least the species names remain familiar to us!

‘In the Dark’

by

Garth Coupland

IN THE DARK

*I cannot wait for the night,
Although the Sun has three hours yet to tumble
through the sky.*

*Some may declare it is not right,
To want so much the Sun to go, and the day to die.*

*In the night no one sees.
I can hide with my disease,
and wander through the Midnight trees,
Of the park.
In the dark.*

*You see, I have severe addiction.
And so to you I give confession.
of this, my terrible affliction.
This my sickness, my obsession.
In truth it is my sorry plight.
Led to the darkness from the light,
In pursuit of Frogs.*



Striped Marsh Frog, *Limnodynastes peronii*,
Mt Nebo, SE Qld Garth Coupland



Mottled Barred Frog, *Mixophyes coggeri*, Kuranda, Nth Qld Garth Coupland



Peron's Tree Frog, *Pengilleyia peronii*,
Mt Nebo, SE Qld Garth Coupland

Nature or Nurture?

An instinctive Love of Frogs

Michelle Toms



I've always loved animals. I think it came from my grandmother, an artist and poet who often recorded her encounters with the natural world. In her later years, I remember Mum trying to explain why she couldn't keep a large ornamental bowl of tadpoles on the coffee table in her small nursing home unit. As an 11-year-old, I thought this was a great idea - apparently most people don't.

This year marks 15 years since I joined the Frog and Tadpole Study Group (FATS), and I thought I'd share some of the memorable wildlife experiences that led me to the most unexpected of positions: President of FATS....

I grew up in suburban Sydney and was lucky enough to have a huge natural backyard. As a child I spent most of my time outdoors, playing with rocks, making mud pies, exploring local tracks, and catching lizards. I loved our resident skinks and would spend hours catching them and making castles for them out of empty ice-cream containers. I was also very fond of our other frequent visitors - Blue-tongued lizards, Brushtail possums, and Crimson rosellas.

My first frog memory is from about age five,

when a frog came into our house one night. My dad promptly picked it up and put it in our blue bathtub, where it swam laps back and forth. I couldn't contain my excitement and reported this to my kindy class the next day during news, complete with drawing.

Throughout my childhood, my siblings and I would collect tadpoles (not knowing any better in the '90s) and eagerly wait for them to turn into frogs. I would check on them every hour or so to see if they'd morphed, only to be disappointed when



My sketch of a frog in 1998

they looked exactly the same - patience was not my strong suit. It always came as a surprise when I'd wake up the next morning and the tadpoles would be gone. Confused, I'd ask mum what happened, and she'd reply "They all turned into frogs overnight and hopped away". I never questioned it at the time - though now I suspect she didn't have the heart to tell me they'd probably been eaten by birds or the neighbour's cat. I was that kid who, instead of playing in the pool like everyone else, spent most of the time rescuing every beetle, bee, and bug that had unwittingly fallen in.

When the internet arrived in the mid '90s, my brother told me I had to choose a name to create an email address. I became 'Shellfrog' for the next 15 years, and received an assortment of frog-themed gifts every birthday and Christmas from then on.

My love of animals followed me into adulthood, and before long I was looking for ways to get more directly involved in wildlife care. I joined WIRES at age 21, where I did hundreds of rescues - everything from common birds and possums to water dragons, penguins, sea turtles, even the odd lace monitor, venomous snake, and powerful owl. This led me down a rabbit hole of animal rescue, expanding into whales, seals, and dolphins - and eventually to frogs.



In 2010 I went to Smiths Lake for the first time with my best friend Hannah, and to this day it remains my favourite field trip. That year the area was absolutely teeming with life. I remember watching Arthur pull a *Mixophyes* out of the ground in Wallingat National Park and being completely shocked, I had no idea NSW had such a large and stunning frog species. On that trip I began to learn how to survey for frogs, identify their calls,



triangulate, and find them in their hiding spots. We saw an abundance of unique species: raptors, reptiles, and Red-eyed Tree Frogs - we were hooked!

After this, I'd regularly venture to my local spot at Darkes Forest, where I found my first citropa and pobblebonk, and my love for finding and photographing frogs was set. My first trip to Watagans with FATS was equally amazing. Being surrounded by tennis-ball-sized mixophyes is a sight to behold. We saw all three species (and their giant tadpoles) as well as a lechriodus and a pseudophryne guarding its eggs. Fifteen years on and I still get just as excited to head out on a field trip to see what we will find.

When I'm not photographing frogs (or other wildlife), I spend time sharing my love of science and nature with my nieces and nephew, hoping the next generation will cherish our unique Australian wildlife as much as I do. If you are fortunate enough to have the opportunity to influence children, nurture their curiosity - support the little scientist in them and help them foster a love of wildlife and the natural world.

We are all born with inquisitive minds, though the pressures of modern life have a way of dimming our spark. For some, it's in their nature to care for and appreciate the natural world and its inhabitants. For others, it takes encouragement, exposure, and education. Perhaps it's both nature and nurture. Either way, every little nudge helps keep the wonder of the wild alive for the next generation.

FATS Events

Members at work and having fun!



Peter Vickery and son Matthew at the FATS display, Lane Cove Community Nursery, 2025



Science in the Swamp, FATS display, Centennial Park, 2025. From left: Arthur White, Punia Jeffery, Kathy Potter, Karen White, David Potter and Michelle Toms

The FATS displays organised by Kathy and David Potter have only been possible with the assistance from many different members over the past years. We thank Kathy and David, and all volunteers who have helped them!



FATS display, Lane Cove Community Nursery;
Michelle Toms and Matthew Vickery



Smiths Lake field trip gathering



Smiths Lake field trip at night

FATS Smiths Lake Field Trip Report, November 2024

Robert Wall

The November 2024 Smiths Lake field trip once again lived up to expectations.

FATS members converged onto the site, taking advantage of all sorts of available accommodation, from cabins, to tents to campervans. The weather was very kind to us, although there was a tentative cause for concern at the start of the weekend, the rain never really eventuated and the weekend turned out to be perfect frogging weather.

On the first night, we departed from our usual destinations and visited a local property whose owners had expressed some interest in having FATS members survey their farm to identify the frogs often heard calling. A very nice farm dam, but really, only the usual suspects, the fairly common Peron's Tree Frogs and some Dwarf Green Tree Frogs. Nearby, things sounded more interesting. There was a small area of Wallum habitat. Arthur White picked up a few more interesting species, *Adelotus brevis* amongst them.

Our visits to the more familiar sites yielded some interesting species and due to the very mild weather conditions, all in good number. The quarry site was particularly good for *Uperoleia* and *Pseudophryne*. Even the newcomers, one, a visitor from overseas, had a chance to go looking for these hard-to-find species. Christina was quite excited to find her first frog all on her own. With Arthur handling the frog, we were all able to take some nice photos of the rather peculiar belly patterns of these frogs.

A visit to the twin fire dams saw a cacophony of *Litoria revelata*. They were certainly out in force, almost ear-piercing in loudness. Once again, our members were happy to spend time looking at every palm frond, tree branch, all inevitably with a calling frog, sometimes in amplexus. We always spend some time here surveying the blue gum forests, it is perfect

owl country. On this occasion, we lucked out, but we weren't too disappointed as we always know we will get other species to add to our list. During the day, the birdwatchers amongst us spend time adding to the weekend's tally. Birdlife here is always very, very reliable.

Wendy Grimm led a small group on a bush walk looking for local orchids, pointing out some of the local plants. This was of particular interest to our international visitor, who took many photos, and has since sent them back to her friends in Berlin. Together with the frog images, I think we may now have even more visitors from Germany. Many thanks, Wendy.

We also picked up a very nice diamond/carpet python. Arthur pointed out the tell-tale signs of interbreeding, and we watched it slowly disappear into the undergrowth.

Back at the field studies centre, the usual traditional socialising around the tables was once again the norm. Arthur and Karen introduce the youngest of our FATS members, their two grandchildren, both financial members at the ages of two and six! Interestingly, our newest member, Christina, an international visitor from Berlin, Germany, had heard of the wonderful wildlife found on our Smiths Lake fieldtrips, and had taken out membership just to attend the Smiths Lake weekend on her visit to Australia! Once again, FATS fieldtrips are gaining an international recognition!

For most, it is a time to sit back, share the food, and enjoy a cup of tea and catch up with friends. At Smiths Lake, everyone can do as they please.

Many thanks to Karen and Arthur for once again, organising the trip, attending to all the logistics and keeping the show running. Smiths Lake has become an intrinsic part of the FATS culture, and shows no sign of waning in popularity.

Fauna Sightings, November 2024

Frogs

1. Corner Swamp

Litoria taylori

Litoria fallax

Ground Frogs:

Pseudophryne coriacea

Uperoleia fusca

2. Kitchen Creek

Limnodynastes peronii

3. Coomba Pond 1

Litoria fallax

Litoria peronii

Adelotus brevis

4. Coomba Pond 2

Litoria taylori

Crinia signifera

Adelotus brevis

Pseudophryne coriacea

5. Sandbar Quarry

Litoria fallax

Litoria peronii

Litoria taylori

Limnodynastes peronii

Uperoleia fusca

6. Sugar Creek Quarry

Litoria taylori

Litoria peronii

Adelotus brevis

Pseudophryne coriacea

Uperoleia fusca

7. Twin Dams

Litoria fallax

Litoria taylori

Litoria peronii

Litoria revelata

Limnodynastes peronii

Adelotus brevis

Reptiles

Coomba Pond 2

Water Dragon, *Intellagama lesueurii*

Diamond/Carpet Python

Morelia spilota

Birds

White-browed Scrubwren

Noisy Friarbird

Eastern Shrike-tit

Black-faced Cuckoo Shrike

Rufous Whistler

Golden Whistler

Koel

Kookaburra

Sacred Kingfisher

Welcome Swallow

Magpie Lark

Magpie

White-faced Heron

Pelican

Whistling Kite

Lewin's Honeyeater

Olive-backed Oriole

Black-faced Monarch

Osprey

Willie Wagtail

Brown Thornbill

Whipbird

Variegated Fairy Wren

Superb Fairy Wren

Great Egret

Masked Lapwing

Brown Cuckoo Dove

Azure Kingfisher

Leaden Flycatcher

Eastern Yellow Robin

Rainbow Lorikeet

White-throated Treecreeper

Channel-bill Cuckoo

Pied Oystercatcher

Satin Bowerbird

Future FATS Field Trips

We offer field trips in warmer months where members can visit different locations to see frogs in the wild. While we usually see frogs on field trips, they are wild animals and can be difficult to see depending on weather.

Please book your place to field trips in advance, by contacting FATS Field Trip coordinator Robert Wall on 02 9681 5308.

GREEN AND GOLDEN BELL FROG SURVEYS

FATS will be undertaking auditory surveys for the Green and Golden Bell Frog at Sydney Olympic Park over the summer. If you are interested to volunteer for the surveys please contact Arthur White at arfawhite@gmail.com for more details. You may even see a Bell Frog or two!

Sunday 30 November Annual Herpetological Societies BBQ Australian Reptile Park, Somersby

The Australian Reptile Park will host the Annual Herpetological Societies BBQ. Free entry for FATS members. Please bring proof of your current membership of FATS. If there is any concern about proving membership, please email us and we can confirm with the ARP that you are a financial member. **RSVP the ARP by 10/11/2025 to: sales@reptilepark.com.au with name, phone number, and number of people attending.**

Saturday 10 January Time: 7.45pm The Watagans Leader: Michelle Toms

This area is known for its large population of *Mixophyes*, including the Great Barred Frog and Giant Barred Frog. These will be our target species for the night, and we are likely to see several of these super-sized beauties and their tadpoles. Tonight, we will learn about the differences between tree frogs and ground frogs, looking at adaptations that make each unique to their habitat. This is Michelle's favourite site where, in addition to frogs, we often see snakes, legless lizards, gliders, kingfishers, and an array of interesting invertebrates.

Saturday 24 January 2026 8.30pm West Head, Kuringai National Park Leader: Rhys Cairncross

Meet at the Duckholes Picnic Area in West Head Road, near the corner of McCarrs Creek Road, Terrey Hills.

Strategies for "waiting out" unfavourable conditions or conserving energy are common in the animal world. Some mammals, and only mammals, hibernate for long periods of time. Body temperature is lowered to maintain a dormant state, thereby conserving valuable energy. Most famously, bears wait out the harsh winter months until the Spring season, affording greater food opportunities. Torpor is a similar energy-saving strategy, but is maintained only for a shorter period, usually on a nightly or daily basis. Torpor is found widely across a range of smaller mammals such as micro-bats. It is also common amongst small birds living in high, cold mountainous environments.

Frogs use the slightly different strategy of aestivation ("as-ti-vation"). Frogs, particularly those of the arid region, remain motionless for long periods of time, only to emerge when conditions are suitable. It seems

that frogs, unlike bears, are rather aware of their surrounds at all times. Tonight, we will look at the subtle differences between aestivation, hibernation and torpor. Rhys will discuss, with his specialist knowledge of our arid frogs, how these energy-saving strategies permit animals to survive in hostile environments, which they would otherwise be precluded from.

Rhys is currently undertaking his PhD and works as an ecological consultant. Tonight, he is taking time off from his monitoring work with the arid frogs of the Simpson Desert to show us his favourite frog site in Sydney. Rhys is also an experienced photographer of wildlife and will be on hand to answer any questions on taking better frog photographs.

Directions to Meetings

FATS meets at 7pm, on the first Friday of every **EVEN** month at the **Education Centre, Bicentennial Park, Sydney Olympic Park**.

How to get to the Education Centre, Bicentennial Park, Sydney Olympic Park:

By Public Transport: An easy 10 minute walk from Concord West railway station and straight down Victoria Ave, then Bicentennial Park Pathway.

By car: Turn left from Bennelong Parkway onto Bicentennial Drive, then turn left into Step Up Place and park in the P10f / Badu Mangroves carpark. It's a short walk from the car park to the Education Centre, which is a single storey building with an adjacent tall tower. Both can be seen from the car park. The paths from the car park and along Bicentennial Park pathway are not well lit at night, so please bring a torch.

Note: Rain is generally ideal for frogging, however in the event of uncertain conditions ie. storms, hazardous rain, strong wind, bushfires, etc. please phone Robert on 02 9681 5308 (or email Michelle about the Watagans) to confirm the field trip is going ahead. All children must be accompanied by an adult. Please wear enclosed shoes that can get wet (gumboots are preferable), and bring a torch, warm clothing and raincoat. Please be judicious with the use of insect repellent as frogs are sensitive to chemicals. All fieldtrips are strictly for members only. Newcomers are welcome to take out membership before the commencement of the field trip. All participants accept that there is some inherent risk associated with outdoor field trips and by attending agree to: a release of all claims, a waiver of liability, and an assumption of risk.

THANK YOU to the FATS committee, general members, FrogCall supporters, talented meeting speakers, Frog-O-Graphic competition entrants, event participants and organisers. New content for our newsletter is always welcome. Special thanks to Marion Anstis who has produced our bumper, glossy, colour collector's edition of FrogCall each December, since issue 100 in 2009.

WHO ARE WE AND WHAT WE DO

The **Frog and Tadpole Study Group of New South Wales inc.** is a **not for profit society run by unpaid volunteers, dedicated to community awareness, advocacy and the conservation of frogs.** We are actively involved in monitoring frog populations, conducting field trips, exhibiting at community events, fairs and shows and providing talks to local community groups. We have regular public meetings, offer student research grants, produce FrogCall newsletters and Frog Facts information sheets.

EVENTS: If you'd like to have a speaker attend an event, exhibition, or community group (eg. garden club, Probus group) please contact Kathy Potter our Exhibitions Coordinator. If you are a member and would like to assist with talks and events please also reach out to Kathy.

MEETINGS: Our public meetings are informative, informal, topical, practical and free. They are held on the first Friday of every even month (February, April, June, August, October and December). If the meeting falls on a public holiday (eg. Good Friday), the meeting date will move. Please check our website and your emails for notices. Visitors always welcome.

FACEBOOK: Our Facebook group has over 6,000 members worldwide. Posts vary from frog species identification, husbandry, frog health, pets, gardens, wild frogs, ponds, research, new discoveries, jokes, cartoons, events, and habitats from all over the world. The Facebook group includes dozens of useful information files. Keep scrolling to see them all. You are welcome to join us at: <https://www.facebook.com/groups/FATSNSW/>

FROGWATCH, VOLUNTEER RUN, HELPLINE: We have been operating a volunteer run FrogWatch helpline on 0419 249 728 for lost and injured frogs in the Greater Sydney area, but it is currently awaiting a new volunteer member to operate it and pass on messages. We apologise for this delay.

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