

FROG CALL

THE FROG AND TADPOLE STUDY GROUP NSW Inc.

Facebook: <https://www.facebook.com/groups/FATSNSW/>

Email: fatsgroupnsw@fats.org.au

PO Box 296 Rockdale NSW 2216

Frogwatch Helpline 0419 249 728

Website: www.fats.org.au

ABN: 34 282 154 794

NEWSLETTER No. 153 FEBRUARY 2018

Photo by Cassie Thompson



Litoria dayi Australian Lace-lid, Lace-eyed Tree frog

*You are invited to our
FATS meeting.
Everyone is welcome.*

Arrive from 6.30 pm for a 7pm start.

Friday 2 February 2018

**FATS meet at the Education Centre,
Bicentennial Pk, Sydney Olympic Park**

Easy walk from Concord West railway station and straight down Victoria Ave.

By car: Enter from Australia Ave at the Bicentennial Park main entrance, turn off to the right and drive through the park. It is a one way road. Or enter from Bennelong Rd / Parkway.

It is a short stretch of two way road. Park in P10f car park, the last car park before the Bennelong Rd. exit gate.

FATS meeting Friday 2 February 2018

6.30 pm Lost frogs desperately seeking forever homes: Several cheery Green Tree Frogs *Litoria caerulea* and one lonely *Litoria peroni* Perons Tree Frog. Priority to new pet frog owners. Please bring your membership card and cash \$50 donation. Sorry we don't have EFTPOS. Your current NSW NPWS amphibian licence must be sighted on the night. Rescued frogs can never be released.

7.00 pm Welcome and announcements

7.30 pm Our main speaker is Arthur White discussing "The History of Frogology in Australia". Kathy Potter, our Events Coordinator will talk about the new Australian frog smartphone app.

9.30 pm Show us your frog images. Tell us about your frogging trips or experiences. Guessing competition, frog adoptions continue, supper, relax and chat with frog friends and experts.

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OCTOBER & DECEMBER 2017 FATS MEETINGS

In October 2017 Jenny O'Meara from the Olympic Park Authority (SOPA) spoke to an attentive audience about Managing a national icon, Green and Golden Bell Frogs *Litoria aurea* at Sydney Olympic Park. See right hand column. Our second speaker was Arthur White, talking about the world's oldest frog, (below) *Leiopelma pakeka*

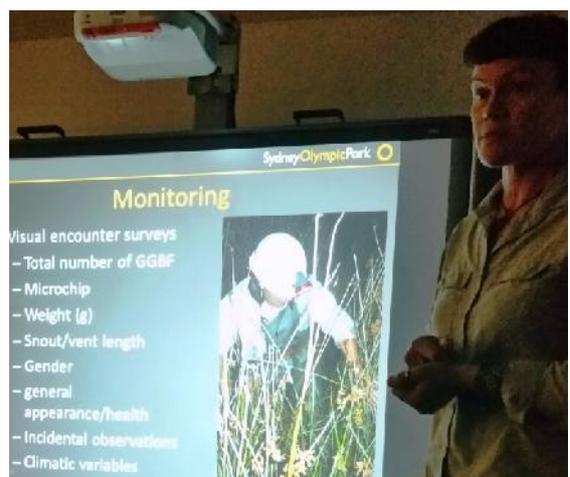


Talks at FATS meetings are very informal. Many of our main speakers take questions and generate much debate in the room from their presentations. Above are Arthur White, Marion Anstis and Jenny O'Meara answering questions and listening to meeting commentary in October.



Leiopelmatid frogs
-ancient lineage.
Closest family group
are Ascaphid frogs
from North America.

These frogs are about the size of your fingernail and are one of four native New Zealand frogs. They have evolved over the last 70 million years. Distinctive features include, no croaking, do not live in water or have webbed feet. They hatch as fully formed frogs, skipping the tadpole stage. The Maud Island frog, *Leiopelma pakeka* (below) is a small terrestrial frog, growing to 5 cm in length, and is medium to dark brown with unwebbed toes and a distinctive extended ridge behind its eye. It is slightly larger than and differs slightly in colour from Hamilton's frog (*Leiopelma hamiltoni*).



Special habitat management practices are applied at SOPA. Activities are coordinated with seasonal wildlife patterns. Training in these work practices is given to staff and contractors working within habitat areas,



Key findings - annual report 2017

- The Green and Golden Bell Frog is distributed widely
- Occupied 46% of ponds surveyed.
- Occupation of ponds is in slow decline
- Movements of up to 370 m were recorded between ponds in the Brickpit Precinct. (average 51 m)
- There was evidence of successful recruitment in all precincts
- Breeding success continues to be highest in the Brickpit precinct.
- Number of frogs recorded in Blaxland Riverside Park/Wharf Pond 4 x larger than the previous season

D Garrick (above) NZ Dept of Conserv. Key findings GGBF SOP (bottom right)



In December Marion Anstis spoke about her photographic journey to South Africa. Marion's latest book, the second edition of Tadpoles and Frogs of Australia is an invaluable and fundamental tool, contributing greatly towards our understanding of Australian frogs. <http://au.newhollandpublishers.com/new-release/june-2017/tadpoles-and-frogs-of-australia-updated-edition.html>

'URGENT RESCUE MISSION' TO SAVE AUSTRALIA'S FROGS USING SMARTPHONE APP

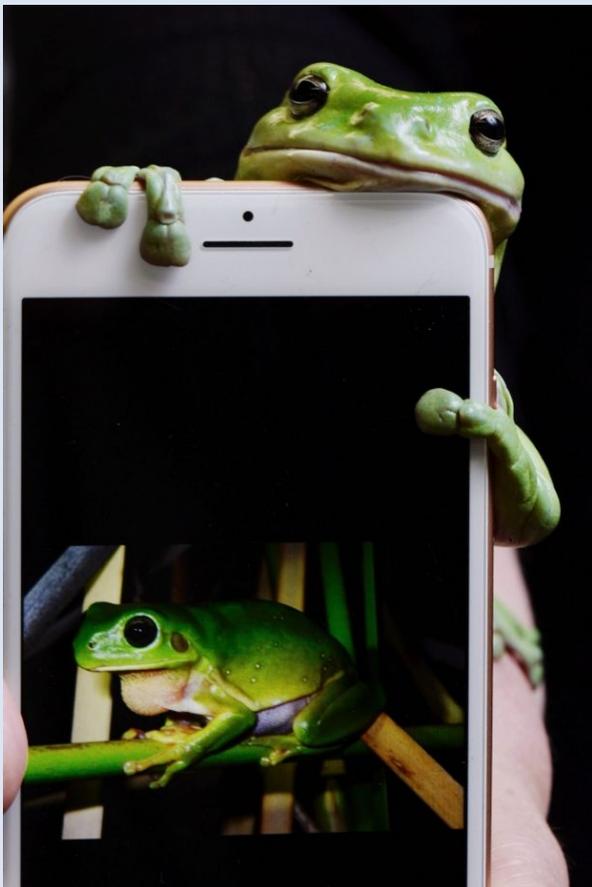
Like the stars of stage, screen and *Sesame Street*, the 25-year-old green tree frog called Godzilla was immediately ready for his croak up. When Godzilla saw an iPhone at the Australian Museum this week, the male frog hugged it. It was an appropriate response given that a new smart phone app called FrogID is being described as an "urgent rescue mission" to save frogs that are vulnerable or endangered.

A Shazam for frogs The Australian Museum has released a new smartphone app, FrogID, that can identify frogs by their chirps, barks and croaks. It's part of a national citizen science initiative to count Australia's frogs, which is being launched by the Australian Museum on Friday.

The app developed by IBM works a bit like the music identification and discovery app Shazam by recording male frog's chirps, barks and croaks. After downloading the app and turning on the location to aid identification, all users have to do is hit record when they think they hear a male frog calling out to attract the females of its species.

The museum's frog expert Jodi Rowley said frogs were often hard to identify by sight: some species look so similar that she sometimes has to inspect the front legs to find small differences. Like humans, each frog has its own "voice", and a larger frog will sound deeper than a younger, smaller frog.

Of the 240 native Australian species, four frogs are already extinct, five are critically endangered, 14 are endangered and 10 are vulnerable, said Dr Rowley, the curator of amphibian and reptile conservation biology. "Frogs are an incredibly threatened group of animals," she said. "Globally it is 42 per cent of all species [that are threatened], which is faster than birds and mammals. And one of the major obstacles in preserving frogs is a lack of knowledge."



Godzilla, the green tree frog. Photo: Nick Moir

In Australia, an estimated 20 species of frogs have yet to be named or identified. There may even be cases where what is thought to be one species could actually be three. "That has huge conservation implications," she said.

Frogs are bio-indicators, and, like the canaries in the coal mine, they are often the first to perish when the quality of water deteriorates or from changes in their habitat.

Kathy Potter of the Frog and Toad Study Group lives with Godzilla and about 40 other frogs, which the educational group has saved or rescued.

"It is nice to see people doing things with frogs," she said of the new FrogID app. "It's usually pretty lonely out there. It is a really specialised kind of crazy."



A Pobblebonk frog. Photo: Nicholas Moir

Frogs were easier to find than most people thought, she said, adding they were everywhere. "You don't have to go out into the wilderness and be the next David Attenborough ... you can go to your local oval at night, you find them in drains, you find them in gutters, any parkland with waters, a good thing to do with friends."

Dr Rowley is hoping citizen scientists may also find some frogs that have gone missing, such as the peppered tree frog, which was last seen in 1970s in NSW's Northern Tablelands and may be threatened with extinction.

"It is a little bit of a needle in a haystack because it is about two centimetres in body length [and lives in deep gorges]," she said.

"This is one species where it would be amazing if somebody out there recorded its call," said Dr Rowley who has been looking for it. Download info available at FrogID.net.au **by Julie Power**

<http://www.smh.com.au/environment/animal/s/urgent-rescue-mission-to-save-australias-frogs-using-smartphone-app-20171108-gzhdog.html> Forwarded to FATS by Stephen Weir

SIX AUSTRALIAN COLD WEATHER FROGS AND THEIR WEIRD MATING CALLS

Amphibians have been remarkably slow to take up smartphone-based dating services, preferring instead to stick to time-honoured traditions like "sitting near a body of water and yelling". In this comprehensive guide, we dissect what's hot (and what's not) in the mating rituals of Australian cold weather frogs.

The WA hooting frog:



PHOTO: "Woop ... woop ... woop." The WA hooting frog, *Heleiporus barycragus*.

(ABC RN: Eddie White/The Illustration Room)

The male hooting frog has much bigger arms than you might expect, giving the impression that it's been skipping leg day at the gym. Growing to a whopping nine centimetres, the hooting frog produces huge tadpoles, some of which can reach six centimetres long. You could be forgiven for thinking the *barycragus* in its scientific name, *Heleiporus barycragus*, is a reference to their Barry White-like love song — a deep, soulful hoot that can be heard in south-west WA's Darling Range. (It actually does refer to their deep voice.)

When breeding season arrives, the male digs a short burrow in the side of a temporary creek, and he proceeds to croon. If a lady frog visits, she'll lay up to 500 eggs in the burrow. When the burrow floods in winter, the tadpoles will swim out and start the development of massive front arms all over again. The hooting frog's conservation status is "of least concern", though almost all frog populations are in decline.

The giant burrowing frog

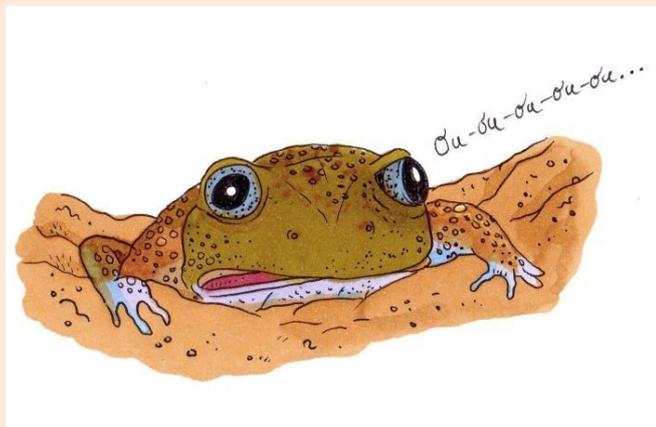


PHOTO: "Ou-ou-ou-ou-ou." The giant burrowing frog, *Heleiporus australiacus*.

(ABC RN: Eddie White/The Illustration Room)

When the first phrase in the field guide calls you "slow-moving" or "very plump", it must be hard not to take offence. But what the giant burrowing frog lacks in speed, it makes up for in being built like a proverbial cyclone-proof powder-room. Its reputation as the bad-ass of the frog world is further enhanced by the fact it eats scorpions for elevenses. Its hooting call is the reason it's sometimes called the owl frog. Their range is a big a big jelly bean on the map from around the bottom edge of NSW and Victoria, but their conservation status is "vulnerable". Good luck finding one — they're very sneaky. Its tadpoles stay swimming for an astonishing 11 or so months before metamorphosis and even though the adult frogs are large, they are incredibly difficult to detect and — like all good Monty Python fans — are experts at remaining hidden.

The growling grass frog



PHOTO: "Crawark-crawark-crok-crok."

The growling grass frog, *Litoria raniformis*. (ABC RN: Eddie White/The Illustration Room)

It's also called the "warty swamp frog", though that name doesn't really do the species justice: they have a simply stunning colouration, even if their call sounds like a peewee motorbike coughing into life. Their love life could be a hot tub scene from a bad skiing movie: the males call the females from a pool of water at night, telling them how well equipped they are to deal with a life of froggy fatherhood.

If the females decide they're up for it, amplexus ensues, which looks like the much smaller male holding onto the female in a piggy back for dear life. Eggs are then laid in little floaty clumps in the waterway, and stunning pink and yellow tadpoles emerge. The tadpoles fend for themselves, and they've got a hard time of it, because adult growling grass frogs have been observed eating young of the same species. They're found in Tasmania, Victoria and bits of neighbouring NSW and SA, and they're rated as vulnerable (but endangered in NSW).

The WA moaning frog



PHOTO: "Ooh ... ooh ... ooh ..."

**The WA moaning frog, *Heleioporus eyrei*.
(ABC RN: Eddie White/The Illustration Room)**

It doesn't get much cuter than the rotund moaning frog, whose howling choruses have annoyed generations of Perth residents. They live in the ground and breed during autumn, rather than spring. This way, their eggs are laid in an area that is likely to be inundated by winter rains, and their tadpoles will be nice and moist. The male digs a burrow with a special chamber at the end and will mournfully call out to the universe for a suitable mate. If the female likes what she hears, she'll do the amphibian equivalent of the right swipe, and lay a hundred or more eggs in foam in the bottom of the burrow.

Moaning frogs are found near the coast in south-west WA. Their conservation status is "least concern", but they're quite concerningly loud if you have one in your backyard. So if a moaning frog is keeping you awake, the WA Museum recommends filling his burrow gently with water from the hose a couple of nights running. He'll decide it's not a good place to woo his lady frog and move to your neighbour's backyard so you can listen to the moans at a humane distance. A reminder: all native animals in Australia are legally protected.

The Blue Mountains tree frog

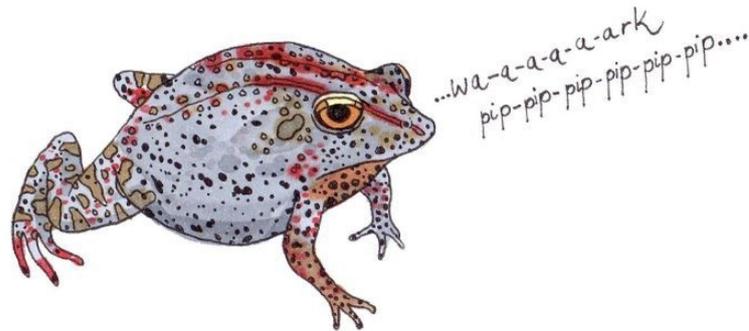


**PHOTO: "War-r-r-rk cruk-cruk cruk-cruk cruk-cruk cruk-cruk." The Blue Mountains tree frog, *Litoria citropa*.
(ABC RN: Eddie White/The Illustration Room)**

This frog has classic Australian 1970s muscle-car cred with pin-striping right from the tip of its nose down each side in a fetching brown with gold highlights. You could say they're a bit showy to look at, but their call has been likened to a golf ball falling into a hole.

In spring, males sing their golf-ball siren song from a variety of positions near flowing water to try to woo the female frog. If successful mating occurs, the eggs are laid in the water and will flow on to a quiet part of the stream and sink to the bottom, sticking to a rock. Confusingly also called the "variegated river tree frog" (I mean, pick a watercourse or a plant), this frog is found close to the coast of the lower third of NSW and at the pointy end of Victoria. Its conservation status is "of least concern".

The Victorian smooth froglet



**PHOTO: "Wa-a-a-a-ark pip-pip-pip-pip-pip-pip.."
The Victorian smooth froglet, *Geocrinia victoriana*.
(ABC RN: Eddie White/The Illustration Room)**

This is a quintessential "small brown blob" frog. It is hard for an amateur to distinguish it from other frogs — its most distinctive feature is probably its call, which consists of two different parts.

Professor Murray Littlejohn from the University of Melbourne has managed to decode what this frog is actually saying, and found its call has a partitioning of function: the two parts of the call mean two different things.

The "wark" is aimed at other males to delineate territory. The "pips" are used to attract females — in fact, they'll only respond to the pips.

It could be argued that this is the start of language. Found across the pointier half of Victoria, the population is rated as stable.

Forwarded by Steve Weir RN By Ann Jones for Off Track 29 Jul 2017 Go to link to hear calls.

<http://www.abc.net.au/news/2017-07-29/the-weird-mating-calls-of-six-australian-cold-weather-frogs/8741284> All recordings courtesy of Professor

Murray Littlejohn. Listen to the full episode of Off Track to hear more about his extraordinary library of frog recordings spanning five decades.

WORLD WETLANDS DAY 2 FEBRUARY 2018 is celebrated each year around the globe. This year we'll be offering guided walks around the WOW Centre and Tiger Bay wetlands on Friday and Saturday 2 & 3 February. These will start and finish at the WOW Centre departing at 8am each day. Depending on how hot it is they'll go for 90 minutes to 2 hours. The cost is \$5 per person but you'll get the tour plus one of our blue buckets and lots more for that....

What frog is that?

This guide is intended to help landowners and other interested people discover the frogs of the Macquarie Marshes.

Frogs are an important part of the Marshes food web. My research aims to shed light on what the frogs of the Marshes need to be happy and healthy.

I'm interested in hearing about what frogs you see and where you see them, and happy to answer any questions.

Please contact me on jo.ocock@gmail.com or awrc@unsw.edu.au



Burrowing frogs

Crucifix toad

Notaden bennetti

This frog spends most of its time burrowed underground. It breeds in temporary rain-filled ponds or the edge of flood waters after heavy rain when it's warm. It has a very distinctive appearance!

Photos top to bottom: Angela Kneel / Jodi Rowley



Ornate burrowing frog

Platyplectrum ornatum

Found near sandy areas, like near the Terrigal creek, after heavy rain in temporary and high flood waters. This frog can be very variable in colouring (see picture below on left - they are the same species!)

Photos: Jo Ocock



Brown froglets

Crinia parinsignifera

These are very small frogs. They call mainly in cooler months. Its call sounds like a low 'meeeeeep' around shallow flooded areas.

Photos: Jo Ocock



Spotted marsh frog

Limnodynastes tasmaniensis

Can be seen and heard calling throughout most of the year near any water body, such as floodplain creeks, marshes and rain-filled ponds. It usually has a stripe down its back, but can look similar to the barking marsh frog. The call is a repetitive 'machine gun' sound.

Photos: Jo Ocock



Desert tree frog

Litoria rubella

This is a smallish, usually reddish tree frog. It is also seen around houses, on the floodplain and dam ponds. It most often heard calling after heavy rain around temporary waters. This frog makes a harsh, buzzing noise.

Photos: Jo Ocock



Salmon-striped frogs

Limnodynastes salmim

These can quite large frogs. It is rather distinctive with those pink stripes! They have been seen throughout the floodplain.

Photos: Jo Ocock and Richard Tate

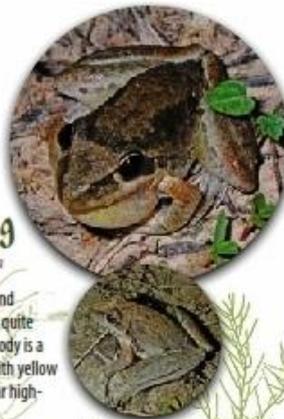
Tree frogs

Broad-palmed frog

Litoria latopalmata

This frog can also be found around the house. It has quite a pointy nose, and the body is a creamy, brown colour with yellow thighs. It makes a regular high-pitched 'yip' call.

Photos: Jo Ocock and Richard Tate



Green tree frog

Litoria caerulea

Everyone knows this one! This frog makes a very loud repetitive 'crawk' noise, especially after heavy rain in summer.

Photos: Jo Ocock / Richard Tate

Painted burrowing frog

Neobatrachus sudelli

Also a burrowing frog, this one has a round nose. There is some skin colour variation, with yellow, chocolate and cream colours seen. Again, usually only seen after heavy rains near temporary and high flood waters.

Photos: Jo Ocock



Waterholding frog

Cyclorana platycephala

Another frog that burrows underground, this one makes a cocoon from layers of skin! It is also mostly known from red clay soil areas, near temporary rain-filled ponds after heavy rain.

Photos top to bottom: Jo Ocock / Jodi Rowley



Wrinkled toadlet

Uperoleia rugosa

These guys are very small and hard to see, but can be common in flooded grassy areas after heavy rains. Brown and warty on top but they have very distinctive orange thighs!

Photos: Jo Ocock

Marsh frogs

Barking marsh frog

Limnodynastes fletcheri

This frog can be seen and heard calling throughout the year near any water body, such as floodplain creeks, marshes and rain-filled ponds. It often has pink patches behind the eyes, but can look similar to the spotted marsh frog. Call is a single rough 'bark'.

Photos top to bottom: Jo Ocock / Jodi Rowley



Striped burrowing frog

Litoria alboguttata

This is another frog that burrows. It has a pointy nose and a green stripe down its back. Usually only seen after heavy rains at temporary waters.

Photos top to bottom: Richard Tate / Jo Ocock



Warty waterholding frog

Cyclorana verrucosa

It can be bright green, but also a lighter olive colour, with a cream stripe. It is also mostly seen after heavy rain, around temporary rain-filled ponds and the edge of flood waters.

Photos: Jo Ocock



Peron's tree frog

Litoria peroni

This frog can also be very common. It is often seen around houses, as well as on the floodplain and near any water body such as dam ponds. Its call sounds like a maniacal, slow descending cackle!

Photos left to right: Jo Ocock / Angela Kneel



Cane toad

Bufo marinus

This species is **NOT** known from the Macquarie Marshes area. It has a very warty skin, large glands behind the eyes, a bony head and sits upright. If you think you see it, let NPWS staff or me know.

Photos: G Miller, Australian Museum



frogs

of the Macquarie Marshes



an informal guide to knowing which frog is that?
Jo Ocock

continued from page 6

Please email Dr Bill Phillips CEO RiverSmart Australia Ltd Also trading as Macquarie River Trails Mobile 0438 817 470 to book in so they know how many to cater for.

ceoriversmart@gmail.com



HAPPY WORLD FROG DAY 20 MARCH



WORLD FROG DAY: A STORY ABOUT SAVING ONE OF THE WORLD'S RAREST FROGS

In 2008, the Year of the Frog, I was appointed by the International Union for Conservation of Nature (IUCN) as International Ambassador for the Frog simply, to draw attention to the threats faced by frogs and other amphibians around the globe (from a fatal skin disease caused by a kind of chytrid fungus, habitat destruction and global warming).

Of course, a frog was produced to meet me during a press conference at the Wellington Zoo (pictured above). This Australian Green frog (*Litoria caerulea*) is also known as White's Tree frog and the Dumpy Tree Frog! It was brought out for publicity photos during my New Zealand visit.

I have always loved frogs and toads – a love probably triggered by Jeremy Fisher, the frog immortalized by Beatrix Potter, and Mr. Toad of *The Wind in the Willows* fame. The only frog with whom I had regular contact, however, was Mr. Jackson – a cement garden ornament who has always lived in the garden at the Birches, my childhood home, beside the bird bath.



It was during that Year of the Frog that I met another Ambassador for the Frog, Dr. Phil Bishop. But while I was simply chosen to be an ambassador more or less for publicity purposes, Phil was the real thing. He was passionate about frogs from his childhood. His doctoral thesis was on acoustical communication in amphibians in South Africa, and he is currently Professor in the Department of Zoology in Otago University, New Zealand. As a result of our meeting, Phil offered to help found JGI-New Zealand and start a Roots & Shoots group. On my next visit to his country I was invited to Otago University and in addition to giving a lecture, was able to visit Phil and his frogs, and his team of frog enthusiasts.



*I got to hold some of New Zealand's very special frogs – this is Maud Island Frog (*Leiopelma pakeka*), a very close relative of Hamilton's.*

It was during that visit that Phil told me about the endangered Hamilton's frog, one of the rarest and most ancient frogs in the world. It is tiny, the male being only about 45 mm, and the female only very slightly bigger – yet it is New Zealand's largest native frog! Hamilton's are ground-dwelling species and during the day hide in tiny crevices in the rocks, which is where the females lay their eggs. While the tadpoles are developing – inside the eggs – the father stays close by guarding them. When the tiny froglets emerge, he carries them around on his back.

There was a time, long, long ago, when frogs of this group (the *Leiopelma* frogs) had tails that they could wag. And today they still have the muscles, even though they have no tails to wag! If you are not smiling, at the idea of a frog wagging its tail – well, then you have no sense of humor! (If you want to know more about the tails of those prehistoric ancestors, you can Google 'caudalipuboischiotibialis muscles' – the proper scientific name!)

The modern *Leiopelma* frogs also have long shaped bits of cartilage in the muscles of their abdomens (look up 'inscriptional ribs' if you want to know more!), round pupils and more vertebrae than most other frogs except their relatives, the tailed frogs found in USA and Canada. I have to admit, I had not heard of tailed frogs before. I wanted to see a picture, and as you may also, here is what they look like:



*A male tailed frog – the females do not have tails.
[picture from Wikipedia Tailed Frogs]*

But perhaps the most unusual characteristic of this group of almost prehistoric frogs is that they cannot croak. Hard to imagine a frog that cannot croak. The reason, Phil explained, is because they have no vocal sacs. Nor do they possess eardrums. “So do they make any sounds?” I asked. “A thin high-pitched squeak,” said Phil.

It was because most New Zealand frogs are more or less silent that Phil was first attracted to the country. How could they find their mates without sound, he wondered? Eventually he found the answer – they communicate by releasing chemicals and scents. “These frogs, along with the tailed frogs,” Phil told me, “also swim differently to other frogs – they use alternate leg kicks and this causes their heads to move from side to side in a rather energy inefficient way”.



Hamilton's Frog

Like so many amphibians, Hamilton's frog is having a hard time. It was originally found on both the North and South Islands of New Zealand, but as a result of habitat destruction and predation by native and introduced animals, it gradually vanished from most of its original range. By 2004 the only Hamilton's left were concentrated in a “boulder bank” on Stephen's Island. The size of its range – just 300 square meters. And only about 300 individuals remaining. Without efforts to protect and restore the little frog it might well be extinct by now. And it is still one of the rarest frogs in the world.

Phil was one of the co-leaders of a group of scientists committed to planning how to save Hamilton's and other endangered frogs (the New Zealand Native Frog Recovery Group). After monitoring the tiny population it seemed that numbers of Hamilton's in its tiny range were stable from year to year, but the habitat was not big enough for expansion.

Obviously there was a need to establish a second group, and Phil and his team chose one of the small islands named Nukuwaiata. “We had to prepare the place for the frogs” said Phil. “We built some rock banks and installed a boardwalk over them so that researchers could monitor the population without risking stepping on the frogs or stepping on rocks that could

move and accidentally squash a frog below.” Next they worked out how many frogs they could remove without harming the original population, whilst giving the second population a good chance of becoming self-sufficient. Of course there was controversy – many people felt the original Stephens Island population might suffer and should be left alone – that all the eggs should be kept in one basket as it were.

“But we went ahead anyway” said Phil, “because we were fairly confident of our mathematical model – based on analyzing the years of monitoring the one existing population. And so, over a two year period (2004 to 2006) they moved 80 frogs to Nukuwaiata.

Since then, both populations have been monitored. By 2008, Phil was able to tell me the good news: “there appears to be no significant impact to the source population” he wrote “and this year, in June, we discovered the first baby frogs on Nukuwaiata”. And he went on to say “we have achieved a milestone as they have been successful in reproducing in their new environment and all of a sudden we have our ‘eggs’ in two baskets, thereby significantly decreasing the risk posed to our single population of the World's Rarest Frog!”

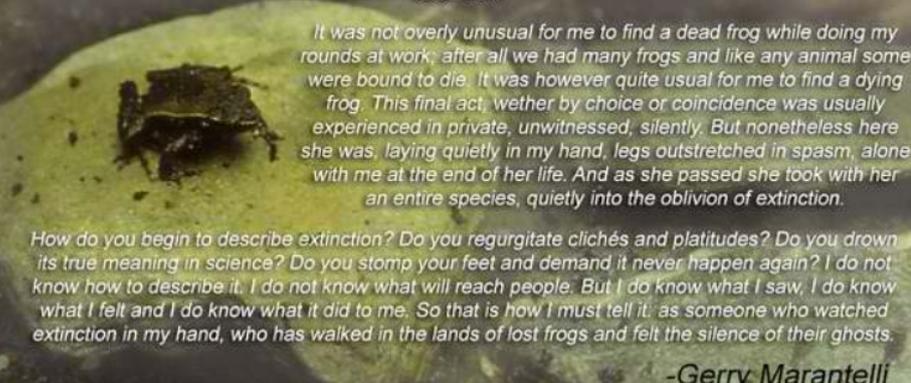
Since 2008, the surveys have been continued on both populations. The most recent, conducted in 2015 by one of Phil's doctoral students, Sally Wren, has even better news. The original population on Stephen's Island, despite the dire forebodings of the nay-sayers, is recovering well from losing the 80 individuals selected for translocation. The number of frogs appears to be increasing, and there are still many subadults among the individuals captured. There was one special frog for Sally: “The ‘frog of the trip’ for me” she wrote, “was the one we found which was first captured as an adult on Stephens Island in 1990, so he must be coming up to 30 years old, if not older!”

And Phil told me, that day in the lab, that “scientists recently found a female who was banded as an adult 35 years ago! It just shows how important long term monitoring is in our business”. I think most people don't realize that little creatures like frogs can live so long. I certainly didn't. **BY JANE GOODALL 20 MARCH 2016**

<http://news.janegoodall.org/2016/03/20/world-frog-day-saving-one-of-the-worlds-rarest/> *A Jane Goodall's All Good News post published in honour of today's World Frog Day.*

PURCHASE FROG FOOD FROM THE AMPHIBIAN RESEARCH CENTRE AND HELP FUND FROG CONSERVATION
<https://frogs.org.au/live-foods/>

It was a small brown frog I held in my hand that day, plain and utterly unremarkable, small enough to walk by without a second glance. It was a Torrent Frog – a Sharp Snouted one to be exact, an inhabitant of small forest streams in North Eastern Australia. Such a ubiquitous creature that no-one invested time in understanding it, in fact more than one biologist described it to me as so common you were bound to step on a few en route to more interesting and important research pursuits. But she was dear to me. I had raised her from a tadpole and now she was mature, ripe eggs visibly bulging from her sides, I should have expected to find her breeding, she was young – in her prime, she should not be unwell!



It was not overly unusual for me to find a dead frog while doing my rounds at work; after all we had many frogs and like any animal some were bound to die. It was however quite usual for me to find a dying frog. This final act, wether by choice or coincidence was usually experienced in private, unwitnessed, silently. But nonetheless here she was, laying quietly in my hand, legs outstretched in spasm, alone with me at the end of her life. And as she passed she took with her an entire species, quietly into the oblivion of extinction.

How do you begin to describe extinction? Do you regurgitate clichés and platitudes? Do you drown its true meaning in science? Do you stomp your feet and demand it never happen again? I do not know how to describe it. I do not know what will reach people. But I do know what I saw, I do know what I felt and I do know what it did to me. So that is how I must tell it: as someone who watched extinction in my hand, who has walked in the lands of lost frogs and felt the silence of their ghosts.

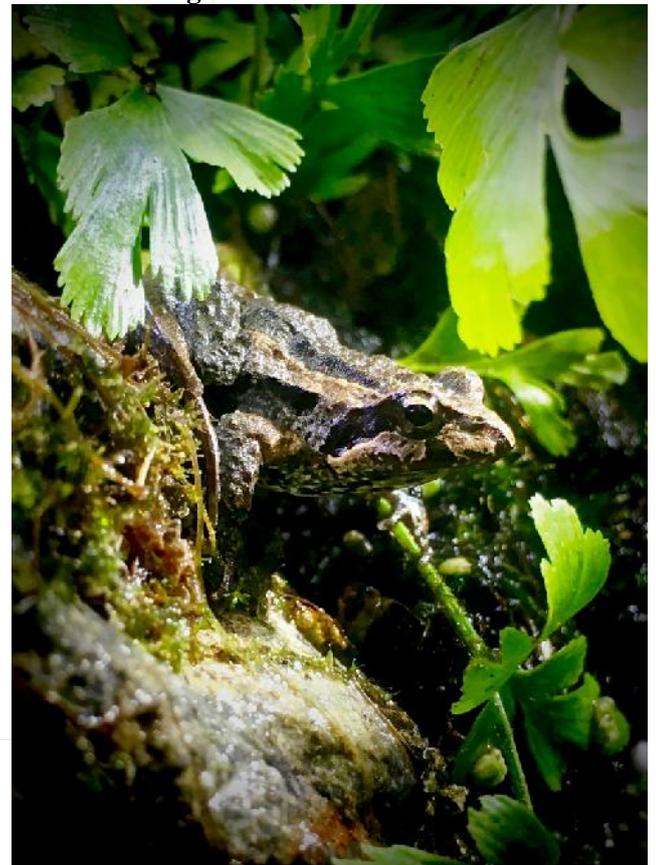
-Gerry Marantelli



Three Fantastic Froggers, Smiths Lake
Karen White, Punia Jeffery and Josie Styles



Photo Craig Broadfield *Crinia tasmaniensis*



CAN WE STOP AMPHIBIAN EXTINCTION BY INCREASING IMMUNITY TO THE FROG CHYTRID FUNGUS?

Study results available online Thanks again to all of our supporters! We have now published a pre-print of our corroboree frog genome-wide study online so can now see what your donations accomplished. Please check it out and share it with your friends:

<https://www.biorxiv.org/content/early/2018/01/18/247999>

We are really excited about the results of this study and what they can do to assist with the conservation of corroboree frogs and other species threatened by chytridiomycosis. We identified several genes that impact chytridiomycosis outcomes and also found that corroboree frogs are still pretty genetically diverse despite being nearly extinct in the wild. This is great news as it means that a selective breeding program can be developed to help increase disease resistance in corroboree frogs. However, before we make any major decisions about how to breed these frogs, we plan to do a larger study to increase our confidence that we have identified the correct genes. Please keep an eye on this space for future developments in our research program and for updates on the manuscript. Lab Note #4 by Tiffany A. Kosch



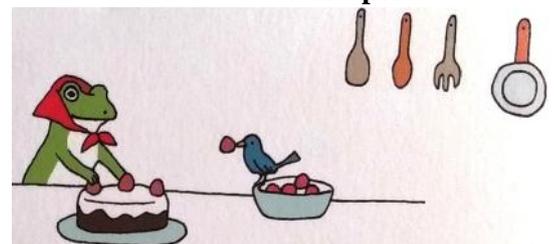
Sighted on the SAVE THE FROGS! Costa Rica Ecotour. They'll be returning to Costa Rica in July 2018.

www.savethefrogs.com/ecotours The Bransford Litter Frog *Craugastor bransfordii* lays its eggs in moist areas close to the ground, and the young hatch directly as froglets. This diurnal frog is considered stable but is declining.

AMPHIBIAN LICENSING

Friendly reminder:

Your frog licensing returns are due to NSW NPWS in April.



FATS MEETINGS commence at 7 pm, (arrive from 6.30 pm) and end about 10 pm, at the Education Centre, Bicentennial Park, Sydney Olympic Park, Homebush Bay. They are usually held on the **first Friday of every EVEN month** February, April, June, August, October and December. Call, check our web site, Facebook page or email us for further directions. We hold 6 informative, informal, topical, practical and free meetings each year. Visitors are welcome. We are actively involved in monitoring frog populations, field studies and trips, have stalls at local events, produce the newsletter FROGCALL and FROGFACTS information sheets. FATS attend many community fairs and shows. Please contact Kathy Potter if you can assist as a frog explainer, even for an hour. No experience required. Encourage your frog friends to join or donate to FATS. Donations help with the costs of frog rescue, student grants, research and advocacy. All expressions of opinion and information in FrogCall are published on the basis that they are not to be regarded as an official opinion of the Frog and Tadpole Study Group Committee, unless expressly so stated.

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FATS ON FACEBOOK: FATS has over 2,3000 Facebook members from almost every continent. Posts vary from husbandry and frog identification enquiries to photos and posts about pets, gardens, wild frogs, research, new discoveries, jokes and habitats from all over the world. The page includes dozens of information files.
<https://www.facebook.com/groups/FATSNSW/>

RESCUED FROGS are seeking forever homes are at our meetings. Please contact us in advance if you wish to adopt a frog. Cash donation required to cover care costs. Sorry we have no EFTPOS. FATS must sight your current amphibian licence. Licences can be obtained from NSW National Parks and Wildlife Service, Office of Environment and Heritage. <http://www.environment.nsw.gov.au/wildlifelicences/GettingAnAmphibianKeepersLicence.htm> We request you join FATS before adopting a frog. This can be done on the meeting night. Most rescued frogs have not had a vet visit unless obviously ill. Please take your new, formerly wild pet to an experienced herp vet for a check-up, possible worming and/or antibiotics. Consider having annual checks for your frog pets. Some vets offer discounts.



Thank you to the committee members, FrogCall supporters, meeting speakers, Frog-O-Graphic competition entrants, events participants and organisers David, Kathy and Harriet Potter, Sarah and Ryan Kershaw. The FrogCall articles, photos, media and webpage links, membership administration and envelope preparation is greatly appreciated. Special thanks to newsletter contributors, Robert Wall, George Madani, Jilli Streit, Karen & Arthur White, Andrew Nelson, Michelle Toms, Josie Styles, Jodi Rowley, Wendy & Phillip Grimm and Marion Anstis.



FROGWATCH HELPLINE 0419 249 728

FATS COMMITTEE CONTACTS

FATS MAILING ADDRESS: P O Box 296 Rockdale NSW 2216

Arthur White	President	ph/fax (02) 9599 1161	1arthur@tpg.com.au
Marion Anstis	Vice President and chairperson	(02) 9456 1698	frogpole@tpg.com.au
Wendy Grimm	Secretary	(02) 9144 5600	wagrimm@tpg.com.au
Karen White	Treasurer	ph/fax (02) 9599 1161	1arthur@tpg.com.au
Phillip Grimm	Memberships, Website & Facebook Manager	(02) 9144 5600	phigrimm@gmail.com
Kathy Potter	Events Coordinator	0403 919 6	kathy@the-pottery.org
Robert Wall	Field Trips Convenor	(02) 9681 5308	rjw2008@live.com.au
David Potter	Frog Helpline Coordinator	0413 210 789	david@the-pottery.org
Monica Wangmann	Editor	0418 992 766 / (02) 9797 6543	monicawangmann@gmail.com

General Committee members Andre Rank, Jilli Streit, Punia Jeffery and Vicki Deluca

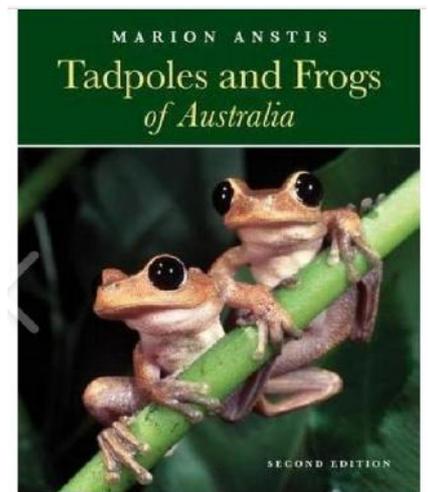


LEFT

Litoria wilcoxi
 watercolour
 by Garth Coupland

RIGHT:

Marion Anstis' second edition book Tadpoles and Frogs of Australia
 A must
 for any keen frogger.



FIELD TRIPS

Please book your place on field trips. Due to strong demand, numbers are limited. Be sure to leave a contact number when contacting the Field Trips Coordinator Robert Wall. Regardless of prevailing weather conditions, we will continue to schedule and advertise all monthly field trips as planned. It is YOUR responsibility to re-confirm in the last few days, whether the field trip is proceeding or has been cancelled. Phone Robert on 02 9681 5308.

27 January 7.45 pm

The Watagans

Leader: Brad McCaffery

Take the freeway north. After approx. 83km, take the Morisset/Cooranbong exit. Turn right and travel approx. 2 km to the corner of Mandalong Rd and Freemans Dr, Morisset.

Frog enthusiasts are aware of the risks that diseases like chytrid and ranavirus pose to our frogs. A less-discussed pathogen is Phytophthora (“fy-toff-thor-a”), a plant dieback disease that affects trees and forest understorey. While not directly impacting on the health of frogs, the pathogen follows groundwater movement along natural land contours, often spreading downslope towards streams and water-bodies. Known to kill fringing vegetation, it is implicated in some frog declines by altering stream-side habitat. More recently, “Myrtle Rust” has entered the country. It too, has a devastating impact upon our forests and stream-side vegetation, and is spreading with alarming speed. With Phytophthora and Myrtle Rust making their presence felt around areas like the Central Coast, tonight we will discuss the importance of limiting the spread of all disease across the landscape, not just those that frog enthusiasts are most familiar with.

Brad spends much of his time undertaking bush regeneration. He has first-hand knowledge of the problems confronting our bushland remnants, and in particular, how these problems impact on the local froglife. Tonight he will explain the importance of hygiene protocols, and how by following these protocols, we help protect our native flora and fauna.

2 & 3 February Macquarie Marshes tour See pages 6 and 7 Whilst not run by FATS, it’s a great way to see the marsh frogs. The downloadable frog brochure (thanks to Jo Ocock) is at <http://www.joanneocock.com/> The guide a great way of spreading info to landholders and other interested people in that area.

***** **With any frogging you do, only access land with permission from the landowner!** *****

2- 4 March

Smiths Lake Camp-Out

Leaders: Karen and Arthur White

Smith’s Lake has become such a popular field trip destination that changes are needed to ensure that everyone gets a chance to go. Up until now, it has been first in, goes to the head of the list, but this approach has meant that the same people often get to go and newcomers miss out. In addition, we have people cancel late so their place goes unfilled. To overcome both of these problems we have changed the booking arrangements, which will include a **non-refundable** pre-payment for the booking. Most people will still be able to attend. This arrangement is in case we have too many people wanting to go on the field trip.

1. For the next field trip, you must email Karen White white.kazzie@gmail.com by the 16th February and indicate that you (and others in your group) want to attend and what day you intend to arrive. Karen will then put your name on a list - if you attended the previous Smith’s Lake field trip you will automatically go on the Reserve List.
2. Karen will send you a reply email to let you know which list you are on. If you are on the A list you must pay your accommodation by the 16th February to confirm your booking. If you do not pay by this date you will be removed from the A list. You can pay electronically to the FATS account:- **Account Name: Frog and Tadpole Study Group - BSB 082 342 Account No. 285 766 885**. Cost is \$17.50 per person, per night.
3. Karen will send you confirmation of your booking when your payment has been received.
4. Karen will email people on the Reserve list, 2 weeks before the field trip dates (16th February). You will be advised if there are spaces available for you or not. If are able to go, you will now need to forward your payment to guarantee your place. Payment must be received by the 23rd February. If not, your place will be given to the next person on the list.

We think that this will be the fairest way to ensure that everyone gets a chance to go to Smith’s Lake.

In the event of uncertain frogging conditions (e.g. prolonged/severe drought, hazardous and/or torrential rain, bushfires etc.), please phone 02 9681 5308. Remember! rain is generally ideal for frogging! Children must be accompanied by an adult. Bring enclosed shoes that can get wet (gumboots are preferable), torch, warm clothing and raincoat. Please be judicious with the use of insect repellent – frogs are very sensitive to chemicals! Please observe all directions that the leader may give. Children are welcome, however please remember that young children especially can become very excited and boisterous at their first frogging experience – parents are asked to help ensure that the leader is able to conduct the trip to everyone’s satisfaction. All field trips are strictly for members only – newcomers are however, welcome to take out membership before the commencement of the field trip. All participants accept that there is some inherent risk associated with outdoor fieldtrips and by attending agree to; a release of all claims, a waiver of liability, and an assumption of risk. RW