

FROG CALL

THE FROG AND TADPOLE STUDY GROUP NSW Inc.

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NEWSLETTER No. 162 AUGUST 2019

Uperoleia mahonyi photo by Michael Mahony



**FATS AGM 7 PM 2 AUGUST 2019
EDUCATION CENTRE BICENTENNIAL PARK**

FATS meeting, Friday 2nd August 2019

6.30 pm Lost Green Tree Frogs *Litoria caerulea* frogs and “friends” seeking forever homes: Priority to new pet frog owners. Please bring your membership card and cash \$50 donation. Sorry, we don’t have EFTPOS. Your NSW NPWS amphibian licence must be sighted on the night. Adopted frogs can never be released. Please contact us first if you plan to adopt a frog. We will confirm what frogs are ready to rehome.

7.00 pm Welcome, Annual General Meeting and announcements

7.45 pm Our main speaker is Henry Cook “A novel way to help threatened species” Grant Webster speaking about a possible New Zealand population of *Litoria castanea*, Yellow-spotted Tree Frog. Arthur White talking about the impact of feral horses on *Pseudophryne corroboree* Corroboree Frog habitat in Kosciuszko National Park.

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.

*You are invited to our
FATS meeting. It's free.
Everyone is welcome.*

Arrive from 6.30 pm for a 7pm start.

Friday 2 August 2019

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

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

Take a torch.

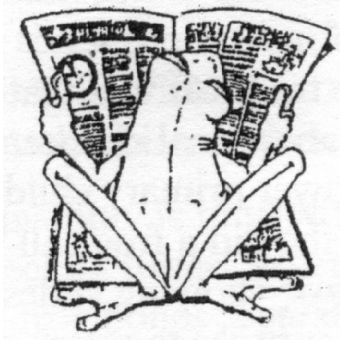
By car: Enter from Australia Ave at the Bicentennial Park main entrance, turn off to the right and drive through the park. It’s a one way road.

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.

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LAST MEETING 7 JUNE 2019

Punia Jeffery opened the meeting and welcomed everyone. Kathy Potter spoke about the Australian Museum FrogID project, the app, the first paper and FATS events. See this issue for more information. We always need people to help. No experience required. It's best to email kathy@the-pottery.org if you can help at our events. FATS is at many events in August. We really need your help. Even an hour gives us a short break in a long day. Here are some events we attend:

Friday 9/8 Big Day Out, Little Explorers
 Saturday 10/8 Super Science
 Saturday 17/8 Mt Tomah
 August Australian Museum Science Festival
 Sunday 18/8 Centennial Park Science and the Swamp
 Sunday 11/8 Mt Annan Botanical Gardens
 Sunday 25/8 Ku-ring-gai Wildflower Gardens
 Sunday 8/9 Stoney Range Spring Festival Dee Why
 September Galston Garden Club and others

Arthur White spoke about FATS at the Sydney Royal Easter Show and American Wood Frogs, whose call resembles a duck's quack. Frogs are ectotherms. The Wood frog survives being frozen. Human are endotherms and make our own heat. We rely on plentiful food to survive and have a stable body temperature.

<https://www.youtube.com/watch?v=pLPeehsXAr4>

FATS AGM - FRIDAY 2 AUGUST 2019

The FATS AGM will be held on Friday 2/8/2019, commencing 7pm. We meet at the Education Centre, Bicentennial Park, Sydney Olympic Park.

If you would like to ask any questions about joining the FATS committee, please give us a call. As mentioned in the June newsletter, contact our President Arthur White at least two weeks before the meeting for further information and to submit items.

We appreciate fresh ideas and new members on our committee. No experience required. The committee meets 6 times a year. No task commitments or time expected of committee members, other than what you are able to spare. See contacts details on page 11.

Arthur White

2019 FATS FROG-O-GRAPHIC COMPETITION

The FATS members' 2019 Frog-O-Graphic competition opens closes 31st August 2019.

Categories: Best Frog Image,
 Best Pet Frog Image,
 Most Interesting Image &
 People's Choice.

Category winners are decided by a panel of judges.

People's Choice is voted for by everyone present at the October FATS meeting.

All entries are by email to photos@fats.org.au

Please state: your name, confirm that you are a financial FATS member, **identify the frog species preferably by scientific name (in the file name) and location**, if known, whether the image is a pet frog and your contact phone number.

Max 6 entries per person. Max attachment size 6 MB.

Fabulous prizes awarded. Entries must be original and your own work. The entries may appear in FrogCall, Facebook, our web site and other FATS publications.

Arthur White





Glenn Shea presented part 2 of his talk on the early European history and study of Sydney's frogs. Glen graduated with a PhD in 1992, from Sydney University.. He has been teaching Veterinary Anatomy since 1985. His research interests are in the systematics and biology of the reptiles and amphibians of the Australasian region. He is an honorary research associate of the Australian Museum and the Queensland Museum, honorary life member of the Australian Herpetological Society, a member of the Skink Specialist Group of the IUCN, editor of the Australian herpetological journal "Herpetofauna", librarian of the Australian Herpetological Society, President of the Australian Society of Herpetologists, and past member of the Australasian Reptile and Amphibian Specialist Group of the IUCN.

Glenn's April talk was about the discovery of frogs by those visiting Sydney, including English and French expeditions. His June presentation covers frog discovery mainly by people living in Sydney and collecting frogs. Many specimens were still being sent back to England for classification.



Georg Ritter von Frauenfeld 1807-1873

In 1858 an Austrian expedition visited Sydney. The arrival of frigate Novara was warmly welcomed by Sydney sides and led to celebrations by the German residents, with customary singing and band music. They collected fauna from Sydney and the local region, specimens such as *Litoria bibronii*, *freycineti*, *lesueurii*, *aurea* and *phyllochroa*, *Limnodynastes salmoni*, *grayi* and *Litoria castanea* (lost for decades then found again) went back to the Austrian

National Museum to be studied by Franz Steindachner over the next 80 years.



Franz Steindachner 1834 – 1919

At the British Museum John Gray who was unwell, gave his assistant Albert Günther the task of caring for and cataloguing the amphibian collections, including live frogs, which he completed in a couple of years eg *Limnodynastes tasmaniensis*, *Pseudophryne bibroni*. *Litoria peroni* all coming from one source Johann Krefft.



Albert Karl Ludwig Gotthilf Günther 1830 to 1914



Johann Ludwig Gerard Krefft 1830 to 1881

Collected specimens for Australian Museum and published the first paper on many Australian frogs. He fell out with corrupt Museum officials.



George Albert Boulenger 1858 - 1937

Continued Günther's and Kreffts work at the British Museum. He named more species than any other person in herpetology world wide. He wrote many papers. Fletcher was his main source of specimens.



Oskar Boettger 1844 - 1910 an agoraphobic, worked at home on frog specimens for the German Museum.



James Fowler Wilcox 1823 – 1881 had a private zoo in Sydney and collected specimens for Kreffft, some from Grafton.



Wilhelm Carl Ludwig Kirchner 1814 - 1893
Consul for Hamburg and Prussia in Sydney, collected frogs in Sydney for the Senckenberg Museum in Frankfurt Germany. He was very interested in natural history.



Wilhelm Moritz Keferstein 1833 – 1870 received specimens in Germany from Kreffft and others.

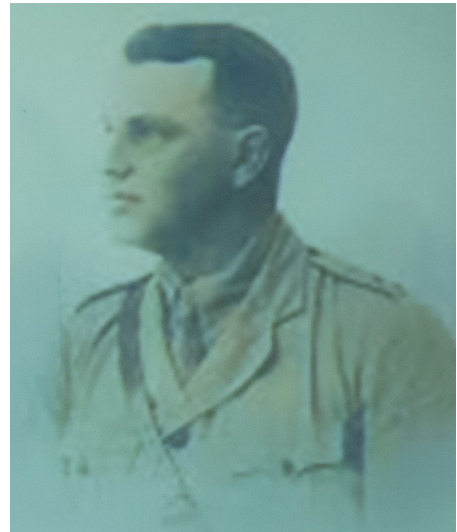


Joseph James Fletcher 1850 - 1926, from Newington College. Provided specimens to Boulenger. Fletcher's research work was diverse. He wrote a succession of papers on the distribution of frogs.



Gabriel Bibron 1805-48

natural history as a young teenager. He became a young cadet at the Australian Museum. He published his first paper on frogs at 15. He produced ground breaking papers on frogs. Sadly he died in the first world war.



Launcelot Harrison 1880 - 1928. Lived in Killara and worked with Dene Fry. They went to uni together. Ending up as the professor of zoology at Sydney Uni. He was bequeathed Fry's frog notes. He died quite young.

Frog research drops out for about a 30 year period. In the 1940's frog research returns. Glen will leave that talk for another day. Thanks Glenn Shea for yet another brilliant presentation. Please come back soon.

Arthur spoke about FATS presence at the Sydney Royal Easter Show and the wonderful set up and interaction with the public by Sarah, Ryan, Punia, Karen and our members. It puts FATS in such a good light. See pages 2 and 12. We desperately need more helpers at these types of events. Do you remember "Dairy Queen" the famous pet Cane Toad from Queensland? The little girls' grandfather visited our stall at the show and saw Dairy Queen's photo on our back drop, and introduced himself.

<https://www.youtube.com/watch?v=jxZ45U9wu4c>

<https://www.youtube.com/watch?v=wustbtoyKLE>



La Coquille (later l'Astrolabe)

René Primevère Lesson 1794-1849

(with Prosper Garnot 1794-1838)



Dene Barrett Fry 1897 - 1917 at Denegully, Lindfield 1914 was the next person to step up to the plate. Born in Lewisham, Sydney, moved to Lindfield where he met Launcelot Harrison. Fry was a genius and began his love of



Marie Callins scoops the pool – best in herp show

Lastly, Andre Rank ran a short video of tadpoles followed by supper and raffles. **MW.**

THE GREEN AND GOLDEN BELL FROG POPULATION AT KURNELL

has been evident on the peninsula since Cooks party first detected it upon landing at Migurrung Beach in 1770. This gives the GGBF population at Kurnell immense historical significance with the species being the first Australian frog detected by Europeans and subsequently one of the first illustrated from specimens sent back to England. An illustration depicting the frog appears in the publication by John White "Journal of a Voyage to New South Wales". See FrogCall 161. This book documents the field observations made by the naturalists aboard 'Endeavour', including Solander and Banks, at Kurnell and at other locations explored. The naturalists' field notes were transcribed by George Shaw and then published in White's Journal with illustrations by J. Merritt based on the descriptive field notes provided along with the preserved specimens. The specimens were lodged in the 'Hunterian Museum' at the Royal College of Surgeons in London. Unfortunately the specimens were destroyed during an air raid in WWII when the building was bombed and consumed by fire and so the identity of the Type specimen is in some doubt and can no longer be verified.

The treatment of the matter by Tyler and Dobson in 1973, where they suggest that the specimen is a Green Tree Frog *Litoria caerulea* (sensu lato), is one possible interpretation and is based on the tendency of preserved *L. caerulea* to often have a blue tinge and hence the name for the illustration. There is also another motive for favouring this interpretation and that is preserving the nomenclatural stability of the two well known frog species (*Litoria aurea* and *L. caerulea*) that are implicated. With no intention or desire to destabilise the existing nomenclatural arrangement of either species, it is however, still important to give appropriate recognition to such an important historical discovery of the first frog for Australia.

The illustration provided in White shows a specimen of what is almost certainly a GGBF with its reduced toe pads, elongate phalanges, pointed snout and pictured habit of calling from wetland/pond margins. Furthermore the GGBF is also well known for its 'electric' blue thighs and groin area that would no doubt have been mentioned in field notes at the time of collection. The 'Blue Frog' notation could therefore have been in reference to this leg colouration rather than the whole frog as alluded to by Tyler and Dobson (1973). The location illustrated also bears a strong resemblance to the wetland and spring still present today a short distance from Cooks landing place that was, in all likelihood, the original site of the specimens collection. This area is recorded on the register of the National Estate and is a National Environmental Significance (NES) matter protected by the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

Extracts from:

<https://www.environment.nsw.gov.au/resources/threatenedspecies/2007139kurnellggbfmp.pdf>

IS ATRAZINE TURNING FROGS GAY?

Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses. Hayes TB¹, Collins A, Lee M, Mendoza M, Noriega N, Stuart AA, Vonk A.

Abstract Atrazine is the most commonly used herbicide in the U.S. and probably the world. It can be present at several parts per million in agricultural runoff and can reach 40 parts per billion (ppb) in precipitation. We examined the effects of atrazine on sexual development in African clawed frogs (*Xenopus laevis*). We hypothesize that atrazine induces aromatase and promotes the conversion of testosterone to oestrogen. This disruption in steroidogenesis likely explains the demasculinization of the male larynx and the production of hermaphrodites. The effective levels reported in the current study are realistic exposures that suggest that other amphibian species exposed to atrazine in the wild could be at risk of impaired sexual development. This widespread compound and other environmental endocrine disruptors may be a factor in global amphibian declines. **extracts**

<https://www.youtube.com/watch?reload=9&v=RstxQEXPVwk&feature=youtu.be&list=PLthPsWmE3cecPBz3KdUKbPvy1DpkdBQMI&fbclid=IwAR3a52WycCBpE1dMU8Y82YD0fMz4i4rP5jUnJUzofgFAfzQ-tK3-vUGIV4c> sent to FATS by Jerry O'Donnell Facebook

OPERATION BLIZZARD ANTI-WILDLIFE SMUGGLING

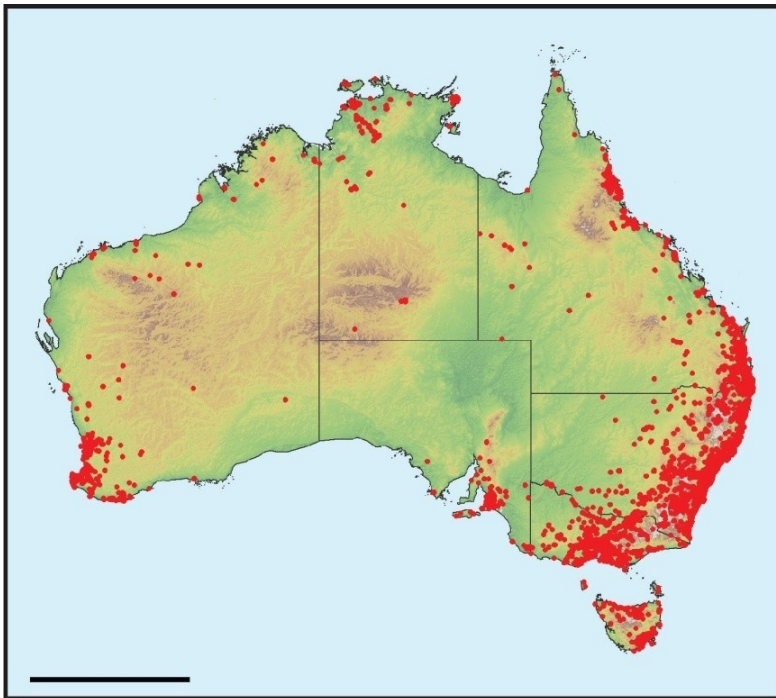


On Tuesday, 28 May 2019, ACTHA had the privilege of participating in an anti-wildlife smuggling media event at the Australian National Botanic Gardens. The event was promoted by the Commonwealth Department of Environment and Energy, and ACTHA was invited to contribute some appropriate animals for the media to see firsthand the species that are most commonly trafficked. In addition, ACTHA life member, Ric Longmore, was invited to contribute a specialist talk on the reptiles known to be targeted by smugglers. International reptile smugglers have been targeted in a coordinated operation across states and territories Peter Brewer, *The Canberra Times*, 29 May 2019 It resulted in the seizure of 69 reptiles. Operation Blizzard was coordinated by the Department of the Environment and Energy's Office of Compliance. The operation involved the Australian Border Force, the Department of Agriculture and Water Resources, and environmental agencies from every state and territory in Australia joining forces to combat wildlife trafficking at a national level. **Extracts from an article by the ACT Herpetological Association ACTHA**

FROGID'S FIRST YEAR: WHAT YOUR DATA TELLS US



May 2019 update. The findings from the first 12-months of FrogID are in! In just one year, FrogID has generated the equivalent of 13% of all frog records collected in Australia over the last 240 years. The submitted recordings have resulted in over 66,000 validated calls and detected 175 of Australia's 240 known native frogs. The data has informed scientists on the impacts of climate change and pollution on Australia's frogs including the first evidence of the decline in Sydney of the Australian Green Tree Frog; the spread of the invasive Cane Toad; and information on the breeding populations of 28 globally threatened and 13 nationally threatened frog species.



Location of all frog records for the first year of FrogID.

“Due to FrogID (see <https://www.frogid.net.au/>) and the thousands of people recording the calls of frogs across Sydney, we have enough data for the first compelling evidence of the disappearance of the Green Tree Frog from most of Sydney.” Dr Jodi Rowley, Australian Museum Curator of Amphibian & Reptile Conservation Biology said.

Evidence of the decline of the iconic Australian Green Tree Frog (*Litoria caerulea*) in Sydney is integral to conservation efforts. We can now provide up to date information to land managers to better understand where they are located, and ensure the habitat that supports them is protected.

Another surprising result from the first year of the project has been the number of records of native frog species detected

calling from well outside their known range, including the Eastern Dwarf Tree Frog (*Litoria fallax*) found up to 400km from the known edge of the native range near the NSW/Victoria border.

This is all thanks to the efforts of you, the amazing Citizen Scientists driving this data collection. Check out our top frogger, Matt from the NT, featured recently in the Sydney Morning Herald.

https://www.smh.com.au/environment/conservation/going-for-croak-under-threat-frogs-hitchhiking-their-way-back-to-life-20190427-p51hsj.html?fbclid=IwAR3jFPtzYWTcCmWyi_5RUzKXIH5sZbzW4urOdaSD72TiYp7Syv-loT5z6oQ



You can read our first publication using FrogID data in the latest Herpetological Conservation and Biology Journal.

<http://www.herpconbio.org/index.html>

http://www.herpconbio.org/Volume_14/Issue_1/Rowley_etal_2019.pdf

Happy frogging from the FrogID Team!

FATS Editor: Congratulations Jodi Rowley, Kathy Potter and all.

A ROSE IS A ROSE IS A ROSE

I suffer from Taxonomy; it really is a pain
To split and lump among the dump implanted in my brain.
I cannot yet remember or I may not still have learned
Tomorrow's word or yesterday's, as round the facts are churned.

I hobnob with Taxonomists; I like the way they think.
I love the lucubrations and the fights with pen and ink.
To me it really matters whether names are right or wrong
Because we're planting gardens where the little guys belong.

I revel in Taxonomy; it is a wondrous fight:
Do we go with a consensus? Do we try to get it right?
As the butterflies keep vanishing, we have to work and worry
Just a-waiting for the scientists, who really must not hurry.

I grieve for the Taxonomists, for I know what they've missed
Spending their golden days inside and working on a list.
And just when they imagine that they're coming to an end,
Please change that 'Hemiargus' to 'Cyclargus'," says their friend.

So when I talk to Santa, who has asked me to report
On some of our associates, the good and naughty sort,
I'll tell him you're all perfect, and have really proved your worth
In service to our Mother, the holy Lady Earth.

Anne Kilmer viceroy@gate.net naturepotpourri@yahoo.com

AXOLOTLS IN CRISIS: THE FIGHT TO SAVE THE 'WATER MONSTER' OF MEXICO CITY

The city's floating gardens are a prime party spot – but pollution has driven the axolotl population to the verge of extinction. Can a radical plan save them?



Axolotls are embedded in Mexico City's culture, and murals and graffiti depicting the unusual creature are ubiquitous in the capital.

Photograph: Jan-Peter Kasper/EPA

Like many residents of Mexico City, my experience of the floating gardens of Xochimilco has mostly been tinged with alcohol. After all, every weekend, this Unesco world heritage site turns into a bacchanal, with groups aboard the canals' iconic boats celebrating everything from high school graduations to engagements and weddings.

But this is a weekday morning, and Carlos Sumano, who is steering my canoe through the floating gardens, or *chinampas*, says that sort of unfettered use has taken its toll on the ecosystem. During his six years working in Xochimilco, Sumano has come across everything from pushchairs to television sets in canals.

The loss of the axolotl is traumatic for Mexico City: the creature is vital both to its ecosystem and its imagination Water pollution has also affected the region's most unique creature: the axolotl. When the Aztecs established themselves in the nearby city of Tenochtitlan, they found in Xochimilco what appeared to be the larva of a salamander. Fascinated, they called the animal "water monster" and incorporated it into their mythology as the mischievous and renegade brother of the god Quetzalcoatl.

Its divine character didn't keep the Aztecs from eating it but, thanks in large part to the low-impact agriculture of Xochimilco, human and amphibian thrived. However, with the arrival of the Spanish came the start of many attempts to drain the Valley of Mexico's system of lakes. Since then, the fates of the axolotl and Mexico City have been tragically tied. From 1607 onwards, various canal construction and valley drainage attempts were undertaken and by 1950, Xochimilco was completely dry. Today, most of the water in Xochimilco's 150km (93 miles) of canals comes from a water treatment plant located in nearby Cerro de la Estrella.

Pollution comes from the plant, but also from local residents, who use it as a sewer, and those who still farm the floating gardens using water-contaminating pesticides. The wild axolotl is racing towards extinction. A 2003 study in Xochimilco by the Mexican Academy of Sciences found an average of 6,000 axolotls for each sq km; the latest survey, in 2015, has that number down to 36.

The loss of the axolotl is traumatic for Mexico City: the creature is vital not only to its ecosystem but also to its imagination. Murals and graffiti depicting the animal are ubiquitous: in fact, an axolotl recently won a contest for an emoji to represent the city. The fascination extends beyond Mexico's borders. Roger Bartra – a Mexican anthropologist who has drawn parallels between Mexicans and the axolotl – recently edited a collection of axolotl-inspired texts by Julio Cortázar, Aldous Huxley, Primo Levi, Giorgio Agamben and Octavio Paz.

What has enthralled authors and biologists around the world is the fact that, unlike its relatives, the axolotl does not metamorphose into a full-grown salamander; it lives in an eternal amphibian "childhood", refusing to grow up.

This aspect has confounded biologists. In 1804, the naturalist Alexander Humboldt was so excited by the species during his trip to Mexico City that he brought live specimens overseas and exhibited the creature at a scientific conference in Paris.

Since then, the animal has been bred profusely in home aquariums and laboratories around the world. Today the axolotl is studied for its ability to rebuild body parts and the recently revealed fact that it has the longest known DNA strand.

The interest is also gastronomic; according to the journal Nature, axolotls “are bred so widely in captivity that certain restaurants in Japan even serve them up deep-fried”.



The axolotl recently won a contest for an emoji to represent Mexico city. Photograph: Paul Starosta/Getty Images

A species is nothing without its natural habitat Luis Zambrano

Tourism and water pollution are not the only causes for the axolotl’s demise. In the 1970s, as part of a nationwide poverty-relief project, the Mexican government introduced thousands of carp to Xochimilco.

Refugio Chinampa focuses on building canals blocked off from Xochimilco’s main waterways, separating the axolotls from predators.

Finally we arrive at local *chinampero* Felipe Barrero’s plot of land. Like many farmers involved in the project, Barrero – who can trace his family’s presence in Xochimilco two centuries back – has donated part of his plot to the axolotl cause. This means not only agreeing to the digging of a new canal, but also committing to not using pesticides.

Thanks to the healthy ecosystem Barrero enthusiastically demonstrates to me, this has already happened in his canal: the axolotl population there is thriving. All the same, heading home among the early-morning tourist boats starting to make their way through the canals, the only fish I see are tilapia. **As the crisis escalates..... in our natural world, we refuse to turn away from the climate catastrophe and species extinction. For The Guardian, reporting on the environment is a priority. We give reporting on climate, nature and pollution the prominence it deserves, stories which often go unreported by others in the media.**

https://www.theguardian.com/cities/2018/dec/04/axolotls-in-crisis-the-fight-to-save-the-water-monster-of-mexico-city?CMP=tw_t_a-environment_b-gdneco&fbclid=IwAR3ARTmffwaqRs--JMd_JGBek9WSCqxoAaIVla60hVqwxNUG99jR_nCF8 Alan Grabinsky in Mexico City Tue 4 Dec 2018 EXTRACTS

RECLAIM KOSCI

Kosciuszko National Park is for all Australians. It must be protected from feral horses and the damage restored. Reclaim Kosci aims to do just that. If you want to help us achieve our mission, register your support, take action or donate to our campaign. What’s so bad about the Kosciuszko Wild Horse Heritage Act? There are two fundamental problems with the new legislation introduced by local member and NSW Deputy Premier John Barilaro and passed on 6 June 2018.

Firstly, the new law overrides the legal protection provided to the native plants and animals of the national park, allowing the health of the park to be compromised. The new horse heritage plan to be developed to protect the feral horses in the park can explicitly over-ride the legal protection for native wildlife provided by the NSW National Parks and Wildlife Act. In a worrying precedent, government can designate large parts of Kosciuszko National Park for horse protection regardless of the ongoing negative impacts that would result.

While this legislation stands, feral horses will have a higher status than the native wildlife of the national park.

Secondly, the new law was imposed without warning, consultation or broad community support, showing contempt for three years of community engagement that led to the compromise 2016 draft horse plan of management. The law that passed Parliament two weeks after being announced only pleases those that don’t want horses removed from the park and a local horse-riding business. Reclaim Kosci seeks:

- * To raise awareness about the impacts of feral horses in Kosciuszko National Park.
- * Repeal of the Kosciuszko Wild Horse Heritage Act 2018.
- * A substantial reduction in the feral horse population in Kosciuszko National Park through humane and effective means.

This situation will irresponsibly allow feral horses to further spread, expanding their impacts throughout the national park and on visitors, motorists and neighbouring land holders.

The law was roundly condemned, including by the IUCN, the Australian Academy of Science, the ACT Government, the RSPCA and members of the government’s own expert technical committee, the NSW Threatened Species Scientific Committee has subsequently listed the impacts of feral horses as a key threatening process, in large part due to their impacts on Kosciuszko National Park.

<https://reclaimkosci.org.au/about/>



**SOUTHWOOD PRIZE
EARLY CAREER RESEARCHER AWARD ANNOUNCED**



Matt from Melbourne, Australia [CC BY 2.0
(<https://creativecommons.org/licenses/by/2.0/>)]

Congratulations to Simon Clulow for winning this year's Southwood Prize, *Journal of Applied Ecology's* award for the best paper by an early career researcher in the 55th (2018) volume of the journal.



Simon's winning paper, **Elevated salinity blocks pathogen transmission and improves host survival from the global amphibian chytrid pandemic: Implications for translocations**, shows that manipulating environmental salinity in landscapes where amphibians are translocated can mitigate the impacts of the amphibian chytrid disease by lowering infection rates and thus improve the probability of population persistence for amphibians currently affected by chytridiomycosis. More broadly, Simon and his co-authors provide support for the paradigm that environmental manipulation can be used to mitigate the impact of emerging infectious diseases.

The journal's Senior Editors describe the work as a clear and striking study that gives hope for tackling one of the most pernicious of contemporary threats to biodiversity: that of chytridiomycosis. The paper demonstrates, for the first time, that the probable primary mechanism of a previously demonstrated beneficial effect of salinity on survival of green

and golden bell frog is reduced disease transmission, and not increased survival of infected frogs. The paper thus combines clear new contributions to scientific knowledge and impactful management recommendations, making it a worthy winner of the Southwood Prize. It is well-written for a broad audience while also being immensely topical. The findings are important and could have widespread practical applications.

The winning paper, *Elevated salinity blocks pathogen transmission and improves host survival from the global amphibian chytrid pandemic: Implications for translocations*, as well as those articles shortlisted for this year's award are available to read in this Virtual Issue.

Winner biography Simon Clulow is a Research Fellow at Macquarie University, Sydney. He received his PhD from the University of Newcastle for studies investigating ways in which environmental stressors can be used to mitigate the impacts of emerging wildlife diseases via the environmental mismatch paradigm between host and pathogen, which formed the basis for his Southwood Prize winning paper. His current research spans the fields of ecology, disease, behaviour and reproduction, primarily on frogs and reptiles and he often integrates these under an applied conservation umbrella. He has conducted extensive work on the threats posed to the biota and ecosystems of northern Australia (especially guilds of the apex varanid predators) from the expanding distribution of the invasive toad, *Rhinella marina* and on the impacts of the amphibian chytrid disease throughout Australia and New Guinea.

He is particularly interested in developing novel, modern approaches to mitigating impacts of seemingly unstoppable threatening processes (e.g. emerging diseases, invasive species) including through environmental mitigation, genome storage, assisted reproduction and de-extinction. He is passionate about conserving not only genetics and biodiversity, but also a belief that, for conservation to be most effective, it is important to understand and conserve ecological and evolutionary processes, such as behaviour, which are often neglected.

Due to his passion for amphibians in particular, he recently completed a comprehensive field guide to the frogs of Australia of which he described a new species from the genus *Uperoleia*. **Thank you Wendy Grimm for this article to FATS 29 April 2019 Journal of Applied Ecology Awards and Prizes, Early Career**
<https://appliedecologistsblog.com/2019/04/29/southwood-prize-early-career-researcher-award-announced/> *Bridging the gap between researchers, practitioners and policymakers*

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 displays at local events, produce the newsletter FROGCALL and FROGFACTS information sheets. FATS exhibit at many community fairs and shows. Please contact Events Coordinator 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 FATS Committee, unless expressly so stated.

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FATS ON FACEBOOK: FATS has about 2,700 Facebook members from almost every continent. Posts vary from husbandry, disease 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 at our meetings. Contact us if you wish to adopt a frog. A cash donation of \$30 - \$50 is required to cover care and feeding 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 (link below). Please join FATS before adopting a frog. This can be done at the meeting. Most rescued frogs have not had a vet visit unless obviously ill. Please take you new, formerly wild pet to an experienced herp vet for an annual check-up and possible worming and/or antibiotics after adoption. Some vets offer discounts.

<http://www.environment.nsw.gov.au/wildlifelicences/GettingAnAmphibianKeepersLicence.htm>

FATS now has Student membership for \$ 20 annually with Electronic FrogCall (but no hard copy mail outs).
<https://www.fats.org.au/membership-form>



Thank you to the committee members, FrogCall supporters, talented 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 are greatly appreciated. Special thanks to regular newsletter contributors, Robert Wall, George Madani, Karen & Arthur White, Andrew and David Nelson, Josie Styles, Wendy & Phillip Grimm and Marion Anstis.



FROGWATCH HELPLINE 0419 249 728

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Please book your place on field-trips; due to strong demand, numbers are limited. Be sure to leave a contact number. 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 9681 5308

26th October 7-30pm

The Watagans

Leader: Grant Webster

Please note our new meeting point for this fieldtrip!

Meet at McDonalds, Morisset. Only 400m from our previous meeting point. Take the freeway north. After approx. 83km, take the Morisset/Cooranbong exit. Turn right and travel approx. 2.5 km to the corner of Mandalong Rd and Ourimbah St, Morisset. McDonalds is on the corner. Meet in the carpark.

Wetlands are amongst our most threatened group of habitats. Few realise they include a bewildering variety of forms including lakes, swamps, mudflats, mangrove forests, saltmarshes, rivers, creeks, overflows, anabranches, irrigation channels, bogs and ditches. In fact, just about any water body, permanent or ephemeral ("*ee-fem-er-al*" – *temporary, subject to drying out*), may be considered a wetland. In the Watagan mountains, small, seemingly insignificant "soaks", many lining dusty roadsides, are home to some outstanding frog species.

Grant has studied this area intensively for many years now, and he is highly skilled at finding the most cryptic of species. We hope to pick up some of the impressive Barred Frogs, a group that are now quite endangered. Grant has also carried out much taxonomical work on the super-secretive *Pseudophryne* genus. With a little luck, we might be able to tick off some of these hard-to-find species tonight. He will also explain their rather complex taxonomical background, and provide us with some insights into their very subtle habitat preferences.

In the event of uncertain frogging conditions (e.g. prolonged/severe drought, hazardous and/or torrential rain, bushfires etc.), please phone 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 fieldtrips are strictly for members only – newcomers are however, welcome to take out membership before the commencement of the fieldtrip. 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.



FATS AT THE SYDNEY ROYAL EASTER SHOW

It doesn't take long for the crowds to arrive.

