

# FROG CALL

THE FROG AND TADPOLE STUDY GROUP NSW Inc.

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NEWSLETTER No. 132 August 2014

Photo by Punia Jeffery Feb 2013



*Platyplectrum ornatum* - Ornate burrowing frog

Arrive 6.30 pm for a 7pm start.

## Friday 1<sup>st</sup> August

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 Road / Parkway.

It is a short stretch of two way road.

Park in p10f car park, the last car park before the exit gate.

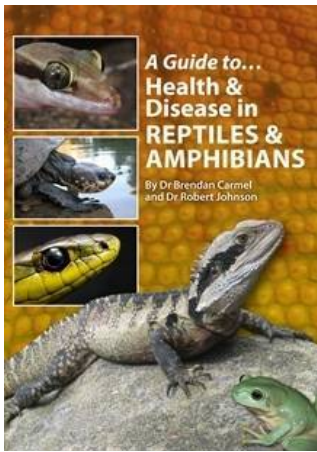
### MEETING FORMAT Friday 1<sup>st</sup> August 2014

- 6.30 pm** There are lost frogs (*Litoria caerulea*, *Lt. infrafrenata* and *Lt. gracilentia*) needing forever homes available to FATS financial members. Please bring your FATS membership card and cash \$40 - \$50 donation. Your current NSW NPWS amphibian licence must be sighted on the night. Rescued frogs can never be released. Sorry we have no EFTPOS at meetings. Please contact Monica before the meeting to confirm your interest in adopting a rescued frog.
- 7.00pm** Welcome, announcements and **AGM**
- 7.45 pm** Main speaker: Grant Webster 'Australia's false toads – *Pseudophryne*, the bold and beautiful brood frogs'
- Arthur White will be giving a presentation on the oldest Australian fossil frog.
- 9.15 pm** Show us your frog images, tell us about your frogging trips or experiences. Guessing competition, continue with frog adoptions, supper and a chance to relax and chat with frog experts.

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### LAST FATS MEETING 6 JUNE 2014

**R**obert Johnson was our main speaker in June. He discussed a variety of health conditions facing amphibians eg oedema, abscesses, skin conditions, metabolic bone disease and nose rubbing.



#### Cartoon courtesy of Dr Robert Johnson

Robert spoke about frog responses to pain (if it hurts us it probably hurts them), pain relief, medications, diet eg diluted with water 50/50 Hills a/d, a highly digestible food for recovering pets, avoid handling and treatments. Why do diseases occur? **Thank you very much Robert Johnson for taking the time to share your detailed wealth of knowledge with us. FATS has bought a few copies of “A guide to health & disease in reptiles & amphibians” by Dr Brendan Carmel and Dr Robert Johnson. RRP \$55. It can also be purchased at Reptile Publications [reptiles@reptilepublications.com.au](mailto:reptiles@reptilepublications.com.au) or South Penrith Veterinary Clinic Stafford St, South Penrith <http://www.reptilevet.com.au/>**

Punia Jeffery had opened the meeting with announcements including FATS August AGM and the Frogographic competition. Kathy Potter spoke about our exhibitions at St Ives, Blacktown, Campden, and forthcoming events such as Science in the Swamp and the Ku-ring-gai Wildflower and Garden Festival to be held in Ku-ring-gai Wildflower Garden on Sunday 31 August 2014, from 9am to 3pm. Graham Pyke spoke about future birding events.

Marion Anstis presented spectacular images and commentary about her April visit to the Galapagos Islands and the Amazon. Meeting ended with tasty supper (thank you Phillip and Wendy) and lots of chat. **MW**

### HOW TO PAY FATS MEMBERSHIP DIRECTLY

**Direct bank transfer** BSB 082 342

account name Frog and Tadpole Study Group

account 285766885

Please ID yourself by name if there is an option

and if possible FATS membership number and email

Karen White 1arthur@tpg.com.au to confirm transfer.



Photo by George Madani *Notaden melanoscaphus*

#### FATS STUDENT GRANTS

Since 2008, FATS has offered small grants to students to assist with the cost of frog related study and research. If you are interested please contact Arthur White on 9599 1161 or 1arthur@tpg.com.au for further information.

#### FROG FOSTER PARENTS NEEDED

**O**ne of our FATS members is not in good health and needs to give her two pet frogs away. She is due for some serious operations soon, so if you can help as soon as possible this would be much appreciated. She offers to give them and their good quality cages and equipment away to a suitable, understanding, licensed amphibian keeper. She would like them back after her operations but would not make that a condition of transfer.

The first frog is a half-grown female Green Tree Frog, *Litoria caerulea*. She has cysts, does not require treatment, but is kept as per vet instructions in clean conditions and is not to be kept together with other frogs. She is hand-fed and eats well. Her name is “Wink”.

The second frog is a female Peron’s Tree Frog, *Litoria peronii*. She has a foot missing, does not require treatment and is also kept in clean conditions. Her name is “Treebark”. The frogs and their cages would need to be picked up from Campbelltown near Sydney. If you are interested, please ring me for contact details. **Lothar Voigt Frogwatch Helpline 0419 249 728**





Chloe Neuman - *Litoria Citropa* Blue Mountains Tree Frog 2009

## FATS AGM NOTICE FRIDAY 1<sup>st</sup> August 2014

**T**he FATS AGM will be held at 7pm 1<sup>st</sup> August 2014. FATS 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. We appreciate fresh ideas and new members on our committee. No experience required. The FATS committee meet 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**

## FATS MEMBERS 2014 FROG-O-GRAPHIC COMPETITION Closing date 15 September 2014

**F**ATS have many creative people in the group who take marvellous photos, do incredible drawings and art works, can sculpt, potter or create frog do-dahs from just about anything. Here is your chance to show off your skills. Entries for the 2014 Frog-O-Graphic competition are now open. There are several categories in this year's competition for members: Pet or Wild frogs (adult & junior), Best Frog Image (adult & junior), Most Interesting Frog Image (adult & junior), Best Frog Artwork (adult & junior) and the People's Choice award.

All but the People's Choice award will be selected by a specifically handpicked panel of judges and announced in October. The People's Choice will be decided by the general membership at the October FATS meeting.

**Maximum 6 entries per person. Email entries to [photos@fats.org.au](mailto:photos@fats.org.au)** Please include in the email a FATS membership confirmation, your name, age if under 18, whether pet or wild frog and contact number for all entries. (especially if email is not the preferred method of contact). Maximum attachment size 6 MB. Fabulous prizes for each winner. The winning entries may be featured in a colour Frogcall newsletter and published in the 2015 FATS calendar. We look forward to see your entries. **AW**



*Notaden nichollsi* Photo by David Nelson 2009

## THE FIELDTRIPS SEASON IS UPON US!

**S**pring is looming and the 2014/2015 fieldtrips season is getting underway. For the newer members amongst us, our fieldtrips are a monthly activity that stretch over the spring and summer months. Our fieldtrips are suitable for all – although we usually finish around 11p.m., which can be a bit challenging for the very young. We can usually make provision for people to leave early, but not necessarily always. Please enquire at time of booking.

Our fieldtrips are safe, fun and a great way to spend a summer's evening. It is a perfect way to see our frogs in their natural habitat and learn about their lifestyles. All you need is a torch, preferably some gumboots and lots of enthusiasm. Bookings are essential. Contact me if you have any queries regarding any aspect of our fieldtrips. **Robert Wall** (02) 9681 5308

## SUBSCRIBERS TO HERPETOFAUNA

**T**he journal Herpetofauna has not been produced in 2014. FATS members who subscribed (and paid) for Herpetofauna will be given a \$10 credit towards their next FATS subscription. Unfortunately we do not know when the next edition of Herpetofauna is likely to come out and so FATS will no longer take subscriptions to Herpetofauna until its publication schedule is resolved. **AW**



## FROG'S TONGUE 'CAN LIFT THREE TIMES OWN BODY WEIGHT'

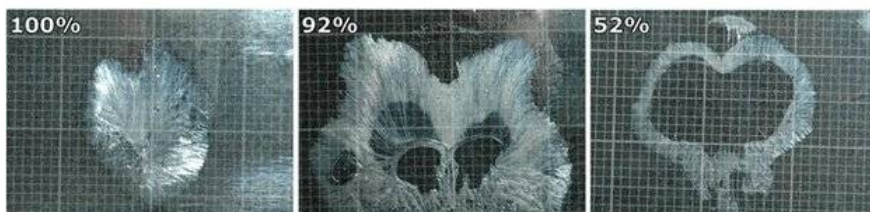


**E**ach frog was separated from a tempting morsel by a glass slide, which was used to measure the forces exerted by its tongue. Zoologists placed the horned frog, a predator known to swallow whole mice, in front of a glass slide and tempted it with a tasty cricket. Stronger pulling forces were measured when contact with the glass was briefer and less mucus was left behind. The study, from the journal *Scientific Reports*, suggests the action of the tongue is similar to sticky tape.

"It's the first time we've ever measured how well frog tongues stick," said Dr Thomas Kleinteich, who performed the experiments at the University of Kiel in Germany. Dr Kleinteich works in a group that studies biological adhesives, including **gecko** and **beetle** feet, with a view to finding new designs for sticky applications like boot soles, tapes and parcel closures. Dr Thomas Kleinteich University of Kiel "The thing that's interesting about frog tongues is that they're really fast," he told BBC News. "It only takes milliseconds."

The South American horned frog in particular, a popular pet, is known for its ability to snatch morsels up to half its own size - from locusts and fish to other amphibians and small rodents.

In the wild, they lurk half-buried in wait for their prey, and then "they swallow pretty much everything that fits into their mouths," Dr Kleinteich said. To study this combination of strength and speed, he bought four horned frogs from local pet shops. During their regular feeding routine, he presented each frog with an adult cricket behind a glass slide, attached to a transducer that recorded the forces exerted by the frog's tongue.



**The tongue prints left behind showed varying degrees of mucus coverage**

On average, these forces were larger than the weight of the frog itself, and in the case of one young amphibian more than three times larger. After each trial, the equipment was removed and the frog got its treat.

Dr Kleinteich ultimately needed twenty measurements from each frog, so the predators had to be kept happy. Looking at the slides afterwards, the "tongue print" left behind on the glass slide offered more insights, including massive variation in the proportion of the contact area that was covered by mucus.

"The common belief is... that the mucus acts as some sort of superglue," Dr Kleinteich explained. "But what we found was actually that we got higher adhesive forces in trials where we found less mucus. That was quite interesting."

The mucus appeared to build up over time, so that cases where the tongue touched the glass for longer left more mess behind. "But during the *initial* contact, the mucus coverage was rather low," said Dr Kleinteich. "So to actually establish the contact, there might be very little mucus involved." "It plays a role. It's definitely a wet adhesive system, it's not just structure and friction, because there is some fluid involved. But the key is the structure plus the mucus. "It's not like having a liquid glue, it's rather like a sticky tape."

That comparison applies particularly to the way the tongue peels away from the glass. The researchers saw stringy "fibrils" of mucus stretching between the two surfaces, just like the ones you can see if you look closely at sticky tape peeling off a surface.



**In the wild, horned frogs wait half-buried until "pretty much anything that fits into their mouth" strays nearby**

The team is now using microscopes to examine the fine details of the tongue's surface and see more of its sticky secrets. Dr Kleinteich said he enjoyed doing the feeding experiments. "It's fun," he said. "I used to do a lot of morphological, descriptive work with amphibians - I used to study dead, museum specimens. For me it was quite exciting to work with the living frogs and see how they behave."

**By Jonathan Webb Science reporter, BBC News <http://www.bbc.com/news/science-environment-27794722> Forwarded to Frogcall by Andrew Nelson**



## UPCOMING FATS EVENTS

7 August Frog Workshop Sydney Olympic Park.  
Marion Anstis is one of the speakers.

Kingsgrove High School Science Day  
Arthur White speaking there.

12 September Nepean Environment Day.  
Kathy Potter seeking helpers – No experience required.

October Stroud Environment Day.  
Arthur White to speak and present.

25/26 October Bird Fair at Newington Armoury SOP.  
FATS stall. Helpers and presenters needed. Ask Kathy Potter.

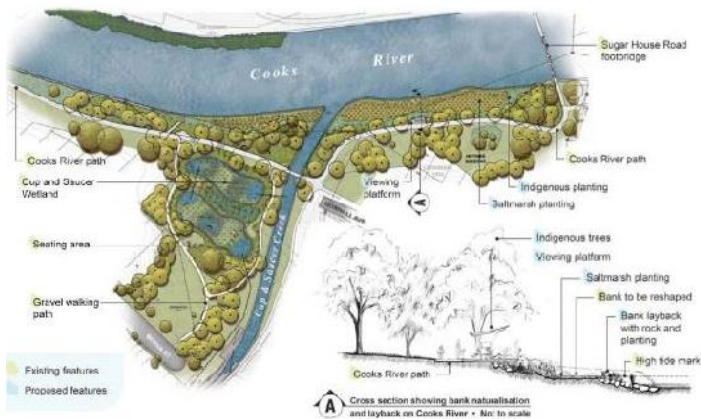
6 November Narrabeen Wetlands Frog talk and walk.  
Ask Arthur White if you would like to help.

There are several other events this year where your help would be appreciated. Contact Kathy Potter for further information. Eg Science in the City and Ku-ring-gai Wildflower Festival 31/8. No experience required.

### A RIBBETING TALE A famous frog-hopping contest yields data that challenge previous lab estimates of how far a bullfrog can jump – forwarded by Martyn Robinson

<http://www.the-scientist.com/?articles.view/articleNo/38685/title/A-Ribbeting-Tale/>

Site 3: Canterbury



Sydney Water is naturalising three sections of river bank along the Cooks River at a total cost of about \$9 million.

- Site 1: Belfield, upstream of the Second Avenue bridge
- Site 2: Campsie, Flockhart Park to Beamish Street
- Site 3: Canterbury, Heynes Reserve, next to Cup and Saucer Wetland.

The naturalisation will provide new habitat for birds and aquatic life and will improve the amenity of the river for people to enjoy.

We will be replacing several areas of concrete with sandstone rocks and planting over 80 000 new native plants over more than a kilometre of river bank. We will need to remove some existing trees to allow for the naturalisation work.



Sydney Water Corporation ABN 49 776 225 058  
1 Smith St Parramatta 2150 | PO Box 399 Parramatta 2124 | DX 14 Sydney | T 13 20 92 | [www.sydneywatertalk.com.au](http://www.sydneywatertalk.com.au)  
Delivering essential and sustainable water services for the benefit of the community

## Cooks River before naturalisation



## RIVER SPRINGS BACK TO LIFE

**Sydney Water is currently working to naturalise three areas along the Cooks River. Naturalisation involves removing the old concrete bank lining the river and creating a more natural environment, lining the river with sandstone and plants, shrubs and trees that are indigenous to the Cooks River. The areas being naturalised are at Belfield, Campsie and Canterbury. We will naturalise over 1.1 kilometres of the river bank, with construction finishing in mid 2014.**

Cup and Saucer Wetlands (see photo from last newsletter page 3) built in 2010 has attracted a broad range of wildlife to the area. This freshwater wetland has provided a new home for frogs and birds. As part of the work a fauna passage will be built between Cup and Saucer Wetland and the Cooks River. This vegetated passage will allow turtles, frogs and other wildlife to travel safely between the river and the wetland. We are hoping that the naturalised banks at Belfield could provide a new habitat for a broad range of frogs.

We expect that the naturalisation works will have a positive impact on the local frog life. The project involves planting 80,000 native plants, which will help provide a new habitat for birds and frogs around the Cooks River. Over the coming years, Sydney Water plans to naturalise as much as possible along the Cooks River.

We are interested in working with the community to monitor the frog life in the newly naturalised banks and wetland. To find out more, visit [www.sydneywatertalk.com.au/crbnp](http://www.sydneywatertalk.com.au/crbnp) or call Nelson Wallis, Community Relations Advisor, Sydney Water on 02 8849 4198.

## Cooks River after naturalisation





## HERPDIGEST Extracts of several articles

### HIBERNATING FROGS GIVE CLUES TO HALTING MUSCLE WASTAGE

**Scientists at the University of Queensland, Australia, have identified key genes that help burrowing frogs avoid muscle wastage whilst they are dormant. These genetic insights could help prevent muscle atrophy in bedridden human patients, or even astronauts.**

For most mammals, including humans, when muscles are inactive over a long period, they lose condition and waste away. However, some animals can remain dormant for several months and yet suffer minimal muscle damage. These include green-striped burrowing frogs *Cyclorana alboguttata* which occupy arid environments in Australia. When resources are scarce, these frogs survive by burrowing underground and wrapping themselves in a cocoon of shed skin.

Lead investigator, Beau Reilly (PhD Student) says: "If we can understand the cell signalling pathways that confer resistance to muscle wasting, then these could be useful candidates to study in mammalian muscle atrophy." These could help to develop therapies to treat bedridden human patients or even astronauts, who frequently lose muscle tone when exposed to reduced-gravity conditions.

One of the genes identified is known as survivin. This appears to protect cells from a "suicide" mechanism which normally removes damaged or diseased cells. Interestingly, this gene has also been shown to be highly active in human cancer cells. Another gene, checkpoint kinase 1, regulates cell division and DNA repair.

In mammals, inactive muscles can become damaged by highly charged molecules called Reactive Oxygen Species (ROS). These are thought to degrade proteins, causing the muscles to waste away. Dormant burrowing frogs, however, seem to suffer less damage from ROS. This may be due to increased levels of protective antioxidants, including the compounds thioredoxin and sulfiredoxin. Similar results have also been found in hibernating mammals, such as squirrels. **Society for Experimental Biology. "Hibernating frogs give clues to halting muscle wastage." ScienceDaily. ScienceDaily, 30 June 2014. Vol 14 Issue 37**  
[www.sciencedaily.com/releases/2014/06/140630193413.htm](http://www.sciencedaily.com/releases/2014/06/140630193413.htm)

## COULD THIS FROG HELP US CONQUER SPACE?

### **H**ibernating amphibians may let astronauts endure long missions without losing muscle

Burrowing frog, *Cyclorana alboguttata*, hibernates for months at a time. Despite lack of movement, it avoids problems linked to muscle wastage. Scientists have now identified genes that give the amphibian this power. The genes could help to develop therapies to treat bedridden human patients or even astronauts, who frequently lose muscle tone **By Ellie Zolfagharifard ,July, 2014, Guardian Online Volume # 14 Issue # 36 7/1/14**

### ZOOLOGGER: ONLY KNOWN 'POTTER' FROG PACKS EGGS IN MUD

**T**he kumbara night frog, *Nyctibatrachus kumbara* inhabits stream and river beds in the forests of the Western Ghats of southern India. A newly discovered species from southern India differentiates itself in part by being the only known amphibian to coat its eggs in mud. The mud may well protect the eggs, but that is probably not the whole explanation.

The new species, called the kumbara night frog is one of several frog species crammed together into a small area. That means it pays them to be as different as possible. Indeed, they are a different size to their neighbouring species, they mate differently – and they smear mud all over their developing offspring. **Journal reference: Zootaxa, DOI: 10.11646/zootaxa.3796.1.2 Volume 14 Issue # 29 5/29/14 27 May 2014 by Sandhya Sekar**

## CAN COMEDY ENCOURAGE CONSERVATION?

**A** recent speech I gave on comedy and conservation at the Environmental Film Festival in Washington D.C. At the end of the speech, I announced the winners of the 2014 Eco-Comedy Video Competition. I hope you enjoy watching those as well. We greenies tend to be too serious. Certainly, there's a lot to be serious about, but jealousy can turn people off. Humour, on the other hand, is one of the most powerful tools available to us. Making viewers laugh is an effective (and fun) way to grab their attention and hopefully hold on to it long enough to get an important message across. Comedy has so much potential, and as advocates for our planet, we must learn to harness this potential to do good.

I want to start by showing you a web video from Greenpeace, which attacks Mattel's use of virgin paper from Indonesian rain forests in its Barbie doll packaging. The video worked beautifully. The company received 500,000 e-mails protesting their packaging. Barbie's overloaded Facebook page had to be shut down. The result was that Mattel, the largest toy company in the world, announced it would stop using environmentally-damaging packaging. Barbie, It's Over (2:55)

[http://www.youtube.com/watch?v=E3MT71Vy8\\_s](http://www.youtube.com/watch?v=E3MT71Vy8_s)



That web video from Greenpeace leads me to the first point I want to make: Environmentalists should use humour more often. When a person laughs, they become more open to new viewpoints. They are paying attention and listening. Humour increases likeability of the message source. It can bring down the natural defences audiences have around controversial issues, and encourage them to consider a fresh point of view. My colleague Mike English from Maryland Public Television says that laughter dissolves the ego. And that process affords people precious moments of clarity in which they can see their place in the world.

Follow The Frog (3:10) about sustainability  
<http://www.youtube.com/watch?v=3iIkOi3srLo>

The Daily Show with John Oliver criticized the Discovery Channel for its fake documentary Megalodon which opened Shark Week in August 2013. To me, this is a good example humour being used in a great cause—this time to keep broadcasters honest and ethical. It makes you think about the issue and want to learn more.

<http://www.thedailyshow.com/watch/wed-august-7-2013/sharks--lies--and--videotape> (3:30)

This short film graphically draws attention to the corrupting relationship between lobbyists and legislators:

[http://m.youtube.com/watch?v=nIfnVM4O3js&desktop\\_uri=%2Fwatch%3Fv%3DnIfnVM4O3js](http://m.youtube.com/watch?v=nIfnVM4O3js&desktop_uri=%2Fwatch%3Fv%3DnIfnVM4O3js) (3:00)

**Professor Chris Palmer Author of Shooting in the Wild** <http://socialpalmer.blogs.american.edu/> [oneworldoceanfoundation.org](http://oneworldoceanfoundation.org) Vol 14 / 23

## PERU'S MANU NATIONAL PARK - NEW BIODIVERSITY RECORD

**Peru's treasured Manu National Park is the world's top biodiversity hotspot for reptiles and amphibians, according to a new survey published last week by biologists from the University of California, Berkeley, Southern Illinois University in Carbondale (SIU-Carbondale) and Illinois Wesleyan University.**

The park, which encompasses lowland Amazonian rain forest, high-altitude cloud forest and Andean grassland east of Cuzco, is well known for its huge variety of bird life, which attracts ecotourists from around the globe. More than 1,000 species of birds, about 10 percent of the world's bird species; more than 1,200 species of butterflies; and now 287 reptiles and amphibians have been recorded in the park. **University of California - Berkeley Posted by Science Codex, 20 February 2014**

[http://www.sciencecodex.com/perus\\_manu\\_national\\_park\\_sets\\_new\\_biodiversity\\_record-128295](http://www.sciencecodex.com/perus_manu_national_park_sets_new_biodiversity_record-128295) for photos and at bottom of page video on the herps of Manu National Park

## SILENCING THE SCIENTIST

**Tyrone Hayes interviewed on Being Targeted by Herbicide Firm Syngenta -Hayes found that atrazine (the Herbicide in question) causes sexual abnormalities in frogs, and could cause the same problems for humans**

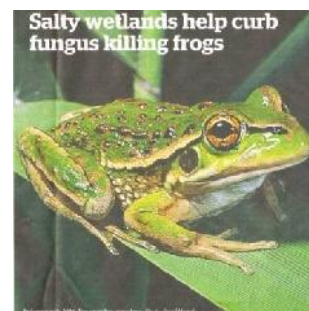
Scientist Tyrone Hayes of the University of California, Berkeley, who discovered a widely used herbicide may have harmful effects on the endocrine system. But when he tried to publish the results, the chemical's manufacturer launched a campaign to discredit his work. A new article in The New Yorker magazine uses court documents from a class action lawsuit against Syngenta to show how it sought to smear Hayes' reputation and prevent the U.S. Environmental Protection Agency from banning the profitable chemical, which is already banned by the European Union. For the full 50 minute interview video go to

[http://www.democracynow.org/2014/2/21/silencing\\_the\\_scientist\\_tyrone\\_hayes\\_on#](http://www.democracynow.org/2014/2/21/silencing_the_scientist_tyrone_hayes_on#)

AMY GOODMAN: "I want to thank you very much for being with us, Tyrone Hayes, a professor of integrative biology at the University of California, Berkeley, who's devoted the past 15 years to studying atrazine, a widely used herbicide made by Syngenta.

<http://www.newyorker.com/magazine/2014/02/10/a-valuable-reputation> in The New Yorker magazine that reveals how the company tried to discredit Professor Hayes after his research showed atrazine causes sexual abnormalities in frogs and could cause the same problems for humans. The article is called "A Valuable Reputation: After Tyrone Hayes Said That a Chemical was Harmful, Its Maker Pursued Him." **21 February 21, 2014, Democracy Now Vol 14 Issue 14 2/26/14**

[https://www.facebook.com/HerpDigestorg/130624001610?ref=br\\_tf](https://www.facebook.com/HerpDigestorg/130624001610?ref=br_tf) **HerpDigest.org** Publisher/Editor- Allen Salzberg



**From Phillip Grimm SMH 19/11/13**

### Bridie Smith

A deadly fungus decimating the world's frog populations may yet have a weakness scientists can exploit to reduce its lethal impact in Australia.

Researchers have found the chytrid fungus, which has already resulted in the extinction of four Australian frog species, is less toxic in warmer, saltier wetlands.

Their study, in *Ecological Applications* this month, looked at growing grass frog populations and found former bluestone and clay quarries provided an unlikely refuge.

Known as the southern bell frog in NSW, it is one of the largest frogs in Australia. Listed as endangered in NSW, it has suffered a considerable drop in numbers and distribution in NSW and is now largely limited to isolated populations in the Coleambally irrigation area, the Lowbidgee floodplain and Lake Victoria.

Research fellow at Melbourne University's school of botany Geoff Heard said the quarry sites studied in Melbourne had warmer, saltier water than other wetlands due to a lack of foliage. The pit depths meant the saline water table leaked into the surface water, with some wetlands re-

cording salinity readings that were 10 per cent as salty as seawater. The conditions appear not to phase the frogs, while the impact of the deadly fungus appears weakened.

"That's the really interesting bit," he said. "We've seen the frogs in really high density in some of these quarry sites and it was intriguing as to why that was the case."

Dr Heard studied 10 wetlands in the Merri Creek catchment area north of Melbourne with Arthur Rylab Institute researchers Michael Scroggie, Nick Clemann and David Ramsey. The sites ranged from cool wetlands with average midnight water temperatures of 16 degrees between October and March to warm quarry wetlands with average midnight water temperatures of 21 degrees. In summer, night water temperatures can reach 27 degrees.

Warmer conditions reduced infection rates among frogs which were better able to fight off the disease as, being cold-blooded, their immune system ramps up in warmer conditions. Dr Heard said overseas research has shown the fungus has a low tolerance of temperatures above 25 degrees and dies when exposed to temperatures above 30 degrees.

## HABITAT REQUIREMENTS AND CONSERVATION MANAGEMENT OF PROTECTED FROGS IN AUSTRALIA

**The Sydney Olympic Park Authority is running a Wetlands Education and Training program 7/8 Biology & conservation 8/8/2014 Active adaptive management 2-day Rate (Including GST) Regular \$770 Concession \$660**



Australian frogs are under enormous pressure due to anthropomorphic activities resulting in wetland loss or modification, introduced diseases and increased predation. Commitments to ecologically sustainable development and legislation require a serious rethink of how we manage wetlands and frog habitats. Many urban, peri-urban and rural environments have suffered a decline in frog habitat, extent or quality and, as a consequence, planning for frog conservation can be a key consideration in land management. Frog habitats are often constructed as offsets for development or highly managed wetlands in urban/rural environments. Building and managing successful wetlands for frogs requires understanding of frog biology and their habitat requirements. Unless these are taken into account many Australian frog species will continue to decline, resulting in overall loss of biodiversity.

This two day workshop will be led by expert practitioners from government agencies, universities and the private sector and will focus on the above issues, enabling participants to learn from successful case studies and discuss effective, practical management tools. The workshop will include site visits to frog ponds at Sydney Olympic Park — the site of one of the largest frog habitat conservation programs ever undertaken in Australia.

Learning outcomes Participants will learn:

- Fast-tracked identification of Australian frogs
- Key habitat requirements for Australian frogs
- Conservation biology
- Principles and designs of constructed frog ponds
- Effective maintenance considerations
- Best tools for monitoring and assessment

The experts and practising ecologists who deliver the talks and tutorials are top scientists and industry leaders in the field of conservation biology and management. Experts and managers from the NSW Office of Environment & Heritage and academia from several universities will share their latest scientific findings in this field. Industry experts possess many years' experience in applying cutting edge techniques in construction and management of frog ponds.

Participants are expected to have general understanding of frog conservation issues. Registration Sydney Olympic Park Authority [education@sopa.nsw.gov.au](mailto:education@sopa.nsw.gov.au) 029714 7888  
[www.sydneyolympicpark.com.au/education](http://www.sydneyolympicpark.com.au/education)  
<http://www.sydneyolympicpark.com.au/register>

## JUNE EDITION BBC WILDLIFE

There is a nice article on frogs, with colour pix, in June's edition of BBC Wildlife. P32 mentions an Attenborough film on "Fabulous Frogs" later this year. Cheers Barb Harvey

### FROGS AND MILK

<http://www.abc.net.au/science/articles/2014/05/21/4008786.htm> Refrigeration has been around for thousands of years. But before refrigeration, what would you do with a bucket of fresh milk on a hot day? Well you could drink it really quickly, or you could turn it into cheese. But some farmers in Finland and Russia had another way to stop the milk from spoiling. They would drop a frog into a bucket of milk. Not everyone dropped frogs into milk. Some people kept their milk drinkable in other ways — by using ice. Forwarded to Frogcall by Wendy Grimm

### TREATING CHYTRID (extract)

**Brian Gratwicke, a conservation biologist with the National Zoo, describes the difficulties zoos face in treating the creatures.** The animals must go through 10 days of immersion in an itraconazole solution. "Itraconazole is a fairly expensive drug, and depending on the species we treat we can see a very high mortality rate," says Gratwicke.

In the study, Rollins-Smith and colleagues, of Vanderbilt University, Nashville, TN, tested two potential alternatives, chloramphenicol, and amphotericin B. Although both drugs reduced *B. dendrobatidis* infection, neither could eradicate it. But amphotericin B had a critical advantage over chloramphenicol.

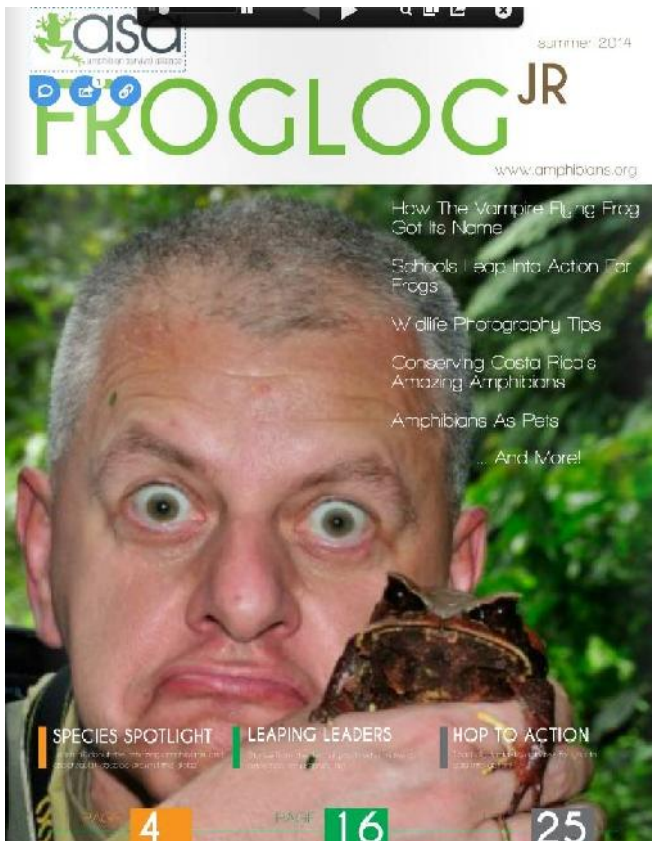
The investigators found that chloramphenicol can cause major changes in the community of microbes inhabiting amphibian skin, while amphotericin B does not, says Rollins-Smith. Previous research has shown that altering or reducing the skin microbiome leaves amphibians more vulnerable to chytrid infection, she says.

Whether by competing for space, or by providing antimicrobial compounds, the skin microbiome is probably protective. Moreover, amphotericin B is much less toxic to frogs than is itraconazole.

Rollins-Smith suggests that a more benign cure for photericin B, followed by itraconazole, which would enable a lower, less toxic dosing with the latter. Sent to FATS by Fred Parker [http://www.sciencedaily.com/releases/2014/05/140512155314.htm?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+sciencedaily+%28Latest+Science+News++ScienceDaily%29](http://www.sciencedaily.com/releases/2014/05/140512155314.htm?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+sciencedaily+%28Latest+Science+News++ScienceDaily%29)



## FROGLOG JUNIOR - first edition



Dear young frog fanatics,

**When I was 8 years old, I started working with frogs and the environment. I had always loved amphibians and nature, but it wasn't until this time that I started taking herpetology and citizen science classes. I learned that not only are frogs really cute, but they are also a very important part of the natural world. They are known as an indicator species. Their skin is permeable (kind of like a sponge) and that means things like water (and whatever is in that water or the environment) goes through their skin easily.**

If their homes are healthy, then the frogs are healthy. If their homes are unhealthy, the frogs start to disappear or die out, and that means problems for other living things too.

Unfortunately, frogs and other amphibians are disappearing faster than normal. However, there are many ways we can all help them. That's great news, because when we save amphibians, we save the environment too! Saving the environment can be a lot of fun – just keep reading to see how you can use chopsticks, take pictures, make art, dissect frogs (yes, dissect!) and even croak loudly like a frog...all to help save amphibians!

What is the biggest amphibian in the world? What is herpetology? What are amphibians doing in a children's pop music CD? How can YOU be in an amphibian card game? You will learn more about all of these things right here in FrogLog Jr. I would love to hear from you.

You can always find me by visiting my organization website or Facebook page. Just remember to get an adults'

permission first! For now, get comfy and get ready to learn a whole LOT about some of the coolest creatures on Earth! **Peace & love, Avalon Theisen Guest Editor, FrogLog Jr**

<http://amphibians.us6.list-manage1.com/track/click?u=b58881e4e4c1aa2aea044f998&id=d32337fa88&e=c5d7a29088>

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## WILDLIFE CORRIDOR CALL FOR MANLY CREEK FROM SAVE MANLY DAM CATCHMENT COMMITTEE

**E**nvironmental enthusiasts want four parcels of bushland added to the 62ha District Park to ensure a wildlife corridor from Manly Dam to Manly Lagoon. Manly Vale's Malcolm Fisher and the Save Manly Dam Catchment Committee have lodged the request as part of Warringah Council's call for public feedback on the park's future.

They are restoring bushland at the Mermaid Pool, Manly Vale, to ensure a healthy creek flows between the dam and lagoon. However, the bush volunteers are concerned about four parcels of Crown land, on the northern side of the creek, just outside the park boundary. While some are zoned open space, one is zoned for residential development. Mr Fisher and friends want the council to request ownership of the parcels and classify them as District Park.



**Malcolm Fisher and friends in the bush**

"The bushland along this section of creek is home to rare plant species and some amazing wildlife has been spotted here," Mr Fisher said. Goannas, wallabies, bandicoots, echidnas, green tree frogs, turtles. That's why it is important to be formally preserved as a wildlife corridor. It would be a great opportunity for District Park after the community has put in all this effort."

While much money had been spent on improving the health of Manly Lagoon, the upper parts of the creek were just as important, according to Mr Fisher. "If they just become polluted drains, the beach doesn't end up very clean either," he said.

A council spokeswoman said it previously asked the Crown about formalising environment management at two land parcels but had not received a response. The council is hosting more information nights this month to canvass ideas for District Park. Carlile Swimming, which runs learn-to-swim programs and squads across Sydney, has already proposed opening one of its centres at North Manly Bowling Club.

One of the council's main interests is generating more use of the bowling club, as well as Warringah Golf Club and Warringah Recreation Centre. Other community suggestions have been to add synthetic fields, cycling tracks and cricket nets. The strategic directions paper on the park is available for public comment until August 10. District Park includes David Thomas, Miller, Nolan and Passmore reserves. **Steven Deare Manly Daily 11 July 11, 2014**

[http://www.dailytelegraph.com.au/newslocal/northern-beaches/wildlife-corridor-call-for-manly-creek-from-save-manly-dam-catchment-committee/story-fngr8hax-1226984592908?from=newslocal\\_rs&nk=a2d0f286e76610cdce1e4dd6adfb338](http://www.dailytelegraph.com.au/newslocal/northern-beaches/wildlife-corridor-call-for-manly-creek-from-save-manly-dam-catchment-committee/story-fngr8hax-1226984592908?from=newslocal_rs&nk=a2d0f286e76610cdce1e4dd6adfb338)

## George Madani *Litoria rubella* Desert Tree Frog



### FATS ON FACEBOOK

We have 1,030 FATS Facebook page members. Woo hoo! Sample post copied below.



Kira Alia Leon shared Andrew Snyder Photography's photo. Now this is tiny!!



With some Meet Your Neighbours shots, it's hard to get an idea of the size of the organism in the picture. A perfect example is this juvenile Tukeit Hill frog (*Allophryne rubiventris*) from Iwokrama, Guyana, that without the finger wouldn't have looked much different than an adult frog.

The genus *Allophryne* currently contains only two species, this one, and *A. resplendens* recently discovered in Peru. Long baffling taxonomists as to its placement, recent phylogenetic work has revealed that *Allophryninae* is actually the sister taxon to *Centrolininae*, a subfamily of glass frogs.

Unlike · Comment · Share · 12 February at 14:57

You, Claudette Hudson, Graeme Finn, Faye Galbraith and 7 others like this.

## Photo by George Madani *Litoria phyllochroa*





AUSTRALIAN HERP VETS

<http://www.wolfwood.com.au/rept2.shtml>

Just before dawn, May 2013  
Perons in sculpted wooden birdbath



*Litoria peroni* Perons Tree Frog Photo by Kim Rudder

LIFE IN THE PARK 10 AM–12.00 14 SEPT 2014

**C**ome and join a series of short free talks on **Urban ecology and how Sydney Olympic Parks monitoring programs and the community are ensuring that biodiversity continues to thrive in this unique urban environmental setting.** Displays on reptiles, frogs and birds will be present and live footage, via EagleCAM, of our nesting Sea-Eagles will be available. A light morning tea will be provided. Parking available at Bicentennial Park P10 carpark. For directions visit [www.sydneyolympicpark.com.au](http://www.sydneyolympicpark.com.au) **FREE Sydney Olympic Park Education Centre, Bicentennial Park**

- 10.00am** – ‘The year of the Finch – ecology highlights for 2013-14’ Jen O’Meara, Sydney Olympic Park Authority
- 10.20am** – ‘Powerful owls’ Holly Parsons, Birds in Backyards program, Birdlife Australia
- 10.40am** – ‘Beating the bite of ticks and mosquitoes’ Dr Cameron Web, Sydney Uni & Pathology West ICPMR Westmead
- 11.00am** – ‘Discovering the fish of Sydney Olympic Park’ Lisa McCaffery, Australian Museum
- 11.20am** – ‘Native bees of Sydney’ Michael Duncan
- 11.40am** – ‘The East Asian Australasian Flyway’ Phil Straw, Avifauna Research Services

**FATS MEETINGS** commence at 7 pm, (arrive 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 (but not Good Friday). Call, check our web site 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. All expressions of opinion and information 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. **Material from FROGCALL MAY NOT BE REPRODUCED** without the prior consent of the writer, photographer, editor or president of FATS. Permission from FATS and/or author/s must be obtained prior to any commercial use of material. The author/s and sources must be always fully acknowledged.



**Thank you to the many Frogcall supporters.**

**Your articles, photos, media and webpage links, membership administration and envelope preparation is greatly appreciated. Special thanks to regular newsletter contributors, Lothar Voigt, Robert Wall, George Madani, Karen & Arthur White, Andrew Nelson, Wendy & Phillip Grimm, Marion Anstis and Bill Wangmann.**



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SMITHS LAKE FIELD  
STATION



Smiths Lake fieldtrip coming soon



## FIELD TRIPS

**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.**

The very talented Arthur White at Smiths Lake



**27<sup>th</sup> September. 6.45 p.m. West Head, Ku-ring-gai National Park. Leader: Grant Webster.**

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

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-thora'), a plant dieback disease that affects trees and forest understoreys. While not directly impacting on the health of frogs, the pathogen follows groundwater movement along natural land contours, often spreading downslope towards streams and waterbodies. Known to kill fringing vegetation, it is implicated in some frog declines by altering streamside habitat. More recently, the plant disease *Myrtle Rust* has entered the country. It too, has a devastating impact upon our forests and streamside vegetation and is spreading with alarming speed. Tonight we will look at the vulnerability of our frogs in the face of disease, and we will discuss the precautions we need to undertake every time we go frogging, or indeed, enter the bush. We will also discuss some of the difficulties of containing disease in heavily visited areas such as Ku-ring-gai National Park. Grant has conducted much research into our froglife and has a great familiarity with the best frog-sites around West Head.

**7<sup>th</sup> December 10 am to 3 pm Australian Reptile Park, Christmas Party, Somersby Host: John Weigel**

It is anticipated that the ARP will hold its Interclub Christmas party on Sunday 7th December 2014 from 10 am to 3 pm. This once a year get-together of the herpetological societies is an event not to be missed. Free entry to FATS members. Please take your current FATS membership card as proof of membership.

**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.**