

FROG CALL



THE FROG AND TADPOLE STUDY GROUP NSW Inc.
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NEWSLETTER No. 142 April 2016

Events Coordinator Kathy Potter at FATS stall



*You are invited to attend
our next FATS meeting*

Arrive from 6.30 pm for a 7pm start.

Friday 1st April 2016

**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 April 2016

- 6.30 pm** Lost frogs needing adoption: 2 Perons Tree frogs *Litoria peroni* 3 Green Tree Frogs *Litoria caerulea* 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. Please contact Monica before the meeting to confirm your interest in adopting a rescued frog.
- 7.00pm** Welcome and announcements
- 7.30 pm** Main speakers: Henry Cook
"Frog Anecdotes from around the World" backed up by many brilliant photos.
Marion Anstis
"New species of Australian Frogs, 2008-15"
Peter Spradbrow "Smiths Lake field trip"
- 9.30 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 5 FEBRUARY 2016

Arthur White spoke about frogging in Kakadu National Park – frogs of the wet and dry seasons. Kakadu has fabulous aboriginal art galleries. As always, the talk and images were fascinating. FATS is so lucky to have many experienced and excellent speakers. Arthur talked about sex reversals. Changing sex occurs in more species of vertebrates than not. It is less common in mammals and birds. It is likely that all early vertebrates changed sex as required. Sex reversals are much easier in species where there is little physical difference between the sexes. We will have an article on this topic and Atrazine in a future 2016 newsletter. Arthur discussed Atrazine effects on humans. Recent studies in the USA have found town drinking water where levels exceed 2.5 ppb concentrations have cancers, birth defects and malformations above normal levels.



**Atrazine is the
21st Century's DDT:
LET'S GET IT BANNED!**

- > Atrazine is one of the world's most harmful pesticides.
- > Atrazine was banned in the European Union in 2004.
- > Eighty million pounds of Atrazine are used in the USA each year, primarily on corn, rice, sorghum and sugar.
- > Atrazine is an endocrine disruptor that causes immunosuppression, hermaphroditism and complete sex reversal in frogs at concentrations as low as 2.5 parts per billion.
- > Atrazine is the most commonly detected pesticide in US groundwater, and can persist in the environment 15 years after it is applied.

HELP US GET ATRAZINE BANNED!
Sign the petition and learn more at:
savethefrogs.com/atrazine

SAVE THE FROGS!
SAVE THE FROGS! is America's first and only public charity dedicated to amphibian conservation.

Scan the QR Code to view the petition!



We are a society with a genuine interest in frogs and tadpoles. FATS members desire to learn more about frogs and our environment. It is our mission to increase the awareness and appreciation of the natural world and advocate for frogs and their habitat. Whilst FATS assist lost frogs needing forever homes, we are not commercial frog sellers, as sometimes mistakenly thought. Many translocated frogs accidentally come to Sydney and other parts of Australia, in trucks from banana plantations. After the rescued frogs have been through quarantine, FATS members have the opportunity to adopt these amphibians at our meetings. We ask for a small donation from adopters, to cover to cost of food, medication and housing of hitchhikers.

Artist and wildlife illustrator Gerhard Koertner produced a spectacular Holy Cross Frog *Notaden bennettii* frog image for the latest round of frog T-shirts. They sold for \$30 for adults and \$20 for children. See <http://www.mabuzi.com/shop/item/mens-surf-t-shirt> for general information. <http://www.mabuzi.com/shop/item/kids-cotton-surf-t-shirt/products-t-shirts-kids> Thanks George Madani for making the T-shirts available at our meeting.

FATS attend several public events a year. We would love some help talking and listening to visitors at our frog stalls. No experience required. Please contact Kathy Potter (see page 11), check FrogCall or look on our web site www.fats.org.au to find out about future and annual events. Our next event is at the Sydney Royal Easter Show 28 & 29 March 2016. Page 5.

Postage has risen to \$1 for normal mail in Australia. FATS is considering two membership types in future, premium with 6 hard copy black and white FrogCall newsletters a year posted out to members and a less expensive, discounted membership with only electronic colour PDF newsletters emailed to members. These are usually less than 2 MB in size. Please let us know what you think. At present, around a dozen members receive just electronic copies of FrogCall. We will probably continue mailing out the hardcopy colour December collector's FrogCall edition.

Many thanks to David Potter, Phillip Grimm and Jilli Streit who work behind the screens to ensure the technology at meetings is working well for our FATS speakers.

Peter Spradbrow spoke about the November 2015 Smiths Lake field trip. A must for our members if you haven't been yet! Many thanks for the excellent images including many from Scott Martin, Josie Stokes, Jilli Streit and Arthur White.

The meeting ended with delicious supper and relaxed time to chat with new members, regulars and frog experts. Thanks Karen White and Wendy Grimm for supper and to all our committee who make the meeting so pleasant for our visitors. **MW**

2016 FATS FROG-O-GRAPHIC COMPETITION FATS AGM NOTICE FRIDAY 5th AUGUST 2016

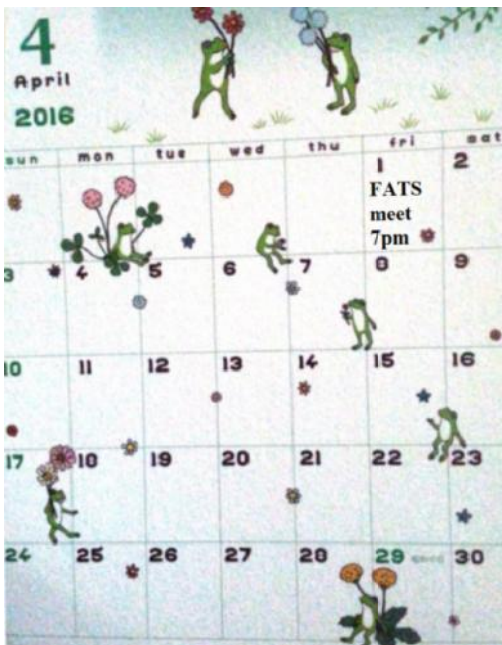
In 2008 FATS conducted our first Frog-O-Graphic competition. This proved very successful as we have many creative people in the group. So start photographing. We look forward to seeing your entries.

FATS members' 2016 Frog-O-Graphic competition opens

1st May and closes 31st August, 2016

Junior and Senior Best Frog Image,
Junior and Senior Best Pet Frog Image,
Junior and Senior Most Interesting Image,
People's Choice.

Category winners to be decided by a panel of judges. **People's Choice** will be decided by everyone present at our 2nd December FATS meeting. **All entries are by email to photos@fats.org.au Please state: your name, confirm that you are a financial FATS member, age if under 18, whether the image is of a pet frog and contact phone number. Maximum six entries per person. Maximum attachment size 6 MB.** Fabulous prizes will be awarded for each category. Entries must be original and your own work. The winning entries may be featured in colour in FrogCall, FATS 2017 calendar and other FATS publications. **Arthur White**



THIS MEETING'S MAIN SPEAKER IS HENRY COOK



© Henry Cook
Henry Cook *Mantella laevigata*, Nosy Mangabe Madagascar

The FATS AGM will be held on 5/8/2016, commencing 7pm. 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. 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. We 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**

NSW ANNUAL AMPHIBIAN KEEPERS' RETURNS DUE 30 APRIL 2016

Annual NSW Amphibian Keepers' Record returns are due no later than 30/4 by post or e-book www.animalkeepers.environment.nsw.gov.au This is an annual licence condition requirement that you as an Animal Keeper Licence (AKL) holder need to do each year unless your frog is registered as a "one off" companion animal. See <http://www.environment.nsw.gov.au/wildlifelicences/electronicFaunaRecordBook.htm> after 31/3/2016.

If you intend keeping only one frog or reptile as a pet in NSW, you can apply for a companion animal licence. It is less expensive and does not require the maintenance of a fauna record book.

A Code of Practice for the Private Reptile Keeping is for anyone licensed by to keep reptiles as pets. It has been designed to contribute to captive reptile welfare. <http://www.environment.nsw.gov.au/wildlifelicences/ReptileCode.htm> If you are caring for frogs see <http://www.environment.nsw.gov.au/resources/nature/hyprfrog.pdf> All licensees with an Amphibian or Reptile Class licence need to read and comply with the codes. This requirement is a condition of your licence. <http://www.environment.nsw.gov.au/wildlifelicences/caringforfrogs.htm> Copies of the Code can be downloaded at www.environment.nsw.gov.au For enquiries please contact (02) 9585 6406 or wildlife.licensing@environment.nsw.gov.au

E-book lodgements for 2015-2016 are open from 1/4/2016. Make sure your records are up to date and you use the My Lodgement tab to formally lodge your records by 30 April 2016. Contact the Wildlife Licensing Team by email should you have an enquiry. <http://www.environment.nsw.gov.au/questions/wildlife-licence-renewal>

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

Wildlife Licensing and Management Unit National Parks & Wildlife Service Office of Environment & Heritage Department of Premier & Cabinet PO Box 196 HURSTVILLE NSW 1481

CANE TOADS AND THE PUBLIC

Cane Toads damage our native animals and our pets, and most Australians are well aware of that. The word has also spread that they look somewhat similar to several of our native frogs and that, if there is any doubt, their ID ought to be checked.

These days, where just about everybody carries a mobile phone that can transmit pictures to the Frogwatch Helpline, the answer can be often on the spot. Here is an example of three toad photos that were sent in for identification over the past few weeks.



Tamworth Photo: Ben Callaghan 25.12.15

Ben found his toad just outside Tamworth along the highway, obviously a hitchhiker from up north. Julie found hers on her lawn in Toowoomba. While Mathew from the Gold Coast was digging post holes, two toads had jumped in.



Toowoomba Photo: Julie Zischke 25.1.16

As you can see, all three varied in colour. All were large adults, around 13 cm, and all had their characteristic poison-blisters on their shoulders (not on their legs, that would have been a native species). Looking at the sides of their heads, you see the blunt snub noses. Looking at their faces front-on, you see the high bony ridge, like a V-shape running from nostrils to where you'd expect the eyebrows to be.



Gold Coast Photo: Mathew Berquist 28.1.16

Smaller Cane Toads are a bit harder to identify. It's best to send in a few photos, clear, format-filling and also showing the side of the face if possible. One more thing: If it's clinging to your window pane, it is one of our tree frogs, regardless whether it's brown or green or warty. Cane Toads can't climb up a wall. But neither can our native ground frogs, so please get them checked out before any drastic action is taken.

But what drastic action (a) is possible and (b) makes sense? For (a), the FATS Group recommends picking the animal up in a large strong plastic bag (an inverted one if you don't want to touch it) and then putting it, bag and all, in the fridge overnight until it gets sleepy. Then put it in the freezer for two days where it will die in its sleep as it freezes solid.

Item (b) is trickier because we just can't put Humpty together again. The Tamworth toad was disposed of thoughtfully. It would probably not have survived the winter there but it could have done some wildlife damage until then. For Toowoomba and the Gold Coast, the horse has long bolted and a few more or less can't make much difference. (Where they are thick on the ground, an effective way of keeping their numbers down is food competition from other Cane Toads. Thin them out and the remaining ones get even bigger and lay more eggs.) But it makes sense, with a concerted community effort, to create toad-free areas, even in Cane Toad heartland. This may include fencing in ponds and checking others for toad spawn. All effort needs to be made to keep them out of new areas they could colonise. And to protect our native almost-lookalikes.

Well done, Ben, Julie and Mathew! L.V.

Frogwatch Helpline 0419 249 728 See also:
<http://www.environment.nsw.gov.au/resources/pestsweeds/130118CaneTbpg.pdf>



Litoria citropa photo by Peter Smith

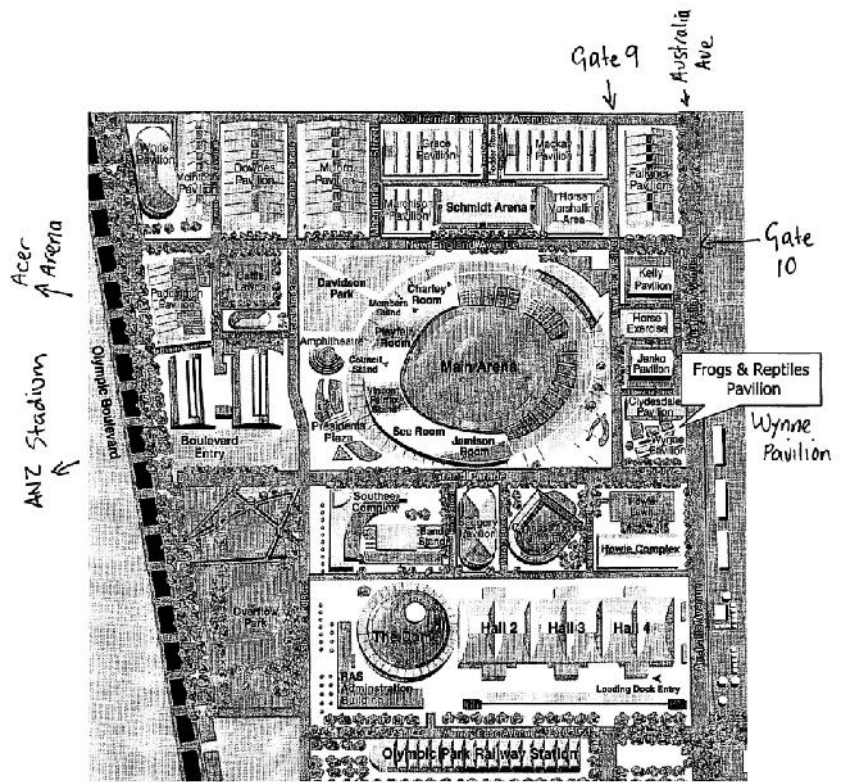
FROGS OF THE GREATER BLUE MOUNTAINS WORLD HERITAGE AREA

The Greater Blue Mountains World Heritage Area (GBMWA) encompasses eight reserves: Blue Mountains, Gardens of Stone, Kanangra-Boyd, Nattai, Thirlmere Lakes, Wollemi and Yengo National Parks and Jenolan Karst Conservation Reserve. The biodiversity of the area is considered to be outstanding at international level. Last year we received a Department of the Environment Community Heritage and Icons Grant to prepare an annotated checklist of the frogs, reptiles, birds and mammals of this area.

In a draft listing for the frogs of the GBMWA we have indicated for each frog species the reserves for which we have records and also dates of most recent records. We may have missed species in particular reserves. There are also a number of species (*Pseudophryne dendyi*, *Litoria freycineti*, *L. gracilenta*, *L. nasuta*, *L. raniformis*) for which we have only old records that require confirmation before we can include them in the checklist. If you would like to comment before 30 June 2016, on what we have put together to date, your feedback would be most welcome. Please contact Judy and Peter Smith smitheco@ozemail.com.au if you would like a copy of the draft checklist.

Faberge Easter Egg pewter trinket box by Keren Kopal with Swarovski Crystal frog pedant inside

Photo far right by Karen Russell
New Holland Frog Eastern Snapping Frog *Cyclorana novaehollandiae*
thanks David Flack for id confirmations



2016 SYDNEY ROYAL FROG & REPTILE SHOW



FATS Anthony Stimson, Lee and team look forward to seeing you at the show. www.wildexpo.com.au Wild Australia Expos Australian Wildlife Displays Ph: 0404 899 466 Please contact Kathy Potter if you are able to assist. 2nd and 3rd last day of the show, (not the last two days as previously). Come and say hello or better still help us for a couple of hours. No experience necessary. Experts on hand if you get a difficult question. Meet some of our team. Photo: Girls find they love the beasts that creep and crawl at the Sydney Daily Telegraph Sophia, 4, with a Magnificent Tree Frog. Monday 28th of March – Frogs and Lizards Tuesday 29th of March – Frogs and Snakes info@wildexpo.com.au



HERPDIGEST

INVASIVE TOADS WILL PROBABLY OVERRUN MADAGASCAR

Two years ago, scientists warned of a new threat to Madagascar's unique biodiversity: invasive Asian toads that had probably arrived via container ship sometime in the 2000s and started spreading in the wild. Similar to the cane toads that have become a menace in Australia, the Asian toads (*Duttaphrynus melanostictus*) are toxic, and predators that eat them usually end up dead. In Australia, that toxic nature has wreaked havoc on the native wildlife, but the toads have spread too fast and too far to eliminate entirely. Efforts now focus on limiting the toads' impacts on native wildlife and ecosystems as much as possible.

In Madagascar, where the invasion is much more recent, there may be time to do something more drastic. The bad news, though, is that a new report from an international group of scientists evaluating options for dealing with the invasion finds that eliminating the toads is "not currently feasible."

The problem facing Madagascar is potentially huge, the report's authors note. Predators, ranging from mammals — like the fossa and mouse lemur — to birds, such as hawks, to large snakes, may all die if they are unlucky enough to eat the toads. Populations of smaller amphibians — frogs, chameleons and skinks — could shrink from toads hunting them. There are also worries that Asian toads could spread amphibian diseases such as Ranavirus. The effects of such losses could run rampant through the food web and ecosystem.

The toads are dangerous to humans, too. Unlike in Australia, where people have dealt with the toads for a long time and are unlikely to eat them, rural Madagascans may see the toads as an easy meal. Many of these people depend on hunting and gathering for at least part of their diet and may not know that Asian toads aren't safe. Plus, declines in large snakes could let the rat population thrive. Too many rats is never a good thing, and the rodents could devastate stores of crops and commercial items.

The report outlines four options for dealing with the toads: Do nothing, protect priority sites only, contain the spread within the 100 square kilometres or so where the toads are currently found, or eradicate them entirely. The last option would be best, the scientists say, as it would get rid of the problem entirely and protect both wildlife and people. But then they list a host of reasons why this wouldn't work.

There are already about 4 million Asian toads in Madagascar, scientists estimate, and they are really good at making more toads. Females lay an average of 20,000 eggs — and up to 40,000 eggs — each year. Only 1 percent of those eggs survive, but that's still a lot of toads. To keep the toad population at 4 million, wildlife managers would have to kill 1.5 million toads every year.

To get rid of them, they'd have to kill 2.5 million toads every year until they were gone.

Such measures wouldn't be horribly expensive — the report estimates it would cost about \$2 million to \$10 million (the effort would need only a wealthy backer from the West) — but that's really just a guess. No one knows exactly where the toads are or precisely how many are in Madagascar. There's no easy way to find them, and there's no quick method of dispatching them, at least not in the numbers necessary for eradication. And then the country would need to set up good biosecurity measures to prevent another invasion (though that would have the added benefit of preventing other potentially harmful species from entering the country).

And then there's the fact that no one has tried to remove invasive toads on such a scale before. There have been three successful removal projects, but they were all in much smaller areas.

So it looks like eradication won't be possible, the scientists conclude, at least without a lot more research that would let managers and the government overcome many hurdles. And by that time, the toads will probably have become so numerous that, like in Australia, any such efforts would be impossible.

Sarah Zielinski, 22/2/16, Science News

The Only Free Weekly Electronic Newsletter That Reports on the Latest News on Herpetological Conservation, Husbandry and Science Volume # 16 Issue # 13 3/6/16 (above and below)

FACEBOOK GROUPS: MALAYSIA'S NEW WILDLIFE TRADE MARKET PLACE (extracts)

Traffic- Malaysians are turning Facebook into a wildlife marketplace, driving a roaring and often illegal trade in iconic and threatened animals, according to a new report from TRAFFIC. Just half an hour's daily monitoring over five months by TRAFFIC researchers of 14 Facebook Groups in Peninsular Malaysia found more than 300 apparently wild, live animals for sale as pets, ranging from Sun Bears *Helarctos malayanus* and gibbons, to otters and even Binturong *Arctictis binturong*.

The previously undocumented trade was unexpected because Peninsular Malaysia does not have open wildlife markets like those found elsewhere in Southeast Asia. "The rise of social media appears to have enabled the creation of a thriving marketplace for wild animals as pets where one previously didn't exist in Malaysia," said Kanitha Krishnasamy, Programme Manager for TRAFFIC in Southeast Asia and a co-author of the new report, *Trading Faces: A Rapid Assessment on the use of Facebook to Trade Wildlife in Peninsular Malaysia* (PDF, 2.2 MB).

Most surprising was the level of domestic trade in live native animals: more than 60% of the 80 species recorded during the monitoring were native to

Malaysia, indicating a demand for local wildlife as pets. Almost half of the species recorded were totally protected from hunting or trade and illegal to sell under the country's Wildlife Conservation Act 2010. 25 of the 69 non-native species for sale, including the Yellow-crested Cockatoo *Cacatua sulphurea* from Indonesia and the Ploughshare Tortoise *Astrochelys yniphora* from Madagascar, were protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which restricts or prohibits their commercial international trade.

Most of the 14 Facebook Groups were "Closed Groups", requiring membership to view and trade online. At the time of monitoring, the Groups boasted close to 68,000 active members while the 106 identified unique sellers had made little effort to conceal their illegal activities.

TRAFFIC shared the outcomes of the research with Facebook, who responded positively and are collaborating with TRAFFIC to identify practical solutions to prevent abuse of their platform in Malaysia and beyond. "We are committed to working with TRAFFIC to help tackle the illegal online trade of wildlife in Malaysia. Facebook does not allow the sale and trade of endangered animals and we will not hesitate to remove any content that violates our Terms of Service," said a Facebook spokesperson.

TRAFFIC also shared its findings with Peninsular Malaysia's Department of Wildlife and National Parks (PERHILITAN) who have launched a number of successful operations against wildlife traders operating on the social networking site. "We recognize the scale of this problem as we have been monitoring over 30 Facebook Groups selling wildlife since 2013. PERHILITAN has taken measures to address the problem, including working with other law enforcement agencies to stop the illegal trade of wildlife on Facebook. We have carried out 43 successful seizures, arrested at least 54 illegal traders and saved over 67 wildlife species from being traded illegally on Facebook," said Hasnan Yusop, PERHILITAN's Director of Enforcement. "More importantly, we also want to send out a stern warning – if anyone is caught violating our law, they will face harsh penalties," he added. "We're yet to grasp the full extent of the online threat to wildlife, but initial discussions with Facebook and the early enforcement successes by Perhilitan have been encouraging, although continued action will be crucial in curbing this spiralling form of illegal trade," said Krishnasamy.

The report's recommendations include a call for closer collaboration between enforcement agencies and Facebook to enable effective targeting of offenders and a request for social media sites to do more to raise awareness about the issue and denounce illegal activity.

Additionally, the report recommends a dedicated forum be set up at the regional and global levels for governments, social networking bodies and NGO partners to find realistic solutions to the problem. "Although the findings are about illegal wildlife trade in Malaysia, we believe it reflects a worldwide problem," said Sarah Stoner, a Senior

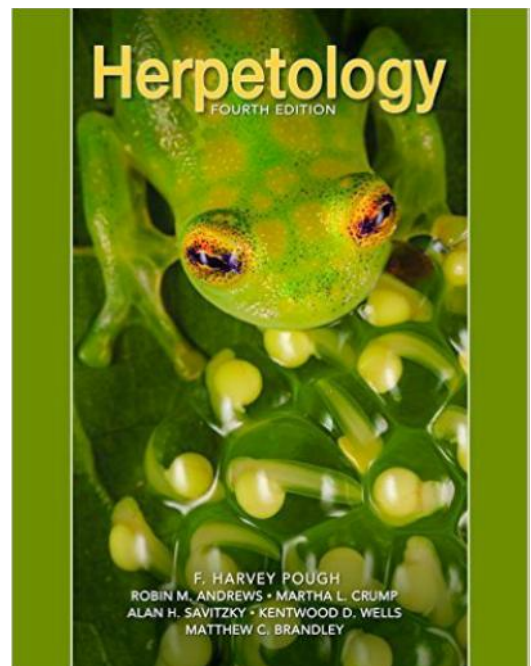
Crime Data Analyst with TRAFFIC in Southeast Asia. "Social media's ability to put traffickers in touch with many potential buyers quickly, cheaply and anonymously is of concern for threatened wildlife and enforcement agencies which demands nothing short of a concerted global response." **The Trading Faces: A Rapid Assessment on the use of Facebook to Trade Wildlife in Peninsular Malaysia report was produced with the support of WWF-Netherlands. Kuala Lumpur, Malaysia, 3rd March 2016**

Ed: Unfortunately the illegal trade in amphibians was not included in the report about the illegal trade of wild animals on Facebook, to our knowledge.

BOOK REVIEW HERPETOLOGY, 4TH EDITION

Hardcover: 591 pages, 549 illustrations by F. Harvey Pough, Robin M. Andrews, Martha L. Crump, Alan H. Savitzky, Kentwood D. Wells & Matthew C. Brandley Sinauer Associates, Inc 8 x 11 inches 1.6 lbs. An amazing book! Every herpetologist, beginners and advanced should have it. Featuring A presentation that synthesizes the experience and expertise of six authors; Dynamic analyses of interactions of multiple components of amphibian/reptile biology; Current coverage of amphibian/reptile systematics and evolution; Over 600 new and revised full-colour illustrations, including numerous photographs and Extensive in-text citations.

Herpetology, Fourth Edition presents a functional understanding of amphibians and reptiles—what they do and how they do it, and how those attributes are related to their ecology and evolutionary history. It serves as a textbook for undergraduate and graduate-level courses and as a comprehensive source of information about amphibians and reptiles for professional biologists, hobbyists, and interested laypersons. Email asalzberg@herpdigest.org in USA for orders.



HerpDigest asalzberg@herpdigest.org

FROG SKIN CHEMICAL TREATMENT FOR ALZHEIMER'S DISEASE WINS HOBART SCHOOLGIRL NATIONAL SCIENCE AWARD

Tasmanian 16 year old girl Hannah Sutton has won the BHP Billiton Science Prize for her studies on using frog secretions to treat Alzheimer's Disease. Research indicates that Alzheimer's disease is caused by the build up of amyloid beta (A β), a protein which occurs naturally in the human body. Using a peptide, Caerin 1.9, found in the skin glands of the Australian tree frog, *Litoria chloris*, Hannah aimed to increase the transportation and clearance of this protein. She hypothesised that introducing Caerin 1.9, would benefit the microglial cells in the brain which are responsible for clearing the protein. Her results showed this to be the case with an overall 35% increase in microglial uptake of A β , providing a promising potential therapeutic treatment for Alzheimer's disease.

<http://www.scienceawards.org.au/Student-Awards>



Hobart schoolgirl Hannah Sutton researched the use of chemicals from the skin of tree frogs to treat Alzheimer's disease.

Hannah Sutton looked at a possible treatment for Alzheimer's using a peptide, Caerin 1.9, found in the skin glands of the Australian tree frog. Her research has won her the investigation category of the BHP Billiton Science and Engineering Awards for school students.

Every Tuesday afternoon for a year, Ms Sutton left school and went to the Menzies Research Institute in Hobart to conduct her experiments. "I had a pretty amazing teacher at school and I wanted to undertake a gold CREST Award which is something run by the CSIRO and to do that it's mandatory that you have a mentor because of the level of the project," she said.

"So [the teacher] organised some mentors and she emailed heaps of places and Menzies were amazing and said that 'yup, we'd love to have you'. "And so basically I

took some time off from school and went down there every week and they helped me conduct the research there."

Ms Sutton said she had the idea to look at green tree frogs as a possible source for an Alzheimer's cure when she researched a substance they produce. "The peptide that we use does come from the skin glands of Australian tree frogs and basically it's been used in antibiotic research for about 10 to 15 years," she said.

"It's been shown to be able to inhibit HIV and things like that. "I worked with the mentors at Menzies and we thought, well if it has the potential to have that much of an impact on HIV then maybe it could have an impact in areas of neuroscience too."

Ms Sutton said the chemical was found to help the body fight the substance which may cause Alzheimer's disease.

"There's this protein called amyloid beta which is believed to be one of ... the causes of Alzheimer's," she said. "So what [Caerin] 1.9 can do is, we've shown that it can increase the rate at which those micro-global cells take after pathogens like amyloid beta. "Basically it can help to clear those pathogens from the brain."

Early days for Alzheimer's frog gland treatment The experiment has been successfully tested on rat cells but it has not yet been tested on humans.

Ms Sutton said the research was still in its early stages. "It does definitely have a lot of potential but there are ... a few problems just because it's really preliminary research," she said. "Our biggest problem in looking at developing it as a treatment is the fact that there's a barrier between the brain and the blood and it will only let certain chemicals in.

"[The chemical we are working with] is about five times bigger than what is allowed through that barrier. "So [we are] looking at methods and there are methods as to how we can get around that and, the other big thing is how it would interact with someone and their different genetics and what other drugs they're taking and things like that.

"So there are kind of a few obstacles on the way to making it a proper therapeutic treatment."

The award winners were announced on Tuesday after a five-day camp in Melbourne where all the contenders participated in science activities and discussed their work. Ms Sutton said her win was unexpected. "I was incredibly overwhelmed, I was really excited and the really great thing was the lots of amazing friends I made on the camp," she said. "My Mum was at the awards and they were all really excited I think."

Ms Sutton envisages a career in science. "Science is definitely something I'd love to consider doing after I finish school," she said. "I'd like to take some time off and do a bit of travelling but I'm looking at going into medicine." **By Felicity Ogilvie**

Forwarded to FrogCall by Arthur White

<http://www.abc.net.au/news/2016-02-10/frog-skin-chemical-treatment-for-alzheimers-hannah-sutton/7154394> 10/2/2016



Tadpole's eyes are closer to the top of its head than most - possibly so it can see eggs being dropped into its tree pond at feeding time

'EXTINCT' TREE FROG REDISCOVERED IN INDIA AFTER 137 YEARS

An extraordinary tree frog thought to have died out more than a century ago has been rediscovered in India. A frog was presumed to be extinct and only known from 2 pickled specimens collected in the 1870s. *Frankixalus jerdonii* was refound when a biologist surveyed unburnt patches of forest that had escaped clearing for an oil palm plantation.



Unusually, the frogs feed mostly on vegetation, rather than insects or larvae

The discovery was made by renowned Indian biologist Sathyabhama Das Biju and a team of scientists, in the jungles of north-eastern India. It is hoped the frogs might now be found across a wide area, from China to Thailand. Studies of the frog have also led scientists to reclassify it as an entirely new genus.



Instead of teeth, the tadpoles have smooth mouths, to suck in the eggs they eat

The golf ball-sized frog lives in tree holes up to 6m (19ft) above ground, which may have helped it stay undiscovered. Although other scientists have suggested it may have gone unnoticed simply because there are so few scientists working in the remote region.

The height at which they live is not their only quirk, with females laying their fertilised eggs in tree holes filled with water, only to return after the tadpoles hatch, to feed them with unfertilised eggs.

Unlike most frogs, adults also eat vegetation rather than insects and larvae. The newly uncovered frogs were first found by accident in 2007, during a search for other animals. Mr Biju, of the University of Delhi, is known as The Frog Man in India, for discovering 89 of the country's 350 or so frog species. "We heard a full musical orchestra coming from the tree tops. It was magical. Of course we had to investigate," Mr Biju said.

Using DNA analysis, Mr Biju and his colleagues have now identified the frogs as part of a new genus, meaning it has a new name. It has changed from *Polypedates jerdonii* - named after Thomas Jerdon, the British zoologist that collected the previously only known specimens in 1870 - to *Frankixalus jerdonii*, after herpetologist Franky Bossuyt - Mr Biju's adviser when he studied at Vrije Universiteit in Brussels, Belgium.

Although the frogs have since been found in significant numbers, they are far from safe, Mr Biju warned, with tropical forests being cut down at alarming rates to make way for agriculture and human settlements. 26/1/2016 <http://www.bbc.com/news/world-asia-india-35368928> Forwarded to FrogCall by Arthur White



Photo by David Nelson *Litoria burrowsae* Tasmanian Tree Frog, Melaleuca, Tasmania From Marion Anstis book Tadpoles and Frogs of Australia

CHYTRID FUNGUS: RESEARCHERS FINALLY FIND CURE FOR DEADLY AMPHIBIAN DISEASE



Researchers may have finally found a cure for the deadly chytrid fungus plaguing wild amphibians.
Photo Jaime Bosch/MNCN-CSIC)

Researchers may have finally found a cure for a deadly fungus, chytrid, that is plaguing wild amphibians. In a recent study, scientists have documented the first-ever successful elimination of the fatal fungus, providing a major stepping stone toward protecting amphibian populations worldwide.

Chytridiomycosis is an emerging infectious disease of amphibians caused by an aquatic fungal pathogen, *Batrachochytrium dendrobatidis*. Over 700 amphibian species have been affected by this highly-infectious pathogen, which has led to widespread population declines and species extinctions throughout five continents, according to a news release.

For the recent study, researchers from the Zoological Society of London (ZSL), the National Museum of Natural History in Spain (MNCN-CSIC), and Imperial College London combined antifungal treatments with environmental disinfection. In doing so, they found they were able to clear the chytrid infection from populations of the Mallocran midwife toad (*Alytes muletensis*).

"This study represents a major breakthrough in the fight against this highly-destructive pathogen; for the first time we have managed to rid wild individuals of infection for a continued period," Dr. Trenton Garner, co-author of the study from the ZSL's Institute of Zoology, said in the release. "Amphibian-associated chytrid fungi are a critical conservation issue that requires simple, straightforward and transferrable solutions. Our study is a significant step towards providing these."

Chytrid fungi-related deaths were first recorded in amphibians at the end of the 20th century. While researchers are still unsure why the fungus kills its host, previous studies revealed that the pathogen can be transmitted either through water, soil, or through parasites living directly on plants and insects. Additionally, the fungus reproduces asexually and has spores that move through the water. Therefore, researchers believe amphibians contract the disease when

their skin comes in contact with water containing spores from other infected animals.

"This is the first time that chytrid has ever been successfully eliminated from a wild population -- a real positive which we can take forward into further research to tackle this deadly disease," Dr. Jaime Bosch, Senior Researcher at MNCN-CSIC, added. "Chytrid is a global issue which affects amphibian populations worldwide, and I am proud to be part of a team of leading institutions at the forefront of this pioneering research working towards a solution. Thanks for sharing Sonia Elwood. By Samantha Mathewson 18 Nov 2015 <http://www.natureworldnews.com/articles/18278/20151118/chytrid-fungus-researchers-finally-find-cure-deadly-amphibian-disease.htm>

ENVIRONMENT MINISTER ASKED TO INTERVENE TO STOP EPA SLASHING RIVER PROTECTIONS (extracts)



Fleay's Barred Frog, one of the threatened species that will be affected

The North East Forest Alliance is calling on the NSW Environment Minister to intervene to stop the Environment Protection Authority (EPA) changing the logging rules on public land to open up over 15,000 hectares of protected stream buffers and exclusion areas for threatened animals in the Clarence and Richmond River valleys for logging. NEFA released the report 'New IFOA Changes in Forest Protection, In the Clarence and Richmond River Valleys'.

NEFA spokesperson, Dailan Pugh, said that NEFA are calling on the Environment Minister, Mark Speakman, to intervene by stopping the proposed changes to honour his promise that there will be no erosion of environmental values with the new logging rules. "It is shocking that the EPA and Forestry Corporation are proposing to cut already inadequate buffers around over 7,000 kilometres of vital headwater streams in the Clarence and Richmond valleys from 10 metres down to 5 metres..... "What are being lost are the most important buffers around our stream heads, where our rivers are most vulnerable, and core habitat around locations of our most vulnerable animals..... **Posted by Susie Russell 28/1/2016** http://www.nefa.org.au/environment_minister_asked_to_intervene_to_stop_epa_slashing_river_protections

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 but not Easter (Good) Friday. 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.

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 1,617 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 and habitats from all over the world. The page included dozens of information files.

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

RESCUED FROGS: seeking forever homes are at our meetings. Please contact us in advance if you wish to adopt a frog. Cash donation required. FATS must sight your current amphibian licence. Licences can be obtained from NSW National Parks and Wildlife Service, Office of Environment and Heritage. We request you join FATS before adopting a frog. This can be done on the meeting night. Sorry we have no EFTPOS.

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



Thank you to the committee members, FrogCall supporters, meeting speakers, Frog-O-Graphic competition entrants, events participants and organisers David, Kathy, Sarah and Harriet Potter for an enjoyable year.

The FrogCall articles, photos, media and webpage links, membership administration and envelope preparation is greatly appreciated. Special thanks to regular newsletter contributors, Robert Wall, George Madani, Jilli Streit, Karen & Arthur White, Andrew Nelson, Wendy & Phillip Grimm, Henry Cook, Marion Anstis and Bill Wangmann.



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John Pumpurs-Litoria wilcoxii males ready to mate

Oophaga pumilio Strawberry Poison Dart Frog Susie Adamczyk



THE FATS 2015/16 FIELD TRIPS SEASON IS COMPLETE

We hope you have joined us on some of our froggy outings.
Our field trips will recommence in September 2016



Photo Garth Coupland *Mixophyes fleayi* watercolour

WILLOUGHBY FAUNA FAIR

Thanks to Arthur and Karen White, Punia Jeffery and Kathy Potter, FATS were represented at the Willoughby Fauna Fair at Chatswood, on Sunday 20 March. Visitors learnt about our local native animals, their environment, and how our domestic pets can live alongside them. They enjoyed food stalls, wildlife shows and fun kids' activities. They took away some great ideas about wildlife-friendly living. Favourite attractions included wildlife shows and kid's craft activities. Visitors were inspired by special guest Martyn Robinson, naturalist formerly from the Australian Museum, as they explored the world of wildlife in the Aussie backyard. Martyn took a down-to-earth look at soils and some of the mega diversity that's essential for healthy soils.

Expert Arthur White, President of FATS talked about the diversity of wildlife in our gardens - from nocturnal visitors



Godzilla the Green Tree Frog *Litoria caerulea*

FATS meet at the Education Centre, Bicentennial Park, Sydney Olympic Pk. P10f has parking. Short walk to Centre.

