

FROG CALL

THE FROG AND TADPOLE STUDY GROUP NSW Inc.

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NEWSLETTER No. 129 February 2014



© Henry Cook

Photo by Henry Cook *Boophis rappoides*, Andasibe Madagascar

Arrive 6.30 pm for a 7pm start.

Friday 7th February

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

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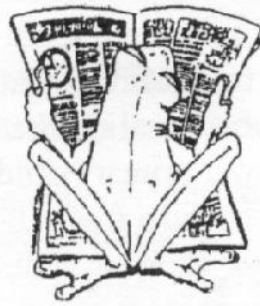
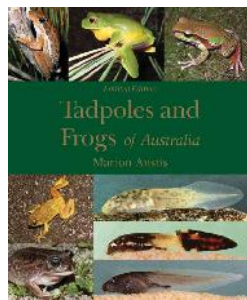
MEETING FORMAT Friday 7th February 2014

6.30 pm There are a few lost frogs needing forever homes with financial FATS members. Please bring your FATS membership card and cash \$40 - \$50 donation. Your NSW NPWS amphibian licence must be sighted on the night. Rescued frogs can never be released. Sorry we have no EFTPOS at meetings. Please call Monica or Lothar before the meeting to confirm your interest in adopting.

7.00pm Welcome and announcements.

7.45 pm Main speaker: Jake Janos "Central Bearded Dragons and their Mutations" and "Frog husbandry"

9.00 pm Show us your frog images, tell us about your frogging trips or experiences, guessing competition, continue with frog adoptions, supper & a chance to relax and chat informally with frog experts.



TADPOLES AND FROGS OF AUSTRALIA

BY MARION ANSTIS - BOOK LAUNCH

New Holland Publishers invite the frog community to the launch of Marion Anstis' book, "Tadpoles and Frogs of Australia". On the 3rd December, we met at the Conservation Theatre, Taronga Zoo, Mosman. The book was launched by Professor Michael Mahony. Dignitaries included Cameron Kerr, Director of Taronga Zoo, Dr Peter Harlow from Taronga, Harold Cogger, Professor Ronald Altig from Mississippi State University, Professor Ross Alford from James Cook University and Ian Morris from NT, naturalist, ecologist, author and tour guide. Other well know identities and scientists from the herpetological community present were Martyn Robinson (Australian Museum), Anthony Stimson, Karen Thumm, Rick Shine and Glen Shea. Arthur White and many other FATS members, "snake people", staff from New Holland including the head of New Holland who flew in from England and many more were there. Apologies to those inadvertently omitted.

Comments by dignitaries: "Olympic" and "mammoth lifetime's work" which has culminated in her book and PHD. "Game changer" by those assessing Marion's PHD. The book needs to be used for the identification of frogs AND TADPOLES at development sites around Australia. ie If there are concerns about endangered species, Councils, State and Federal government, departments and developers have no excuse to dismiss the identification of tadpoles as "unknown". "Such a comprehensive frog and tadpole reference book in colour may never be printed again on this planet." MW

Herpdigest 11 January 2014 : "A stunning comprehensive, one-of-a-kind reference work on the life histories of Australian frogs is now available. The eggs and tadpoles of Australian frogs has been a study waiting to happen for a very long time. Tadpoles and Frogs of Australia provides us with a unique coverage of almost all the life histories of the entire frog fauna of the Australian continent which will become a lasting contribution to frog conservation both nationally and globally.

This 832 pages with hard cover and dust jacket, and includes prolifically illustrated descriptions of all currently known adult frogs, and the eggs, tadpoles and metamorphs of most species. Keys are provided to eggs and tadpoles. Full colour throughout with over 3060 photos and drawings, it is a must-have reference for amateurs, students and professionals. It has been described as "the most comprehensive and thorough treatment of a continental frog fauna that there has ever been." Orders can be made via the following website link:

<http://www.newholland.com.au/product.php?isbn=9781921517310> "

Reports on the latest herpetological conservation news, husbandry and science V # 14 issue # 3 1/11/14 Editor Allen Salzberg www.herpdigest.org. Sales go directly to keep [herpdigest.org](http://www.herpdigest.org) free, alive and an independent voice in the world of herpetology.

APOLOGIES TO HENRY COOK

The striking image in our last colour newsletter of the Madagascar *Mantella aurantia*, at Torotorofotsy, taken by Henry Cook, did not upload and print clearly due our proofreading error. Here he is again with the correct spelling. Thanks for being so understanding Henry. MW



Mantella aurantia at Torotorofotsy, Madagascar photo by Henry Cook

LAST FATS MEETING 6 DECEMBER 2013

Jilli Streit presented a brilliant video about FATS 2013 Smiths Lake field trip - frantic frogs calling, so loudly after the rain, cicadas buzzing, birds calling, gentle background music and excellent photos and sound quality. Congratulations Jilli.

Arthur White spoke about the launch of Marion Anstis' book. Phillip took photos and video footage. Winners of the Frog-O-Graphic competition included Ryan Little, Vicki Deluca, George Madani, David Nelson, Aaron, Payne, John Pumpers, Karen Russell and Michelle Toms.

FATS was very fortunate to hear from Ian Morris OAM at our meeting. He is a renowned writer, presenter, photographer and naturalist with an overwhelming knowledge of the wildlife, geology, climate and indigenous culture of the Australia's Top End. He shared some of his images from Up North with us. Ian came for Marion's book launch, and Graeme Sawyer, started Frogwatch North in 1989.

<http://www.frogwatch.org.au/index.cfm?action=cms.page> They have been looking for ways to make the area Cane Toad proof. Thank you Ian, for the excellent in depth talk on the interaction of the habitat and different frog species in North Australia and interesting question time after your presentation.

The meeting ended with a delicious Christmas supper, raffle, champagne to celebrate Marion's success and informal conversation. MW



Naree magic: the sun sets over the wetlands.

**UNSPOILT STRETCH OF MURRAY-DARLING TO BE CONSERVED
EXTRACTS**

The last untouched part of the Murray-Darling River system has been protected, after graziers sold the land to a conservation group.

Straddling the Paroo and Warrego rivers, Naree cattle station features an abundance of wetlands which are home to all types of bird and plant life. The 14,000 acre property, 150 kilometres north-west of Bourke, has now been bought by Bush Heritage Australia. It is the 35th addition to the organisation's portfolio of land parcels, but senior manager Jim Radford says this one is extra special. "The Paroo River and the Warrego River are the last free-flowing rivers in the entire Murray-Darling basin," he said.

"The Paroo is entirely unregulated; the Warrego has one small dam that has just a relatively small extraction from it. "So what this means is that river system is basically the healthiest in the Murray-Darling basin and Naree station is located at the heart of that system." Dr Radford says Naree is home to some stunning scenery. "The thing that struck me was the diversity of the wetlands and the condition of the wetlands," he said.....

The clean water allows for an abundance of birds, and Naree is home to 160 different species, 15 of which are vulnerable in NSW. "Those that are vulnerable include the mulga, the Major Mitchell cockatoo, hooded robin, blue-billed duck, freckled duck and these sort of species," Dr Radford said.

He is at Naree now, along with more than two dozen scientists and volunteers for Bush Heritage. They are combing through the property to get a clear picture of just how many birds, frogs, and mammals call the property home. After that, they will start work on a long-term conservation plan, looking at tasks such as tackling the woody weed problem and eradicating feral pigs and goats. <http://au.news.yahoo.com/latest/a/-/latest/16831994/unspoilt-stretch-of-murray-darling-to-be-conserved/> **Lucy McNally**

Bush Heritage is a national non-profit organisation that protects Australia's unique animals, plants and their habitats. They do this by acquiring and managing land of outstanding conservation value, or by working in partnership with other landowners. Their vision for 2025 is to protect 1 per cent of Australia. "This is an exciting time for Bush Heritage – built on 20 years of extraordinary achievements." Louise Sylvan, President

Bush Heritage is a non-profit conservation organisation dedicated to protecting Australia's unique animals, plants and their habitats. Our work is funded by donations and bequests from people like you <http://www.bushheritage.org.au/>



A pelican on the water as dusk settles over Naree. The last untouched part of the Murray-Darling River system has been protected, after graziers sold the land to a conservation group.



Finches are just one of the 160 bird species living on Naree.



A brolga wades through the wetlands at Naree.



2408 Hectares - NSW Reserves – Bush Heritage Australia

2014 ROYAL EASTER SHOW FROG AND REPTILE EXPO

22 April for Lizards and Frogs
23 April for Snakes and Frogs

If you are new to entering an animal or need a refresher, please visit the Competition Rules for all the details on what is involved.

<http://www.wildexpo.com.au/comp%20rules.htm>

We accept entries for all Australian frogs & reptiles. Once the numbers are in then we decide on categories. If your animal ends up not being part of a group category, you can still enter the competition and compete for the major prizes. Last year's winner was one such animal. Please do not hesitate to email any questions you might have. Mark Harvey Wild Australia Expos Pty Ltd Incorporating The Wild Australia Expo The Australian Frog & Reptile Show The Sydney Royal Frog & Reptile Competition www.wildexpo.com.au Ph: 9144 7323 PO Box 569 Turrumurra NSW 2074

SMH 17/11/2013 below From Phillip Grimm

LOOKING FOR A SAFE ALTERNATIVE TO GOLDFISH?

We have been contacted by a fish breeder who breeds native fish species, including Pacific Blue-eyes, in the Redland City Council region. These fish are a safe alternative to most other fish species for frog ponds, as they will not eat tadpoles, but still eat mosquito larvae. These fish are sold for \$1 each, cheaper than at most aquarium stores.

Considering these fish can be hard to obtain, we thought this advert may be helpful to the frog-friendly gardener.

For more information on obtaining these native fish, contact Jack Adams at adams.w.jack@gmail.com.



Burrowed From Queensland Frog Society www.qldfrogs.asn.au



Mantella betsileo, Kirindy Madagascar Photo Henry Cook

40 DOMAIN The inspired home SUNDAY, NOVEMBER 17, 2013 THE SUN-HERALD

Provide a wet and wild sanctuary to get frogs jumping all over your place



Jason Hodges

Love your garden

My garden has achieved the tick of approval by one of nature's toughest judges: a frog. The humble eastern common froglet, to be exact, or one that looks like it.

If frogs take up residence in your garden, it means you have a clean, unpolluted and stable environment. So I might have a mosquito or two fewer this summer.

I have fond memories of when I was a kid of catching tadpoles in the local creeks, but I recommend a catch-and-release policy. Frogs are protected, so they cannot be taken from the wild.

The best way to attract frogs to the garden is to provide them with what they need and, with a bit of luck, they'll come for a holiday and stay a while.

Frogs' slimy, beautiful skin is very thin and can absorb nasty chemicals. They can also die if they eat insects that have been killed by chemicals.

Try to eliminate pesticides and herbicides and use organic

fertilisers such as your own compost, blood and bone or a good commercial product.

The good news is there are lots of simple and cheap things you can do in your garden to attract frogs and you don't have to change too much.

Frogs love moisture, so ensure constant water at ground level, and they need protection from birds, dogs and cats. That's about all.

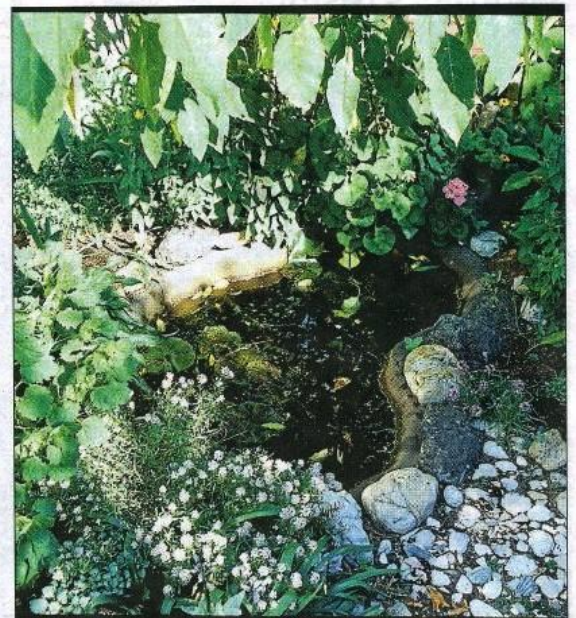
Go for a heavily planted garden:

groundcovers keep the ground cooler and provide places for them to hide, small shrubs and grasses provide protection from birds, and taller trees and shrubs provide shade to larger areas.

A dry, sunny garden to a frog is what a concrete path is to an earthworm on a hot day... not a happy place. Use rocks, hollowed-out logs and broken terracotta pots laid on their sides to create palatial real estate for them.

Once you've attracted some frogs you'll want more, so you need to provide a safe breeding ground. Water, whether it be a feature, a small puddle or just a water bowl hidden among the plants, must be protected from prying eyes. Not because frogs are shy creatures but because they are easy targets in the open.

I have lomandra and liriopé planted around the base of my water feature and a frangipani above it to provide shelter. This



Bare necessities: All that is needed is a shady pond (above) and the green tree frog (left) will come. Photo: Gerry Angelos

wasn't designed for the frogs but it has worked for me and, more importantly, for them.

Make sure water is around all year for the frogs but also that it is not a threat to children.

Think about where you put the water. Inside a fenced pool area is safe. Also take into account that frog noises may be nice sometimes, but near bedrooms they can sound like chainsaws fighting.

Another benefit for comes from

garden lights. They attract moths, flies and mozzies, creating a smorgasbord for frogs.

You can buy frogs at pet shops. You need to obtain a simple licence and can get a good-looking green tree frog for about \$30.

Or you can have many different types of native frogs (there are more than 200) including the green tree frog and my new friend the eastern common froglet for free in your very own wildlife park at home.



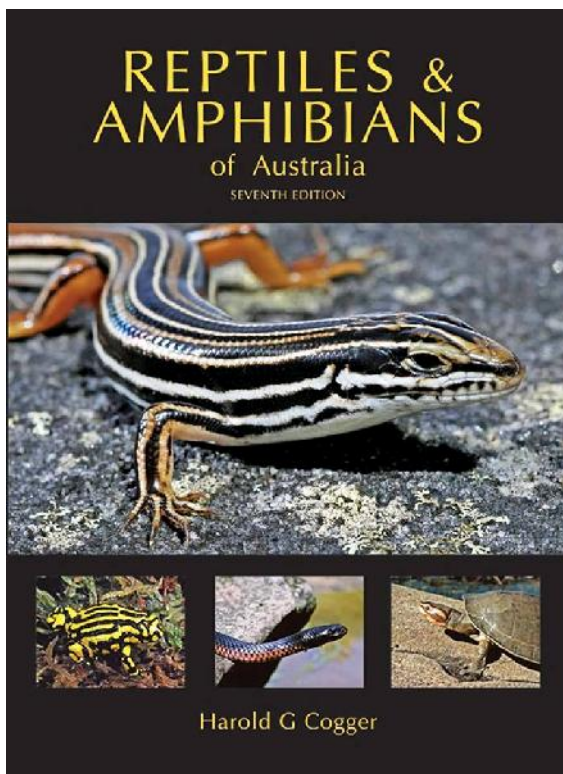


Mixophyes iteratus Giant Barred Frog George Madani

REPTILES AND AMPHIBIANS OF AUSTRALIA.

by Harold G. Cogger, *Collingwood: CSIRO Publishing, (2014 7th edition).* Quarto, dustwrapper, 1056 pp., colour photos, text illustrations, maps

Andrew Isles Natural History Books www.AndrewIsles.com
AU\$150.00 Due March 2014. Pre-order now for a signed copy.
The greatly anticipated seventh edition of this important herpetological work is almost here. This comprehensive guide to Australia's rich and varied herpetofauna describes the 1194 species of frogs, crocodiles, turtles and tortoises, lizards and snakes found in Australia. Illustrated by full colour photographs, each species account contains detailed information on appearance, distribution and habits. Includes 130 simple-to-use dichotomous keys to aid in easy identification. Along with a comprehensive list of scientific references for those wishing to conduct further research, this book contains an extensive glossary, and basic information regarding collection, preservation and captive care of specimens. This classic work, originally published in 1975, has been completely brought up to date. This seventh edition includes all species described prior to October 2013 **Or Purchase through**
<http://www.herpbooks.com.au>
<http://www.publish.csiro.au/pid/6501.htm> and herp societies.



WILDLIFE WEEK AT O'REILLY'S LAMINGTON NATIONAL PARK

O'Reilly's is perched almost a kilometre above sea level in the lush rainforest of the McPherson Range, a scenic 2 hours' drive from Brisbane, or 90 minutes from the Gold Coast. Visit www.oreillys.com.au

Winner of Tourism Australia's Best Job in the World Elisa Detrez will join wildlife lovers at O'Reilly's Wildlife Week 19-24 January 2014. Elisa visited O'Reilly's in Lamington National Park earlier this year as a finalist for the Queensland Park Ranger job and will return as the winner and a special guest. Wildlife Week leader Ian Gynther, Senior Conservation Officer with the Department of Environment and Resource Management (DERM), believes the program has wide appeal as a fun and educational way to experience the diversity of species in Lamington.

In addition to Ian, expert guides include frogging guru Harry Hines and Zoologist Melanie Venz from the Biodiversity Sciences Unit within Environmental Sciences Division of DERM. There will be 'wild' nights, spotlighting for mammals and going in search of frogs with 4WD trips to encounter eucalypt and lowland habitats.

Children are always first in line for these close encounters and Wildlife Week makes an ideal family adventure, combining fun with education and conservation. Specialising in affordable family holidays, kids stay and eat for FREE for Wildlife Week for bookings made before 31 December 2014.

As well as being part of a unique research and education workshop, a stay at O'Reilly's makes the perfect alternative to a summer beach holiday - a chance to beat the heat in the cool rainforest and a great way to get kids interested in zoology and the environment. The stars are bright, the evenings are warm and the glow worms come out for their nocturnal show.

Fleay's Barred Frog: These endangered frogs have been a focus of O'Reilly's Frog Week over the years. They breed in flowing streams rather than the still swamps or ponds favoured by many frog species, so the pristine creeks of Lamington make ideal habitat.

FROG & TADPOLE STUDY GROUP
STATEMENT OF INCOME & EXPENDITURE
FOR THE YEAR 01/07/2012 – 30/06/2013

	01/07/2012 – 30/06/2013	01/07/2011 – 30/06/2012
Opening Balance	<u>\$25290.45</u>	<u>\$27630.63</u>
<u>Income</u>		
	\$ 1316.52	Interest \$ 1839.74
	\$ 5220.00	Membership \$ 8090.00
	\$ 665.00	Donations \$ 75.00
	\$ 2000.00	Grant (SOPA) \$ 2000.00
	\$ 1114.00	Sales(calendars etc) \$ 890.00
	\$ 597.00	Raffle/Auctions \$ 640.00
	\$ 525.00	Rescue Frog Sales \$ 1440.00
	\$ 1285.00	Field Trip Income \$ 295.00
	\$ 150.00	Sundry Income
<u>Total Deposits</u>	<u>\$ 12872.52</u>	<u>\$ 15269.74</u>
	<u>\$38162.97</u>	<u>\$ 42900.37</u>
<u>Expenditure</u>		
	\$ 6.00	Bank Charges \$ 6.00
	\$ 51.00	Fair Trading \$ 91.00
		Insurance \$ 730.00
	\$ 1758.43	Printing – Sundry \$ 1163.00
	\$ 4396.64	Printing – FROGCALL \$ 4157.72
	\$ 1211.98	Postage – FROGCALL \$ 1059.00
	\$ 52.75	Stationery \$ 42.70
	\$ 146.00	Post Box Hire \$ 137.00
	\$ 1198.00	Field Station Hire \$ 275.00
		Herpetofauna \$ 2103.75
	\$ 1660.25	Sales – Expenditure \$ 555.00
	\$ 2591.33	Sundry Expenditure \$ 3169.36
	\$ 673.35	Photographic Comp Expenditure \$ 510.39
	\$ 110.00	Subscriptions (NCC) \$ 110.00
	\$ 1859.00	Mobile Phone (3 x years)
	\$ 1000.00	Student Grant \$ 3500.00
	\$ 168.00	Workshop Expenses
	\$ 200.00	Donations
	\$ 1173.00	Live Food – Rescue Frogs
	\$10000.00	Term Deposit transfer
<u>Total Expenditure</u>	<u>\$28255.73</u>	<u>\$17609.92</u>
<u>Closing Balance</u>	<u>\$ 9907.24</u>	<u>\$25290.45</u>
<u>TOTAL FATS ASSETS</u>		
<u>Cash in Bank</u>	<u>\$ 9907.24</u>	<u>\$25290.45</u>
<u>Term Deposit</u>	<u>\$47114.65</u>	<u>\$37114.65</u>
	<u>\$57021.89</u>	<u>\$62405.10</u>

AQUATIC MICROFAUNA EAT FROG-KILLING FUNGUS (extracts)

Filter-feeders emerge as potential defenders against a deadly amphibian disease.



Adult female *Daphnia magna* (left) and *D. Dentifera* (right) Isabella Olesky (Courtesy Of Catherine Searle)

Chytridiomycosis, the deadly disease caused by the fungal pathogen *Batrachochytrium dendrobatidis* (*Bd*), has been decimating amphibian populations worldwide since the 1980s. “We have no means to stop its advance,” said Antje Lauer, a microbial ecologist at California State University in Bakersfield, “and no cure that can be used in the wild to protect amphibians from it.” *Bd* affects amphibian skin, disrupting its ability to regulate electrolytes in the body, explained Jamie Voyles, an infectious disease ecologist at New Mexico Tech. Infected frogs lose excessive amounts of sodium and potassium, which are critical to keep their hearts pumping. Eventually, their hearts stop.

But new research suggests a potential preventive agent against *Bd* infection—one that may already be swimming all around the affected amphibians. Two recent studies demonstrated that aquatic microscopic fauna—such as *Daphnia*, *Paramecium*, and rotifers—can consume free-floating *Bd* zoospores, keeping *Bd* from infecting as many frogs.....

This study confirmed previous observations suggesting that aquatic microfauna might prey on *Bd* zoospores, and showed that these microfauna can even reduce *Bd* infection. Yet in the lakes where *Bd* and amphibians interact, aquatic microfauna can choose from a variety of foods beyond the infectious zoospores. Would microfauna still reduce *Bd* zoospores in a more complex environment?.....The works of Schmeller and Searle highlight the potential of aquatic predators to fight *Bd*. “Aquatic predators of fungal zoospores are exciting,” said Douglas Woodhams, a disease ecologist and conservation biologist at University of Colorado, Boulder, “because they are the one factor that may be more easily manipulated for disease management” when compared with factors like pond temperature or host immunity. However, Searle warned that “biocontrol must be implemented with caution for it might have unpredictable effects on the community.”

Schmeller agreed, suggesting that biocontrol trials “should [first] be done in a couple of lakes—definitely not more than that—to see if they work.”

“The studies of Schmeller and Searle remind us that host and pathogens do not exist in a vacuum,” said Voyles, “but are parts of diverse, dynamic ecosystems with many interfering organisms, chemicals, and abiotic factors.” Added Lauer: “These studies make clear that a healthy environment with natural predators of *Bd* can reduce the risk of contracting chytridiomycosis.” D.S. Schmeller et al., “Microscopic aquatic predators strongly affect infection dynamics of a globally emerged pathogen,” *Current Biology*, 24: 176-80, 2013. C.L. Searle et al., “*Daphnia* predation on the amphibian chytrid fungus and its impacts on disease risk in tadpoles,” *Ecology and Evolution*, 3: 4129–38, 2013. Forwarded to FATS by naturalist Martyn Robinson Australian Museum <http://www.the-scientist.com/?articles.view/articleNo/38990/title/Aquatic-Microfauna-Eat-Frog-Killing-Fungus/> By Yao-Hua Law January 23, 2014

Gold Coast Sun - from Kathryn Russell



The Giant Barred Frog needs damp leaf litter to live on.

New shrubs ensure frog's survival

LEXIE CARTWRIGHT
LEXIE.CARTWRIGHT@NEWS.COM.AU

FROGS at the Numinbah Valley are jumping for joy after vegetation was planted across a section of the Nerang River to protect the endangered species.

WetlandCare Australia, in partnership with Griffith University and local landowners, have recently wrapped up planting more than 3400 trees and shrubs in the aim to rehabilitate and protect the Giant Barred Frog habitat.

“The main reason they are endangered in the first place is because they need the damp leaf litter on the forest floor, so when the trees get cut down there's only weeds and grass left and they can't live on that,” Sim-

one Haigh, senior project officer at WetlandCare, said.

“The restoration will create valuable habitat for the existing population.”

Ms Haigh said it was important to protect species, as they all played a vital part in the “circle of life”.

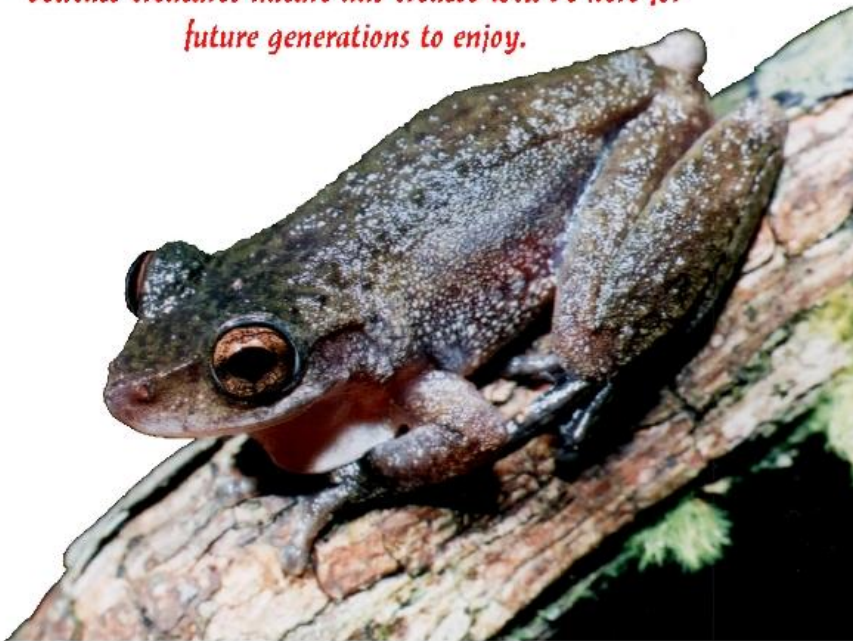
“Every animal has a unique role to play in the food chain, quite simply if it was there before it should still be there now,” he said.

Aside from landowners, who can plant rainforest on their property, the public can also take simple precautions to avoid impacting the lives of endangered species.

“Not littering is vital. Litter creates terrible erosion in the stream banks naturally putting the animals in danger,” he said.

Freedom of Choice

*Our planet's future is up to you.
Choose positive pathways so that the fascinating and
delicate creatures nature has created will be here for
future generations to enjoy.*



Teach your children food gardening - Go organic - it is the best food of all
The most important work is the work you aren't paid for
Repair it before you replace it - Abundance shared benefits many
Waste is a disrespectful scandal - don't let anything go to waste!
Your wallet is a powerful tool: buy local, buy ethical, buy sustainable, buy cruelty-free
Landscapes and wildlife are voiceless - speak up for them at every chance!
Good karma is assured by paying it forward

www.frogsafe.org.au



INTERESTING WEBSITES

<http://www.climatecouncil.org.au/> Off the Charts 2013 Australia's hottest year <http://www.climatecouncil.org.au/wp-content/uploads/2014/01/2013offthecharts.hottestyear-1.pdf>

<http://amphibiaweb.org/> Amphibiaweb List of papers on amphibian declines, causes, amphibian conservation, emphasis those describe methods for monitoring and conserving amphibian populations. Compiled by Professor Tim Halliday (formerly DAPTF International Director tim.r.halliday@gmail.com .

<http://parcplace.org/news-a-events/2014-year-of-the-salamander.html>

<http://www.hawkesburyherps.com.au/expo2014>
Hawkesbury Herpetological Society Expo 9am - 4pm Sunday 2nd March 2014 Penrith Panthers Exhibition Marquee Panthers Complex, Mulgoa Rd, Penrith

<https://www.facebook.com/pages/Appalachian-Salamanders/110150654899>
Appalachian Salamanders on Facebook Year of the Salamander

<http://www.oreillys.com.au/eco-activities/discovery-events>

WHY FROGS AROUND THE WORLD ARE ODDLY ALIKE (Extracts)

New research offers two explanations for why frog species on different continents are strikingly similar. In some cases, different groups of frogs evolved similar characteristics in parallel on different continents, while in other cases the same group of frogs maintained similar characteristics over huge distances and vast periods of time as they moved between continents.....“The really cool thing we found is what happened in Australia. There all the different habitat types have all evolved from tree frogs. After the tree frogs went from South America to Australia, some stayed in the trees, but others became burrowing, aquatic, and terrestrial frogs,” Wiens says. “The species of tree frogs that evolved to use these new microhabitats show no trace of their tree frog ancestry, and are basically indistinguishable from unrelated burrowing, terrestrial and aquatic species on other continents.” **The research appears in the journal Royal Society B: Biological Sciences. Courtesy University of Arizona, 12/27/13 and <http://herpdigest.org/> newsletter Volume # 13 Issue # 64 12/27/13**

NOT JUST KOCH BROTHERS: NEW STUDY REVEALS FUNDERS BEHIND CLIMATE CHANGE DENIAL EFFORT (extracts)

A new study conducted by Drexel University environmental sociologist Robert J. Brulle, PhD, exposes the organizational underpinnings and funding behind the powerful climate change countermovement.....The data also indicates that Koch Industries and ExxonMobil, two of the largest supporters of climate science denial, have recently pulled back from publicly funding countermovement organizations. Coinciding with the decline in traceable funding, the amount of funding given to countermovement organizations through third party pass-through foundations like Donors Trust and Donors Capital, whose funders cannot be traced, has risen dramatically. The final sample for analysis consisted of 140 foundations making 5,299 grants totaling \$558 million to 91 organizations from 2003 to 2010. The data shows that these 91 organizations have an annual income of just over \$900 million..... "The real issue here is one of democracy. Robert J. Brulle. Institutionalizing delay: foundation funding and the creation of U.S. climate change counter-movement organizations. Climatic Change, 2013; DOI: [10.1007/s10584-013-1018-7](https://doi.org/10.1007/s10584-013-1018-7) <http://www.sciencedaily.com> Herpdigest 20 Dec. 2013



FATS volunteers G&G Bell Frog Survey 12/2013 Photo Phillip Grimm

FATS undertook the Bell Frog auditory surveys at Sydney Olympic Park in November and December.

Find the word With compliments Queensland Frog Society www.qldfrogs.asn.au

G	H	S	E	B	H	J	S	B	N	L	O	P	L	F	A	X	Z	C	C	V	B	N	J	H	Y	U	
F	E	E	M	O	P	U	T	D	S	D	N	M	O	I	A	U	S	R	E	L	I	A	U	A	O	L	
R	F	D	N	T	T	M	E	F	E	B	C	A	N	E	T	O	A	D	A	E	A	L	K	M	Q	I	K
O	A	B	G	G	A	I	V	H	D	V	U	D	A	S	S	O	U	L	D	E	R	O	P	E	I	J	
F	B	O	U	L	D	E	R	J	G	E	K	S	H	T	K	J	R	E	B	V	U	O	O	D	K	H	
D	E	W	R	G	P	I	B	L	B	F	H	D	G	G	R	E	F	I	W	Q	A	F	L	V	F	R	
E	W	T	E	A	O	Q	J	N	H	R	D	G	A	H	E	R	A	G	A	Q	J	K	L	B	S	D	
S	A	Y	W	R	L	P	K	O	F	R	O	G	P	C	E	F	A	G	H	C	T	J	W	B	A	N	
V	D	Q	U	E	E	N	S	L	A	N	D	O	O	R	K	B	A	Q	Z	R	H	A	M	G	C	A	
B	X	Q	O	D	P	M	N	Q	I	E	E	P	L	E	C	Y	K	L	E	B	L	A	N	R	V	T	
G	S	A	H	E	L	A	G	R	O	K	Q	O	C	E	A	A	U	S	T	R	A	L	I	A	U	T	
A	V	Z	E	N	M	F	S	A	K	S	O	D	K	N	L	E	A	S	D	F	F	D	J	O	R		
Q	B	O	E	H	Y	U	O	P	R	A	F	L	E	B	D	D	T	R	A	A	H	J	H	J	I	A	
Q	B	O	P	P	R	S	B	I	O	D	I	V	E	R	S	I	T	Y	Q	U	E	E	E	H	E	S	
A	L	C	A	M	P	D	E	P	R	S	E	J	O	N	P	R	E	J	E	N	U	T	L	P	A	S	
D	B	I	I	O	V	E	S	D	E	R	T	N	L	K	D	E	Q	V	C	S	G	H	B	N	L	W	

- | | | |
|------------|-----------|--------------|
| FROG | LITORIA | GARDEN |
| TADPOLE | CAMP | CANETOAD |
| NATRASS | JUMP | CREEK |
| QUEENSLAND | AUSTRALIA | BIODIVERSITY |
| DESERT | BOULDER | |



Photo George Madani *Litoria phyllochroa* Leaf Green Stream Frog



Der Froschkönig

oder
Der eiserne Heinhild.



In den alten Zeiten, vor dem
Winfen noch geflossen
hat, lebte ein König, dessen
Züchter waren alle schön,
aber die jüngste war so
schön, daß die Sonne
selber, die doch so schön
glänzt hat, sich verwun-
derte so oft sie ihr im
Gesicht sah. Also bei
des Königs des Königs
lag ein großer dunkler
Wald, und in dem Walde
war ein alter Zauber
aus einer alten Zinde
war ein Baum; wenn
man den Tag sehr heiß
war, so ging das Königs-
kind hinaus in den Wald
und spielte sich an den
Rand des tiefen Brun-
nens; und wenn sie dort
war, so sah sie ein
goldenes Kästchen, worin
sie in die Erde und fing
sie wieder; und das war
ihre liebste Spielerei.
Dies Kind es sah ein-
mal an, daß die goldene
Kugel der Königs-
mutter in der Handen hat,
das sie in die Erde ge-
halten hätte, sondern vor-
bei auf die Erde stieg
und gerade in die Höhe

Frog fables and images from the
past above and below Forwarded to
FATS by Jillie Streit



HERPDIGEST

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on the Latest News on Herpetological Conservation,
Husbandry and Science

SALAMANDERS HELP PREDICT HEALTH OF FOREST ECOSYSTEMS, INFORM FOREST MANAGEMENT (extracts)

Researchers have determined that salamander population size reflects forest habitat quality and can predict how ecosystems recover from forest logging activity. They believe these findings can be translated to other species within forest ecosystems throughout the world.

Woodland salamanders are small, lungless amphibians that live in moist, forest habitats throughout the U.S. and the world. Salamanders often serve as vital links in forest food chains; their population size and recovery from major disturbances can help predict the health of forest ecosystems. Now, researchers at the University of Missouri have determined that salamander population size reflects forest habitat quality and can predict how ecosystems recover from forest logging activity. MU researchers believe these findings can be translated to other species within forest ecosystems throughout the world.....

Semlitsch and fellow researcher, Grant Connette, a graduate student in the Division of Biological Sciences, chose to study a forest area in the southern Appalachian Mountains that has the highest diversity of salamanders in the world. Although seldom seen in the daytime, these animals breathe using their wet skin and forage at night. The researchers conducted surveys of terrestrial salamanders, which don't rely on water or streams, to examine patterns of their abundance relative to timber harvest and species movement behaviour. They discovered that forests logged more than 100 years ago may still be affecting salamanders today.....

Roughly half of all forest area in the United States is on public land, where modern forest management increasingly uses alternatives to clear-cutting. These techniques include limiting the size of logged areas and maintaining large areas of forest at highly mature stages, which may prove less disruptive to wildlife than clear-cutting. Semlitsch hopes to help find the balance between the economics of using natural resources and conservation and hopes to share this information with forest managers so they can make informed decisions about conservation and biodiversity.

Their research, "Life history as a predictor of salamander recovery rate from timber harvest in southern Appalachian forests, U.S.A." was published in Conservation Biology. **The above story is based on materials provided by University of Missouri-Columbia. Note: Materials may be edited for content and length. Journal Reference: GRANT M. CONNETTE, RAYMOND D. SEMLITSCH. Life History as a Predictor of Salamander Recovery Rate from Timber Harvest in Southern Appalachian Forests, U.S.A. Conservation Biology, 2013; 27 (6): 1399 DOI: 10.1111/cobi.12113 22 Jan. 2014, University of Missouri-Columbia**

A NEW TOAD FROM THE 'WARM VALLEYS' OF PERUVIAN ANDES (extracts)

A new species of toad was discovered hiding in the leaf litter of the Peruvian Yungas. The word is used widely by the locals to describe ecoregion of montane rainforests, and translates as "warm valley" in English. The new species *Rhinella yunga* was baptized after its habitat preference.

The study was published in the open access journal ZooKeys. Like many other toads of the family Bufonidae the new species *Rhinella yunga* has a cryptic body coloration resembling the decaying leaves in the forest floor ("dead-leaf pattern"), which is in combination with expanded cranial crests and bony protrusions cleverly securing perfect camouflage.

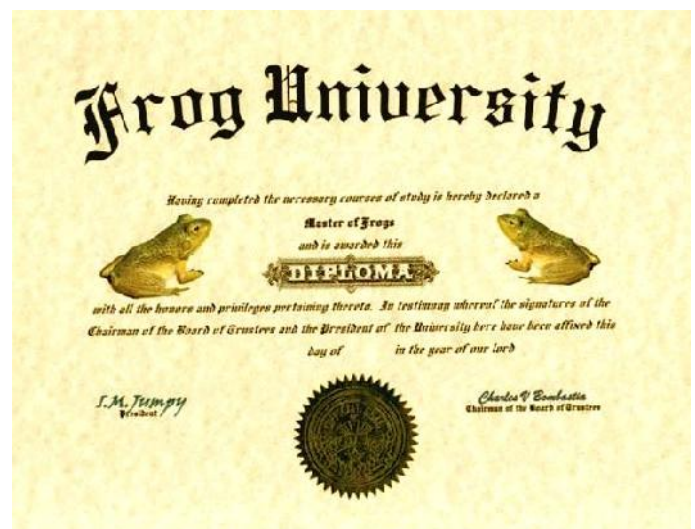
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Journal Reference: Jiri Moravec, Edgar Lehr, Juan Carlos Cusi, Jesus Cordova, Vaclav Gvozdik. A new species of the *Rhinella margaritifera* species group (Anura, Bufonidae) from the montane forest of the Selva Central, Peru. ZooKeys, 2014; 371: 35 DOI: 10.3897/zookeys.371.6580 17 Jan 2014



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**THE WATAGANS FIELD TRIP 7 DECEMBER, 2013
LEADERS: BRAD AND MATT MCCAFFERY**

Photos below and right by Murray Lord



Giant Barred Frogs *Mixophyes iteratus*



Not surprisingly, Matt picked up several snakes along the roadway, necessitating quite a few emergency stops for our vehicles – everyone being very pleased to jump out and squeeze in a few photo opportunities. We were able to add a few interesting geckoes to our haul for the night.

Once again the Watagans proved a good frogging location. Thanks to Murray Lord for the fabulous photos and Brad, Matt and Kim for organising a great night out. **R.W.**

We called into several sites, and despite some fairly dry conditions, Brad and Matt managed to get a good haul of frogs. At Boarding House Dam, we spent quite some time and were treated to some really interesting species. Amongst the highlights were some Giant Barred Frogs *Mixophyes iteratus* (above), while Brad found a nice Blue Mountains Tree Frog *Litoria citropa* nicely perched on the dam wall.

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 and practical, free meetings each year. Visitors are welcome. We are actively involved in monitoring frog populations, other field studies; 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.



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FIELD TRIPS

Blue Mountains Tree Frog *Litoria citropa*



Watagans FATS Field trip 7 Dec 2013
Lead by Brad and Matt McCaffery
Photos above and right by Murray Lord

***P*lease 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.**

21st – 23rd February Smiths Lake Camp-out

Leaders: Arthur and Karen White

Historically, when a plant or animal was first discovered and collected, it was sent off to the authorities, usually the museum or herbarium, and the specimen was formally “described”. It was then preserved and stored with accompanying notes (usually the date and location of collection and by whom it was collected). This became known as the *Type specimen* (technically, the “*Holotype*” but is generally abbreviated and simply referred to as the “*Type*”). This became a very important reference point for future researchers. Today, many scientific articles will refer to the *Type* or the *Type locality* (i.e the place where it was found). There will also be frequent references to a species being “described” It is important for all biology students to understand and be familiar with these terms. This weekend, Arthur and Karen will be on hand to explain the importance of, and protocols accompanying, *Type specimens*. They will also discuss why museum collections are not merely antiquated items of curiosity but in fact serve a crucial research role. Arthur has formally described a new species of frog and is perfectly placed to discuss the often torturous path of introducing a new species to science. Cabin/dormitory accommodation and camping sites available. Hot showers. All kitchen facilities / utensils / crockery supplied. There is a **non-refundable** fee of \$15.00 p.p. per night. Phone Arthur and Karen White on 9599-1161 for bookings and further details. Limit of thirty people.

This concludes the fieldtrips for the Spring / Summer season – Fieldtrips re-commence in September 2014

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.

Giant Barred Frog *Mixophyes iteratus* Watagans



CANCELLED January Kariong Field Trip

Due to the lack of recent rain and the subsequent drying out of water-bodies around Kariong, this fieldtrip was cancelled. Marion has however, kindly agreed to run this fieldtrip for us next season!

Identifying tadpoles can be a very useful method of determining frog populations and is an activity that can be carried out in the more comfortable daylight hours. Today, Marion will guide us through the sometimes tricky task of identifying tadpoles. Marion will also help us become more comfortable using identification keys. This is a unique opportunity to gain important fieldwork skills. For everyone from beginner to professional field biologist.