

FROG CALL



NEWSLETTER No. 84
August 2006

THE FROG AND TADPOLE STUDY GROUP OF NSW INC

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The FATS Annual General Meeting commences at 7pm Friday 4th August 2006.

The AGM will include a presentation of brief reports and the election of office-bearers.

Nominations will be accepted on the night. The meeting will also feature guest speakers as usual.

Brad and Matt McCaffery's dad and Wendy Grimm at Centennial Park



*You are invited to our next FATS meeting
at 6.30 pm for a 7.00 pm start*

Friday 4th August 2006

*Follow signs to Building 22, Jamieson Street,
off Holker Street, Sydney Olympic Park*



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MEETING FORMAT for 4th August 2006

- 6.45 pm A small number of lost frogs need homes are ready to collect from the Frog Rescue Service. Please bring your FATS membership card & Amphibian Licence.
- 7.00 pm Welcome, AGM and announcements
- 7.30 pm Main Speaker: Dave Hunter, Threatened Species Officer Environment Protection & Regulation Division Department of Environment & Conservation (NSW)
The declining frogs of Kosciuszko National Park:
Recovery efforts to save our alpine frog fauna
- 8.15pm 5 Favourite Slides. Anyone wishing to speak about their recent frogging trips or experiences is most welcome to tell all. If you have slides or other images, bring them along as well.
- 9.15pm Drawing of door prize, guessing competition, light refreshments and pleasant conversation

FATS MEETING 2 JUNE 2006

Arthur White welcomed first timers and regular attendees. There's nothing too peculiar about FATS people. We like frogs, have webbed toes and many of our members are absolute novices about amphibians. We meet to answer and discuss frog related issues. If we don't know the answers as a collective, we will try to find out.

Arthur spoke about Life as a Wallum Froglet. These little teeny tiny frogs, that no-one wants to talk about, measure about 20mm, are cryptic, mud coloured frogs that like to hide in mud. You can hear them but don't always see them. They are listed as a threatened species in Queensland and NSW and only occur within 2 k of the coast. These tiny frogs are easily confused with others because of their patterning variations and this has resulted in areas where Wallum Froglet occur being lost to development because the species was not recognised.

They were first described as the Tinkling Frog, near railway stations, going *Crick Crick Crick* and thought to be a variation of *Crinia signifera*. Not much was done about them but their little known biology is very different.

Wallum Froglets sometimes have a pale white belly line that extends from their belly to their jaw, however research is difficult because they can be difficult to identify in the field. They range is from Fraser Island to Kurnell. They are winter breeders in the South and summer breeders in the North.

In 1975 they were only known between Frazer Island and Tweed Heads but by 1995 they had been found in places like Kurnell, Myall Lakes and Wyong. We are not sure what their south distribution limit is. Who wants to go out in the middle of winter in the rain looking for evasive Wallum Froglets? As a consequence this animal has been completely overlooked.

Michael Mahony investigated genetic differences between the Northern (summer-breeding) and southern (winter-breeding) populations and found relatively little genetic difference. They are currently regarded as one species, however it's a species which may be on the point of separating into a Northern and Southern species ie speciating. Evolution on our doorstep! A detailed habitat analysis of the Kurnell study sites and site in Myall Lakes National Park using discriminant function statistics, has identified significant habitat components and will allow better identification of Wallum Froglet habitat areas. Similarly, a study of the dispersal movements of these small frogs has found that they can travel 100 metres or more away from water, and forage in nearby forested areas. Other variations in behaviour between Wallum Froglets and other related *Crinia* species were discussed. Lots of questions remain unanswered.

Elvira Lanham gave a short presentation on some unusual *Pseudophryne* individuals found in the Southern Highlands of NSW, near Robertson. These frogs were found in marshy, low-lying areas consistent with the habitat requirements of *Pseudophryne bibronii*, however their markings were a mixture of *P. australis* and *P. bibronii* and their call more like *P. australis*.

Pseudophryne is a genus of frogs that is susceptible to hybridisation for the following reasons:

- 1 They are small frogs that do not move great distances
- 2 They have relatively undifferentiated mating calls
- 3 Some evidence suggests females may not hear well (Pengilley) (although this is controversial)
- 4 Numerous studies show hybrid zones for many *Pseudophryne* species where population ranges abut or overlap (eg Woodruff 1978; Dennington 1990 etc).

Hybrids of *P. australis* and *P. bibronii* have been recorded in the past in other areas of the Greater Sydney region, but the majority of these hybrid zones appear to have been lost. The frogs found during this trip are currently at the museum having their DNA analysed to see if in fact they are hybrids or just very strange *P. bibronii*! **References**

DENNINGTON, S., 1990. An analysis of a zone of hybridization between *Pseudophryne dendyi* and *P. semimarmorata* (Anura: Leptodactylidae); an investigation of relationships among species of *Pseudophryne* from south-eastern and south-western Australia. M.Sc., University of Melbourne.

Woodruff 1978 Post mating reproductive isolation in *Pseudophryne* and the Evolutionary Significance of Hybrid Zones. Science 203(1). 561-563.

Many thanks to Elvira Lanham for the fascinating presentation and for the information provided for the newsletter.

Harry described and presented his invention for heating reptile and amphibian enclosures. A PVC pipe is fitted with an aquarium heater, filled with water and sealed.

Marion Anstis has received a grant from the Australian Biological Resources Study, a branch of Environment Australia

The grant provides \$16,000 for 2006-07 and an additional \$10,000 for 2007-08 (depending on government funds being available), to assist Marion in vehicle running costs and accommodation expenses during her long trip around various parts of Australia studying Australian tadpoles and frogs for her next book. Without help such as this, Marion has had to cover all expenses herself. One trip can involve over 15,000 km and expenses have been mounting up.

Angus MacDougall, born 5/7/2006 is pictured below catching up on a nap before putting on his gum boots to go frogging. Congratulations to Valerie and Alistair, on the birth of our newest FATS member.



WHERE THE FROGMOBILE GOES

Here is a list of the upcoming Frogmobile Engagements for which we have bookings so far:

Ku-Ring-Gai Wildflower Gardens for Wildflower Festival, Mona Vale Road, Sat. 26.8. and Su. 27. 8.

Baulkham Hills Council, Sustainability Fair, Sat. 14.10.

Centennial Park, Duck Pond, Su. 5.11. (Frogweek).

These are all-day events, but if you would like to come and help and join in the fun, even for a few hours, that would be great. At this stage, we don't have any helpers yet for any of these dates. Please contact me on lothar@exemail.com.au, 9371 9129, or the Frogwatch Helpline 0419 249 728. **Lothar Voigt**

FROGBITS AND TADPIECES

Where the Frogmobile went:

21.5. Centennial Park, over 1000 visitors but with Grant's and Brad's great help we handled them all.

20.-22.6. Warringah Council, World Environment, workshops for schools, with Merinda, David and Rohan.

22.6. Channel 10 Totally Wild filmed the Frogmobile.

24.6. Warringah Council community day, still rainy and squishy, but very busy. Great entertainment laid on.

Brad & Matt minding the table - photo Lothar Voigt



16.7. Centennial Park again, with Wendy, Phillip, Brad and Matt and dog Bindy. About 500 came to look.

Where the Cane Toad went: On 24.5., Channel 9 wanted to lay on a treat for State of Origin and for Kerry-Ann Kennerly at the same time. They stood her in behind of a table-top football field, flanked by cheerleaders, apprehensively gazing down an immobile Cane Toad and a good handful of lively cockroaches. The spell broke when Bufo took a flying leap at her and disappeared under the table. So did she.

Never seen a frog – photo Lothar Voigt



Learning his ABCs – photo Lothar Voigt

Much enthusiasm, including for frogs, at a rekindled Waterwatch workshop on 23.5. at Boronia Park.

At the June meeting of ANGFA, an intermittent flooding system was demonstrated. For them, it was meant as a tidal gizmo for their mangrove tanks. For us, it could be used for sporadically swishing the dead insects out. I will plague you with details if there's any interest. (BTW, ANGFA is of course the Australia New Guinea Fishes Association. They meet in the Australian Museum every first Tuesday evening of the month, and they also like frogs. More at www.angfa-nsw.org and for their great aquatic survey database <http://db.angfa.org.au> .)

The Rosebery Green and Golden Bell Frog project has so far been a success. The frogs have bred and produced baby frogs, and there will hopefully be more in spring. More about it next time, and also about Stage 2.

Some kind soul donated a good portion of mealworms for the Frogmobile frogs. They went like sliced bread. Paul Vogt dropped a decent size home-made frog cage in, nicely done in wood and glass, donated for our next auction. Someone else left three mixed tree frogs at the local vet, cage and all, and all going well soon out of quarantine. Another donor had five Green Tree Frogs for us, apparently long-term captives. A great many thanks to all.

And a big thanks to all the frog fetchers, carting those bereft, homeless frogs around. **L.V.**



NEW FROGS, OLD FROGS...

There have been a number of name changes and new additions to the Australian frog fauna over the past 12 years. To help you get up to date, here is a summary of these changes, and a list of references for the papers describing them, in case you want to know more.

1. 1994. In their review of selected frogs of north-east NSW forests, Michael Mahony and Ross Knowles referred to the future recognition of three new species of *Mixophyes*

that occur in far north Queensland, and have been identified on the basis of genetic work. These large rainforest frogs are now closer to being formally named, so we will let you know when it happens....

2. 1997. A new large tree frog, found beside faster-flowing sections of rainforest streams in the Melville Range far north Queensland, was described by Keith McDonald. The common name is the Cape Melville Tree Frog, and the scientific name is *Litoria andirrmalin*, (from the Barrow Point aboriginal language). It is a large frog (females to 110 mm) and is similar in general shape to the Green Tree Frog, *L. caerulea*, but is mottled brown with cream markings and a pale dorsolateral stripe.

3. 1999. The *Litoria citropa* (Blue Mountains Tree Frog) group of frogs was put under the genetic spotlight by Donnellan et al., resulting in the resurrection of two older names, one of which is now in use, and the other may be in the future. The frogs in question are *Litoria phyllochroa* (Leaf Green Frog) and *L. pearsoniana* (Pearson's Tree Frog), each of which have had their taxonomic past and DNA investigated. The result is that *L. phyllochroa* has become two species which are separated by distribution, DNA and call. The true *L. phyllochroa* now resides along the coast and ranges from far northern NSW south to Sydney, and its close cousin *L. nudidigitus* (so named by Copland in 1962) extends from the south of Sydney to Victoria.

L. barringtonensis (an older name used by Copland in 1957 for a green frog similar to *L. phyllochroa* first found in the Barrington Tops region of NSW), has been resurrected and may be eventually replace the name *L. pearsoniana* once further investigation is carried out on the *L. phyllochroa* complex as a whole.

4. 2001. Once again the *Litoria citropa* group of frogs becomes the centre of interest through the ongoing work of Michael Mahony and his team. This time *Litoria subglandulosa* (Glandular Frog), originally the closest relative of the Blue Mountains Tree Frog, was split into two species on the basis of distribution and DNA. The new species was named *Litoria daviesae* after Margaret Davies, a frog taxonomist, and because it was named after a woman, the name ends in 'ae', not 'i', proving that sexism still exists in the world of science! The revised

distribution for these frogs is: *L. subglandulosa*, tablelands above 400m from south-eastern Queensland south to near Walcha; *L. daviesae*, eastern tablelands from the Hastings River in the north to just north of the Hunter River in the south. Apart from *L. subglandulosa* being slightly smaller in both adult frog and tadpole, the two frogs are very similar in appearance, but while *L. subglandulosa* usually has more green than pale golden brown over the dorsum and sides, *L. daviesae* more often has less green. However, *L. daviesae* can be found all green like *L. subglandulosa*, and just to make it more difficult, individuals of both populations can change colour, flashing more or less green! Confused? The call sounds the same for both, but awaits proper analysis.

5. 2004. A busy year... We have two new species of *Phyloria* (Sphagnum frog group) from northern NSW. The team of four scientists was led by Ross Knowles and Michael Mahony, and after tickling the DNA of various frogs from different populations they erected two new species (based on genetic studies, morphology and call analyses). The first is *Phyloria pughii*, known from seven localities in the Gibraltar Range and other northern forests, and the second *P. richmondensis*, from three locations in the Richmond Range and Yabba National Parks. The frogs are quite similar and individually somewhat variable in colour, but can be separated by genetic differences and the calls.

6. 2004. *Litoria lesueuri* (Lesueur's Frog) takes the prize for being the most schizophrenic, by being split into three species! The original distribution of *L. lesueuri* extended from Victoria right up to south of Cooktown in far north Queensland, so this frog has long been on the hit list for revision. Now it has two new close relatives largely separated by distribution, genetic results, leg colour and even habitat preference: *L. wilcoxii* (resurrected from the original description by Günther in 1864) and *L. jungguy*. *L. jungguy* occurs only in far northern Queensland and is restricted to rainforest streams in the wet tropics. *L. wilcoxii* mostly appears to generally prefer streams in sclerophyll forests and partly comes into contact with *L. jungguy* in the Barron River drainage system and Mitchell River headwaters in north Queensland, then extends south to the Hawkesbury-Nepean river system in NSW. *L. lesueuri* extends from the Hawkesbury-Nepean River System in NSW, south to north-west of Melbourne in Victoria. There are differences in the colour of the spots on the black background over the posterior surfaces of the thighs: *L. jungguy* has white or cream spots, *L. wilcoxii* has small white, cream or even green spots and *L. lesueuri* has blue spots. Size varies: *L. lesueuri* males to 40 mm, females to 53 mm; *L. wilcoxii* males to 48 mm, females to 69 mm and *L. jungguy* males to 48 mm, females to 71 mm.

7. 2005. A new species of *Uperoleia* from south-east of Darwin, NT has been described by Jeanne Young and Michael Tyler. It was initially recognized by subtle differences in its call, as being different from *U. inundata* and *U. lithomoda*, two other species which are found with *U. daviesae* in floodplains during the wet season. It is small and mostly grey above with a slight purplish

tint and numerous small tubercles and defined blotches over the back.

There are more species being described as I write, and even more in the pipeline when major genetic revisions of the hylids and myobatrachids have been completed.

We will keep you informed! **Marion Anstis**

References (you can find these in the Australian Museum Library)

Donnellan, S. C. and M. J. Mahony, 2004. Allozyme, chromosomal and morphological variability in the *Litoria lesueuri* species group (Anura: Hylidae), including a description of a new species. *Australian Journal of Zoology*, 2004, 52, 1-28.

Donnellan, S. C., K. McGuigan, R. Knowles, M. Mahony and C. Moritz, 1999. Genetic evidence for species boundaries in frogs of the *Litoria citropa* species-group (Anura: Hylidae). *Australian Journal of Zoology*, 1999, 47, 275-293.

Knowles, R., M. Mahony, J. Armstrong and S. Donnellan, 2004. Systematics of Sphagnum Frogs of the genus *Phyloria* (Anura: Myobatrachidae) in Eastern Australia, with the description of two new species. *Records of the Australian Museum* 56(1): 57-74.

Mahony, M. J. and Knowles, R., 1994. A taxonomic review of selected frogs of north-east NSW forests, *North East Forests Biodiversity Study Report No. 3g*, unpublished report, NSW National Parks and Wildlife.

Mahony, M., R. Knowles, R. Foster and S. Donnellan, 2001. Systematics of the *Litoria citropa* (Anura: Hylidae) complex in northern New South Wales and Southern Queensland, Australia, with the description of a new species. *Records of the Australian Museum*, 53: 37-48.

McDonald, K. R., 1997. A new stream-dwelling *Litoria* from the Melville Range, Queensland, Australia. *Memoirs of the Queensland Museum*, 42(1): 307-309.

Young, J. E. and M. J. Tyler, 2005. Diminutive new species of *Uperoleia* Grey (Anura: Myobatrachidae) from the vicinity of Darwin, Northern Territory, Australia. *Journal of Herpetology*, 39(4), 603-609.

The ADI RAG

Lobbied Jackie Kelly in the lead up to the 2004 Election for funding to assist in protecting the ADI Sites conservation values. She agreed that there should be adequate protection for the flora and fauna spared from development and committed to provide \$1.1 million for a feral/vermin proof fence around the Regional Park.

Little did we know that at the same time the NPWS was organising their own fence around the Regional Park. Their fence appears to be linked to the Macro Fauna Management Plan and is being funded by Delfin Lend Lease. It appears this fence is primarily for the purpose of keeping the Kangaroos out of the Regional Park. So this explains why they rejected Jackie Kelly's \$1.1 million offer. The little info we have about the NPWS fence is that construction is underway on part of the site and it is very much a vermin proof style fence with a floppy top and can flex (absorb an impact) if hit by a Kangaroo. I doubt very much if this fence will be a permanent fixture considering the Macrofauna Plan only has a limited life (finished once the Kangaroo numbers have been cut to nothing).

NPWS ridiculed the vermin proof fence in 2004 claiming it would block wildlife movements across the site. They even used Koalas as an example of an affected species yet earlier that year they were arguing that there were no Koalas in this area.

The story below from the Western Weekender (30/6/06) adds to all this confusion by concluding with a statement by Alan Shearan, the ALP State Member for Londonderry, that the NSW Government now supports the construction of the fence. So now we have duelling fences. This reads as if the State has jumped on board with Jackie Kelly but it is more a case that Alan Shearan is only now announcing the NPWS fence that has been a secret for several years. They are even flogging our original suggestions that proper feral proof fencing enables the reintroduction of some fauna species to the site.

We do need to find out from the NSW Government exactly what is going on with this fence. If you are up to it please write or phone Alan Shearan or The Hon Robert J Debus, Minister for the Environment, Parliament House, Sydney 2000

If this fence has nothing to do with Jackie Kelly's \$1.1 million then we need to get the Feds to spend that money on another conservation initiative in Western Sydney. **Regards, Geoff Brown Convenor ADI RAG** cwmalis@aapt.net.au
<http://www.adisite.org/>

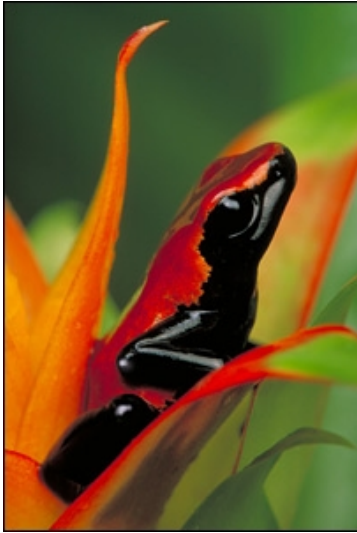
FATS meetings commence at 7 pm and end about 10pm, on the first Friday of every EVEN month (February, April, June, August, October and December), at Building 22, RANAD, Jamieson Street, Sydney Olympic Park, (SOP) Homebush Bay. We hold six informative, informal, topical and practical meetings each year. Please check this Frogcall for further FATS meeting information. Visitors are welcome. We are actively involved in monitoring frog populations and 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 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 source must be fully acknowledged. Always confirm date and location of the next meeting.

A big thank you to the many FATS and committee members, especially Lothar Voigt, Robert Wall and Andrew and David Nelson for the articles, assistance in producing Frogcall, membership and envelope preparation.

CLARION CALL TO SAVE AMPHIBIANS

First true amphibians evolved about 250m years ago Adapted to many different aquatic and terrestrial habitats Present today on every continent except Antarctica Undergo metamorphosis, from larvae to adults

Hundreds of amphibian species will become extinct unless a global action plan is put into practice very soon, conservationists warn.



A third of amphibians are now judged to be at risk of extinction

Campaigners are forming an Amphibian Survival Alliance, to raise \$400m and carry through a rescue strategy. More than a third of all amphibian species are said to be in peril.

In a policy statement issued in the journal *Science*, researchers blame a number of factors including habitat loss, climate change and disease. "We have a huge crisis but I'm confident we can produce some real results," said Simon Stuart, from Conservation International (CI). "The questions is: how many species will we lose? Are we going to lose hundreds before we can stabilise the situation or are we going to lose just tens," he told the BBC News website. "Time is absolutely crucial, and to beat time we need human recourses and expertise, and finance."



Policy pressure

Dr Stuart led the Global Amphibian Assessment which reported in 2004. It confirmed the scale of the long-suspected collapse in many populations.

There are almost 6,000 known amphibians, a category which includes frogs, toads, salamanders and caecilians (legless amphibians). Of these, nearly 2,000 are now judged to be at risk of extinction. Between nine and 122 species have slipped over the edge to oblivion since 1980, when the assessment said the most dramatic declines began.

The losses are caused by land-use change; commercial overexploitation; invasive species pushing out native amphibians; and a wave of disease. The situation led to a summit last year being called in Washington DC, where a global action plan was agreed.

In this week's edition of the journal *Science*, leading conservationists announce the creation of an Amphibian Survival Alliance which will co-ordinate the initiative - pushing forward research, field programmes, captive breeding and making sure the "global crisis" remains at the forefront of policy-making.



Amphibian 'ark'

The biggest single threat to amphibians at the moment appears to be a fungus, *Batrachochytrium dendrobatidis*; first identified 1998, it is firmly established in parts of the Americas, Australia and Europe. The disease which it causes, chytridiomycosis, kills the animals by damaging their sensitive skins, blocking the passage of air and moisture.



Hundreds of amphibian species will become extinct unless a global action plan is put into practice very soon, conservationists warn. (Image: Glass tree frog - R.D.Holt)

In some instances where the spread of this disease was rampant, conservationists would have little choice but to take an "ark" approach", said Dr Stuart. "The only option we have is to take the most vulnerable species out of the wild and put them in captive holding stations and breed them. It's being done in Panama and Colombia. Some of the rarest species are being plucked out before they go," he explained.

The new alliance will be led by an international secretariat of the Amphibian Specialist Group of the Species Survival Commission of the World Conservation Union, also known as the IUCN.

An initial five-year budget of \$400m (£220m) is needed. Longer term, much more will be required. "It is achievable; it can be done," said Dr Stuart, the senior director of CI's biodiversity assessment unit. "Some of the money, of course, overlaps with action that needs to take place anyway for biodiversity more broadly, with the focus on conserving key habitats in the wild. Not all of the funds have to be raised under the amphibian name." Forwarded to FATS by Andrew Nelson, BBC news article 7/7/2006

IT'S FIELD-TRIPS TIME !

It's nearly Spring & our froglife is beginning to shake off the winter blues. This can mean only one thing – our field-trips programme is ready to spring into action! As most of our long-term members would know, we conduct a Spring-Summer programme every year for all members.

We try to schedule a varied programme of events that will introduce members to our native froglife. We try to make our field-trips fun & interesting while appealing to all ages & levels of experience. Our field-trips are safe & well-supervised, & are led by some of the most knowledgeable people in Sydney.

We spread our fieldtrips across the Greater Sydney region & always try to include at least a couple of weekend camp-outs. We particularly encourage new members & all those who have not previously been on any field-trips.

Wild populations of frogs are an important focus of FATS activities & we urge all members to experience frogs in the wild. We need to stress however, that bookings are essential for all fieldtrips. We place limits on numbers (in the interest of frogs & personal safety) so fieldtrips tend to fill quickly. We have a first-in, first-served policy. Starting with this issue, each newsletter will contain information on upcoming events & booking procedure. For additional information please contact the Fieldtrips Co-ordinator.

Robert Wall on behalf of the FATS committee



Frogs are welcome here

Build a pond and you could soon have frogs at the bottom of the garden.

YOUR mission, should you accept it, is to make a frog-attracting pond in your garden. This may not be as difficult as you think, with a little help from the Australian Institute of Horticulture, Bunnings and your local aquarium.

It is wise to check with your council first to find out requirements. If the pond is more than 300mm deep you will require a pool fence and if it is really large you will need council permission.

However, a small pond is all that is needed to attract frogs.

Most species worldwide are becoming threatened as the natural environment is reduced.

I headed to Bunnings to gather the supplies to create a frog-friendly environment.

The pond needs a partly shaded spot. Australian Institute of Horticulture NSW president Marc Worner says attracting a choir of frogs into the garden is easy.

"You may already have some frogs in your yard," he says. "If you go out just after dusk with a torch you may see small eyes reflecting back at you. Some favourite hiding spots include any water's edge, damp ground, under rocks, hollow logs."

Mr Worner says floating plants should be avoided as they deplete the pond of oxygen and light, which affects the algae the tadpoles feed on. "Goldfish and other exotic species love to eat tadpoles for dinner. Instead, populate your pond with small native fish such as the rainbow and blue eyes."

Dig a hole for the pond and place sand in it. To ensure it is laid evenly use a spirit level. Place the pond on the sand and backfill with soil, ensuring there are no gaps. I put the plants in next and then the water, which had to be treated so the fish could be introduced to their new home.

After a couple of days I realised the pond was getting too much sun. So I returned to Bunnings and bought an inexpensive garden arch, some brush fencing and a bag of ready-mix cement. I dug four holes, filled them with the cement mix and put the feet of the arch in the cement.

The next day the brush fencing was attached to the arch with tie wire.

The result is pleasing and I'm looking forward to finding frogs.

Details: Marc Worner at news@aih.org.au or phone 9654 0809

If you have a DIY story you would like to share please contact Pauline Priest at 9689 5174 or email priestp@cumberlandnews.com.au

Home style, Pauline Priest
Inner Western Weekly 22 June 2006
EXTRACTS

Dr Nancy Cushing and I are academics from the University of Newcastle and are currently conducting research into the history of the Australian Reptile Park which, it is hoped, will be published as a scholarly, yet accessible book in 2008, the 50th anniversary of the ARP since beginning at Wyoming at the end of 1958.

Robyn and John Weigel are very supportive of our research and have generously provided us with lots of assistance and encouragement, and the project is being independently undertaken by Nancy and I as university researchers.

If you feel you might be able to contribute to our research, we'd love to hear from you. Please feel free to contact me off-list or at kevin.markwell@newcastle.edu.au

This research project has been approved by the University of Newcastle's Human Research Committee, H-094-0805. Thanks very much Dr Kevin Markwell Senior Lecturer, School of Economics, Politics and Tourism, University of Newcastle, 2308.

'EXTINCT' FROG COMES BACK TO LIFE



Scientists have sighted a spectacular South American frog which had been feared extinct for a decade. The painted frog is found only in a small remote region of Colombia, and the last sighting dates back to 1995.

Conservationists believed it had gone extinct, principally due to a fungal disease, chytridiomycosis, which has caused enormous harm to many species. The team behind the rediscovery say it gives hope that other amphibians may be able to survive fungal attack.

Chytridiomycosis is the main reason behind the worldwide decline in amphibians, which sees about one third of all species threatened with extinction.

Unexpected discovery

The painted frog *Atelopus ebenoides marinkellei* is believed to exist only in the Boyacá region of Colombia.

It belongs to a family which includes a number of species known as harlequin frogs.



The internationally-recognised Red List of Threatened Species says of the painted frog that it "...has not been recorded since 1995, despite attempts to locate it. "It appears to have declined seriously, and has possibly disappeared."

Now, however, it has re-appeared, spotted in early May by Professor Carlos Rocha and a team of researchers from

the Pedagogical and Technological University of Colombia (UPTC) in Boyacá. "The scientific importance of the finding must motivate us to adopt urgent measures toward saving the last of these amphibians, both in the wild and through captive breeding programmes," said Fabio Arjona, executive director of Conservation International in Colombia, which supported Professor Rocha's expedition. "That will require a lot of support from the local and international communities."

Local resistance



Amphibians are one of the most threatened groups of organisms in the world. Their skins easily absorb pollutants, the habitats of many are being squeezed by human expansion, and some species are hunted.

But the single biggest threat is chytridiomycosis, a frequently fatal disease caused by the *Batrachochytrium dendrobatidis* fungus.

The Andes provides a graphic illustration of how devastating it can be. In this "hotspot" of amphibian diversity which includes parts of Colombia, Ecuador, Peru and Venezuela, 42 of the 113 species of *Atelopus* have experienced population declines of up to 50%.

Last year a coalition of conservation groups adopted the Amphibian Conservation Action Plan, a global project aimed at stemming species loss.

So severe was the situation, they concluded, that some species could not be conserved in the wild; the only option would be to rear them in captivity, despite the huge expense which that would entail.

But the painted frog's rediscovery, according to Conservation International, gives reason to hope that some other species which had apparently succumbed to chytridiomycosis may still be clinging to a precarious existence, and perhaps even developing resistance to the fungus

<http://news.bbc.co.uk/2/hi/science/nature/4998074.stm>

Richard Black Environment Correspondent, BBC News website
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Forwarded to FATS by David Nelson

FAQ – *Frogs and their Environment*

The questions below are from FATS workshops for school students but may also be of interest to anyone still somewhat new to frogs. People who ring the Frogwatch Helpline (0419 249 728) usually have very specific questions at the time, but then often express surprise when they realise they had some misconceptions.
L.V.

Frogs of the Sydney area	Can you name a ground frog and a tree frog of Sydney?	Of the 26 frog species in the Sydney region, the most common one is the Striped Marsh Frog, followed by the Common Eastern Froglet. Both are ground frogs. Our most common tree frogs are Peron’s (or Emerald-spotted) Tree Frog and the Eastern Dwarf Tree Frog. See the Frog Gallery (www.fats.org.au/frogs/frogs/index.html) and read “Frogs of the Sydney Region”, www.fats.org.au/publications/pdfs/FF706.pdf .
Frog Rescue!	How do tropical frogs get into Sydney? Can they cause a problem?	Read the “Frog Rescue” article, www.fats.org.au/activities/rescue.html .
Some oddball frogs	Name an “odd” frog and what’s unusual about it.	There are plenty to choose from, including here in New South Wales. Hip-pocket Frogs lay their eggs on land; the female guards them but when they hatch the tadpoles wriggle deep into the male’s skin pouches, where they stay until they are baby frogs. There are quite a number of other rainforest frogs where the tadpoles develop on land, in some cases still inside the egg, so that they hatch as a fully formed baby frog. Then there are frogs that throw their eggs out of streams onto land, where they are safe from fish. And with many, very little is known about their life cycle. See “Rainforest Frogs”, www.fats.org.au/publications/pdfs/FF406.pdf .
From egg to tadpole to frog	<p>What’s external fertilisation?</p> <p>What happens during metamorphosis?</p> <p>What happens afterwards?</p>	<p>Female frogs lay unfertilised eggs, which then immediately get fertilised by the male – who has to be around at the time. While she gets ready to spawn and while she is laying her eggs, he sits on top of her and holds on. They are said to be “amplecting”, and the process is called “amplexus”.</p> <p>Metamorphosis is the process of changing from one life stage to another quite different one. Tadpoles metamorphose into baby frogs. (Note that insect larvae metamorphose straight into adult insects.) The in-between stage that still has a tail but where the legs have started coming through is called a metamorph. Frog (including toad) tadpoles grow their hind legs first, then the arms – different from newts and salamanders. The arms form inside the body and then pop out: the left arm pushes out through the “spiracle” (the tadpole’s no-longer-needed breathing-out hole, always on the left side in Australian species); the right arm breaks out elbow first through the skin, which immediately heals up.</p> <p>After that, the tail shrinks away – it does NOT fall off. During that week or so, in most species the metamorph will not eat. Also, its mouthparts, its skin and its digestive and breathing systems undergo great changes. In all our over 80 New South Wales species, the frog will then live on land for most of its life, and it will take between around six months and four years to become an adult.</p>

<p>Frogs as pets</p>	<p>Where would you get a frog?</p> <p>Where would you keep it?</p> <p>What does it eat?</p>	<p>You can't take a wild one home; they are protected. For the same reason, you can't buy a frog in a shop in New South Wales. But you can get an Amphibian Keeper's Licence (www.nationalparks.nsw.gov.au/npws.nsf/Content/Frog+keepers+licence) and then get a frog legally from the FATS Group if you are a FATS member (www.fats.org.au/about/membership.html).</p> <p>You will find information on keeping frogs under www.fats.org.au/frogs/captive.html, and also regularly in our newsletters <i>FrogCall</i> and in <i>FrogFacts</i> No. 1, 6 and 8 (www.fats.org.au/publications/frogfacts.html).</p> <p>If you have a pond and want garden frogs, they will come and go by themselves, and no licence is needed for those. See "Keeping Frogs in Your Garden", www.fats.org.au/publications/pdfs/FF206.pdf.</p>
<p>How to go looking for frogs</p>	<p>What's "earballing"?</p> <p>What's triangulation?</p> <p>What's eyeshine?</p>	<p>Adopt a wetland or a forest pond, simply by going there often and each time checking for frogs. Especially go there after a good rain and after dark, and listen out for them. Each species sounds different. Keep a record. Even if you can't yet tell which species you heard, write down how many different kinds. You can even do this quickly from the parked car, without getting your shoes muddy, before moving on to your next study site. That is "earballing". Why can this be important and what can you learn from it? Find out when you join the next FATS field trip!</p> <p>If you want to see which frog call comes from which species, you may need to find the calling frog. After dark, if two people shine a torch at where the sound comes from, your frog can be found where the two beams intersect. It's called triangulation. Find out how to do this properly when you join the next FATS field trip.</p> <p>Females don't call, and males don't call all the time. And most of the time they are motionless and hard to find. But their eyes reflect your torchlight, and if you hold the torch close to your own eyes, then the frog will reflect the light straight back to you. At the next FATS field trip, learn how to tell frogs' eyes from spider eyes and dew drops that also reflect back.</p>
<p>Different frog habitats</p>	<p>Why do most frog species prefer still water to streams?</p> <p>How do some desert frogs get their moisture?</p>	<p>Because tadpoles are usually safer from fish in ponds, puddles and other shallow still water bodies, most frog species avoid spawning in streams or living around flowing water.</p> <p>Desert frogs of many different kinds escape the hot and dry conditions by digging down to where it's cooler and a bit moister. Water-holding Frogs also encapsulate themselves in layers of their old outer skin, and they can store large amounts of water in their bladder.</p>
<p>Frogs as environmental indicators</p>	<p>Why are frogs sensitive to pollution?</p> <p>How can you tell when frogs have gone missing?</p>	<p>Pollutants can easily get into them: Their eggs are not protected by any hard shell; tadpoles have thin permeable skin and are subjected to water pollution; as frogs they are also exposed to pollutants on land. In addition, they have a complex life cycle where many things can go wrong if interfered with by toxic chemicals.</p> <p>If a known frog habitat has fallen silent, although the climate conditions are right for a frog chorus (see "earballing"), then it is worth checking further for hidden frogs (see "eyeshine") and for any dead or sick-looking</p>

	What makes taddies grow poorly?	ones. If you think you have found a problem, ring the Frogwatch Helpline on 0419 249 728. They don't grow well in water that is polluted, including polluted with their own waste products. They also grow poorly if overcrowded – a rule of thumb is at least one litre of water for each large tadpole. In some species, large individuals appear to inhibit the growth of smaller ones. And it appears that certain species can slow down or prevent the growth of others. To grow well, tadpoles like some warmth, good food, good water, enough space and no stresses.
Frog species that are disappearing	Name an endangered frog species. Name some of the threats to frogs. Are all frog species in trouble?	In the Sydney region, The Green and Golden Bell Frog, the Red-crowned Toadlet and the Giant Burrowing Frog are classified as either threatened or endangered. A critically endangered species is the Corroboree Frog. See the frog gallery in www.fats.org.au/frogs/frogs/index.html . The Amphibian Chytrid Fungus, feral fish, land use by humans, water use by humans, habitat fragmentation, water pollution, pesticides in the food chain, climate change, other suspected and unknown factors. A few species, such as the Striped Marsh Frog, are doing extremely well, especially around urban areas. This may give the impression that frogs in general are still abundant.



Getting ready for in-house broadcast – photo Lothar Voigt

SEXY SMELLS MAY HELP TRAP TOADS

Bottling up cane toads' sexual odours is the latest left-field idea to trap the noxious pest. The new research builds on a discovery that the pheromones excreted by a native male frog attracts female frogs at large. Dr Mike Tyler from the University of Adelaide says they are hoping cane toad smells will have a similar pulling power.

"If it's an attractant we would be able to attract perhaps females in such numbers, that instead of having to go around and pick up one here and one there, we might be able to attract them together," he said. "It's a bit of a gamble, I admit it, but it's something that hasn't been tried and we're just keeping our fingers crossed that we'll have some luck." <http://www.abc.net.au/news/newsitems/200605/s1644217.htm>
Forwarded on to FATS by Steve Weir



Counting the 10 Green Tree Frogs - photo Lothar Voigt

GREAT AUSTRALIAN BUSHWALK

Sunday 10 September 2006 Try bushwalking Australia! Choose from 110+ diverse walks – all over Australia – with Australia's leading bushwalking organizations. The Great Australian Bushwalk is the premier nation-wide public bushwalking event.

www.greataustralianbushwalk.org.au
Contact: Chris Waugh, National Coordinator
Phone: 0401 900 371 or 02 9299 0000
Email: info@greataustralianbushwalk.org.au
Post: PO Box A96, Sydney South, NSW 1235

FIELD TRIPS

Please book your place on field-trips; due to strong demand, numbers are limited (phone 9681-5308). Be sure to leave a contact number. Regardless of prevailing weather conditions, we will continue to schedule & advertise all monthly field-trips as planned. It is YOUR responsibility to re-confirm, in the final days, whether the field-trip is proceeding or has been cancelled. Phone Robert on ph. 9681-5308.

September 30 – October 1. Smiths Lake Camp-Out. Leaders : Arthur & Karen White.

An ecotone is a transitional zone between two types of communities e.g. a rainforest & a woodland or a woodland & a grassland. Ecotones typically are very rich in faunal species since species unique to each community tend to 'overlap' at these fringes or margins. This weekend we will look at some of the different types of ecotones that occur around the Smiths Lake site. With our focus on frogs, we will look at the rich legacy of wildlife to be found in these important zones. Arthur & Karen have studied this site in detail for many years & have gained an intimate understanding of the reptile & amphibian biology of this area. Cabin/dormitory accommodation & camping sites available. All kitchen facilities/utensils/crockery supplied. A **non-refundable** nightly fee of \$12 p.p. per night applies. Bookings only accepted with payment. Phone Arthur & Karen directly on ph. 9599-1161 for bookings & further details. Note: Limit of thirty people.

October 21. 1-00p.m. Darkes Forest. Leader : Marion Anstis.

Take the Princess Hwy south, then take the Darkes Forest Rd turn-off. Meet 200 metres from the corner. The award-winning & ground-breaking book, 'Tadpoles of S.E. Australia' needs no introduction to frog lovers. We are fortunate today to have the very gifted talents of Marion Anstis. Identifying tadpoles can be a very useful method of determining frog populations & can be carried out in the more comfortable daylight hours. Today, we go in search of taddies & Marion will guide us through the sometimes difficult task of identifying tadpoles. This is a unique opportunity to gain important & useful fieldwork skills. For everyone from beginner to professional field biologist ! Please note the afternoon start time.

***** DON'T FORGET** our specialist research field trips with Graham Pyke & The Australian Museum. Ideal for all students & serious enthusiasts. Locations at Long Reef, North Avoca & Broughton Island. Contact the Field Trips Co-ordinator for further details.

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 field trips are strictly for members only - newcomers are however, welcome to take out membership before the commencement of the field-trip. All participants accept that there is some inherent risk associated with outdoor fieldtrips & by attending agree to; a release of all claims, a waiver of liability, & an assumption of risk.

FROGWATCH HELPLINE 0419 249 728

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INSURANCE DISCLAIMER FATS has public liability insurance for its various public functions. FATS members should be aware that this insurance does not cover FATS members (it covers the public & indemnifies FATS). We are currently checking with insurance firms to see whether a realistic group policy can be organised to cover FATS volunteers and people who attend field trips.

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