

FROG CALL



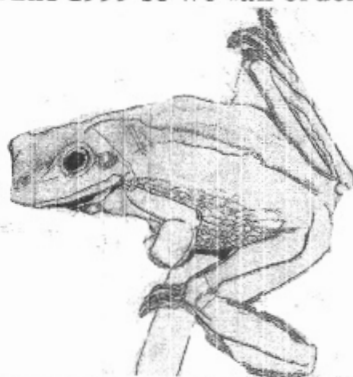
THE FROG AND TADPOLE
STUDY GROUP OF NSW INC.

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Sydney South NSW 1235

INTERNET HOMEPAGE http://members.xoom.com/frog_group

THE NEXT MEETING: 6.30 PM, FRIDAY **11th June 1999** for a
7.00 pm start at the AUSTRALIAN MUSEUM (WILLIAM ST ENTRANCE)

FATS Membership renewals are due by 1st June 1999.
Members requiring Herpetofauna must have paid their membership
by 1st June 1999 so we can order the correct number of journals.



FATS AGM 7.00PM 11th June
Nominations for a Field Trip Co-ordinator
urgently required

White Lipped Tree Frog, with compliments Richard Kean 98



MEETING FORMAT for 11th June 1999

- | | |
|--------|--|
| 7:00pm | FATS Annual General Meeting |
| 7:30pm | Guest speaker:
Ron Haering from the NPWS
"Frog Conservation and the NSW NPWS." |
| 8:15pm | 5 favourite frog slides <u>or</u> 5 minutes |
| 8:40pm | Guessing competition and Auction |
| 9:00pm | Finish for tea, coffee & biscuits |



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Arthur White opened the meeting and welcomed those in attendance including Mary-Anne Jolly from "Today on Saturday" and the channel 9 TV crew. The theatre was packed with people and at this rate we may have to turn people away so please take into account the traffic and parking difficulties and start your trip early if coming by car.

Arthur thanked all the volunteers who put in their time at the Easter Show especially thanking Lothar for all the lead up work, setting up, dismantling, creating the great presentation and long hours keeping live frogs and exhibition looking good. Landcare generously offered us space this year, for all 16 days, inside the dome, near the main entry, at the Easter Show, Homebush

The high rainfall has meant that frogs are turning up in places where they were not previously recorded. Local Councils will need to identify which areas need preservation. Arthur reminded us that

MOVING FROGS AROUND IS A NO NO.

Why shouldn't you move frogs from one place to another?

1. Disease: at present there are three fungal diseases prevalent amongst frogs. If you move frogs to new areas you may merely be killing a previously uninfected population.
2. Competition for food and shelter: if you release frogs into new areas they will have to compete with frogs that are already there. Frogs are going to die of starvation, exposure or through shock.
3. Genetic weakening: frogs in an area have genes that make them well suited to that area. By bringing in frogs from other areas, the genetic mix that is created in subsequent young could result in inferior frog stock.

Arthur reported on the Chytrid Disease in Western Australia, which was first reported in September 1998. It is believed to have entered the state by infected banana frogs and in transported potatoes. The initial infection was detected in *Litoria moorei* the Western Bell Frog. Three populations of *L. moorei* near Perth have crashed. By March 99, the disease has been found in Albury, Busselton, Bunbury and Esperance. WA Museum and WA Frogwatch are now collecting sick frogs. In New South Wales sick frogs should be reported to FATS.

The development of the M5 motorway, at Arncliffe, will destroy a marsh containing Green and Golden Bell frogs. The Roads and Traffic Authority has asked for a brief of what is required to provide an alternate site for the frogs.

Robert Browne announced the creation of the Society of Frogs and Reptiles. The first meeting will take place on 28th May 1999 at the Shortlands Wetland Centre. Our lucky "guessing competition" winner was Kieth Muir with ticket 98C He selected a Frog Calls of NSW CD. Several consolation prizes of a beautiful frog calendar. were also won. Congratulations to all. The meeting finished with much excitement as frogs now out of quarantine were transferred to our members. Thanks to Arthur White for

his notes on the issues above. MW

Lothar Voigt, our guest speaker: HOW TO KEEP FROGS IN AND AROUND YOUR HOUSE



Apart from having frogs in your trailer, there are many good places where you can put them or where they decide to make their homes to keep you company.

Quite sensibly for once, I started my talk at the April meeting by asking how many in the audience had a frog pond. About 100 hands flew up, out of the 135 or 140 people present! The others, it turned out, were nearly all toying with the idea, and presumably waiting for time, space or landlords to permit their dream.

Frog ponds were briefly skimmed over; one or two questions answered, more answers questioned, a few experiences swapped. There was another TV crew (definitely not the ones from Channel 9 who kept us company throughout the meeting night!) that had dug the worst frog pond anybody could set out to construct, they got eleven things wrong and practically nothing right. When it goes on air, I hope they'll explain how not to do it. But then there was also, with slides of Mark Avery jumping right smack bulls-eye in to prove it, the most glorious inner suburbs backyard pond I have ever seen.

Frogs that come unbidden are a source of constant fascination for people ringing the Frogwatch Helpline and often a source of sheer panic! Frogs in the loo, frogs looking at you from the toilet cistern, a whole row of Emerald-spotted Tree Frogs each in its self-watering flower pot and all following you with their eyes. After the Cane Toad headlines two months ago, sightings came in of massive "loads" on the window pane three floors up. Hitchcock, you missed a thriller!

And then there are the frogs we keep confined with us, the unreleasables. A few slides of big fancy cages, a few opinions swapped, and off went the discussion on the one topic of riveting interest: The banana box frogs and how long is the Frog Rescue Service's waiting list and am I going to get my frog tonight. It was I who was rescued by sturdy arms dragging me away. Not to save me, as I learned later ("we only save real frogs"), but because of a small mistake I had made at the beginning. I really had meant to get my wristwatch out so I wouldn't run over, not the calendar. L.V.

With compliments Ben and Wendy Harmer
Editor: our copy doesn't do justice to the photo of their pond





THE FROGMOBILE TRAILER

Osram gives the green light. The news had just broken in time for the April meeting. Klaus Engelhardt, Osram Australia's M.D., made the announcement to a packed Theatre: The FATS Group is going to get a Frogmobile trailer.

Funding will flow from Osram via Landcare into our trailer, and our trailer we will take with us, frogs and all, wherever we go: future Frogweeks, Easter Shows, environmental fairs, media appointments at their local swamps, the lot. Landcare have convinced us that the FATS Group's green credentials should be associated with Osram's new green product a new type of energy-saving light bulb. So welcome aboard, Sponsor, looks like we're riding together.

And what the Frogmobile is going to look like, well, at the meeting I gesticulated a lot in the dark and flapped about and impersonated a windmill. In other words, it's going to be awesome! L.V.



FROG PEEPS, PIPES, QUACKS AND TRILLS

I love hearing about your Australian frogs - it's so different from here. We do have frog call tapes available here in the U.S., but most of the people I know don't need to use them because we have far fewer species than you do, and there are rarely more than two or three species calling at once.

In the very early spring (usually February, but sometimes earlier if we have a warm spell) we have spring peepers (*Pseudacris* - formerly *Hyla crucifer*) and wood frogs (*Rana sylvatica*) calling. They both breed in woodland ponds, but the peepers - obviously - peep, and the wood frogs make a loud quacking sound very much like a duck. The peepers' calls carry a long way and sound like bells jingling when heard from far off. Around the time those species are beginning to wind down, the chorus frogs can be heard - they make a peeping or piping sound also, not as loud as the peepers. Many people here recognize the peepers' calls instantly, since they're one of the first signs of spring.

Later in spring, we have gray treefrogs (*Hyla versicolor*/*Hyla crysoscelis*), which trill. A bit later the toads breed; the American toads (*B. americanus*) trill also, and Fowler's toads make a sound 'like the bleat of a sheep with a cold - at least they do according to my field guide; I've never heard them. There are several species that breed all summer, like the cricket frogs (*Acris crepitans*), which make a clicking sound, or the bullfrogs - those can be heard around most lakes, ponds and rivers, and the beep bellowing call doesn't sound like anything else. There are several other species here in Indiana, but those are the only ones I'm familiar with the calls of.

Because of the large numbers of deformed frogs that have been found in recent years, including some here in Indiana, there is a lot more attention being paid to our frogs than there once was. I was reading that they have learned that surveys of frog calls were as accurate in determining the size of populations as actual counts, though. A large chorus of peepers is pretty deafening up close - I can't imagine how you could count the individual frogs' calls! Angela
Indiana

Many thanks, Angela, for all the frog peeps, pipes, quacks and trills your American frogs make.. -

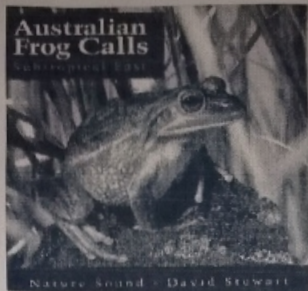
In NSW we have 21 species that are listed as threatened, plus another 5 we are keeping a worried eye on. Three of all these are now feared extinct. One of them was until 25 years ago about as common as the Passenger Pigeon must have been; but then we did things like introducing *Gambusia* (The Plague Minnow. That was the New England Bell Frog. (And why shouldn't we have a New England as well? Our convict settlers were probably just as homesick as your Pilgrim Fathers. One great wit said that from these beginnings we ended up as the larrikins we are today, and you ended up with Kenneth Starr.) Queensland is worse. Let's not go into who they were founded by, but they have 7 frog species feared extinct, and another 7 on skid row. Lothar Voigt

Mark Avery's pond

Frog Calls of the
Greater Sydney
Basin



\$25 and \$15



FATS AND FROGS AND EASTER SHOW

We did it! We all did it – 43 Frog Explainers we had, forty-three of FATSes' finest. And we had thousands of visitors looking at our frogs and posters. And we had the entire 16 Show days there, and just about the best site at the Showground: the first stand when you get into the Dome, which is the first building as you get into the Show.

Our mission was a threefold one – firstly, to let people know about frogs and their habitats and about what they can do to let frogs feel at home in their gardens. Judging from the public's response and enthusiasm and their many requests for more info, I think we did alright there. Secondly, we thought we might perhaps pick up a few more members at the Show. We picked up 95! And thirdly, seeing that Landcare gave us all that space, it became our frogs' job to sluice people into the rest of the Landcare exhibits for the wider conservational picture. That too worked well: the froggies turned out to be excellent sluicers; all good working-frogs that earned their keep.

From left to right, and in order of appearance, our heroes were:

1. A tankful of Striped Marsh Frogs, together with taddies of different species and some friendly mozzie-eating fish, to show people what's easily attainable in their back gardens.
2. A large Cane Toad that was picked up in Sydney. It shared it's tank with young Long-necked Turtles that were still too small to eat it but too big to get eaten.
3. A gang of large Green Tree Frogs and White-lipped Tree Frogs. As always, people ooh'd and aah'd and called them "cool" and "cute", only seconds after they said disgusting things about the Cane Toad. The set-up was a jungle one, complete with rainbow fish.

The other heroes were the Frog Explainers. Sometimes on their own but usually paired up and thrown in at the deep end together. Their job was selling Frog Kits and posters, smiling into prams, taking memberships, handing out Frogfacts, stopping kids from climbing right in with the frogs, and answering questions, always concerned questions by a concerned public. Luckily for our newest volunteers, the questions kept repeating themselves, and soon they felt on safe ground and on top of it all. (If you've never done it, ring 9371 9129 to get on the list. Better than a holiday.)



Lothar Voigt and Frog Explainer at the Easter Show



At the Easter Show, our Frog Explainers and FATS Group helpers were (and again in order of first appearance):

Arthur White	Karen White
Wendy Grimm	Tony Mouradian
Joan Young	Monica Wangmann
Kathrine Wangmann	Bennett Wangmann
Margaret Nicol	Andrew Lo
Noelene Hutchinson	Adrian Mong
Ray Assender	Laurcn Asscnder
Laurenne O'Brien	Suc Ryan
Danny Wotherspoon	Mark Avery
Claudia Hayes	Nerida Hayes
Rosemary Hadaway	Lisa Papworth
Ineke Prochazka	Russ Berry
Bronwyn Ault	Susan Ault
Alex Clouston	Helen Clouston
Herman Ivanorr	Joseph Dimech
Adam Crawford	David Munro
Elisabeth Pidd	Julia Shoulder
Danie Ondinea	Punia Jeffery
Sophie Croft	Denise Croft
Will Introna	Robert Browne
Anne Peaston	Anthony Nicholson

A double thanks to all those who stood in as volunteers repeatedly, to Arthur who helped me see the whole thing up and take it back home again, to Elisabeth who was the rostering focal point and had a heck of a job, and to Monica in her capacity as the good general angel around. Anthony Stimson this year again let us use his Exhibitor's Licence which saved us big money (try \$1000 a year!).

Our gratitude to Landcare who have now for the second year given us Easter Show space, and in particular to Jenny Quealy who did a great job organising it. Land and Water Conservation footed the bill for the space, and for most of our Showground tickets, and they had the invaluable Miriam Arndt on the spot. Thanks, Miriam and Jenny, also for looking after the frogs and our displays and for taking messages whenever FATS had a gap. All those lovely tickets – 25 of them got pinched on the train before we could send them out. When I finally got them back (they were still in the already sealed envelopes in the bag when it was turned in), it was well after the Show. In the meantime, the RAS made up for them and let us in anyway, and our thanks for this go to Angela Sciacca. By next year, we should have the Frogmobile ready ... L.V.



LATEST FROGGY HAPPENINGS

In a case people did not know, the giant barred frog (*Mixophyes iteratus*) and fleays barred frog (*M. fleayi*) have now been moved to onto Schedule 1 of the Threatened Species Conservation Act and so have been upgraded to Endangered and not just Vulnerable and Rare. This change was done after consultation with various experts and is a result of the well documented serious declines of both of the species within their known ranges.

On the research front, I now have two giant burrowing frogs being tracked in the Eden area and another three in the area to the west of Gosford. All of these frogs have been doing interesting things. All of the frogs were collected away from streams or gully lines and have continued to ignore such areas. They have moved around quite a bit, but have remained within a relatively limited area. Perhaps they have a home range which would be highly unusual for a frog. This is supported by the fact that a couple of the frogs have been returning to one spot several times. It looks as though they may have favourite sites.

The giant barred frogs have offered a very different picture. They have studiously remained close by to larger permanent streams (within 20m). It's not that they don't like moving around as they often will move 40-50m in a night, but they just keep heading backwards and forwards along the stream. They also like to jump over logs and shrubs almost as often as they go under them, even if they have plenty of room to do so. During the day, instead of hiding under leaf litter, many frogs choose to remain in a relatively open position with only some vegetation to obscure them from above. However, even being "obvious" is a misnomer because their superb camouflage makes them almost impossible to see even when you are staring straight at them.

Frank Lemckert

Turning on with toads a turn-off

EXTRACT

KEVIN MEADE

A WARNING issued by Queensland police has rekindled a debate that has reared its ugly head countless times since the late 1960s — do people really get high on cane toads or is it just an urban myth?

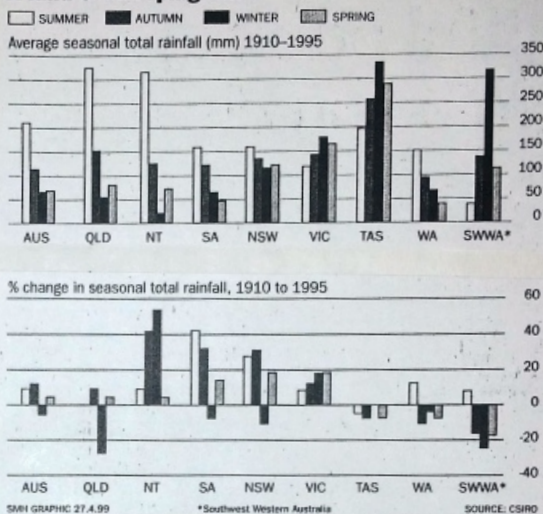
anyone experimenting with cane toads as a drug risked death or serious illness.



Got to admit it's getting wetter

Grace Nicholas

A land of sweeping rains



SMITHS LAKE FIELD TRIP FEB 99

Barbra and Tad Bohdanowicz, David and Beryl Jenkinson, Susanah Power, Rainer Enke, Karen White, Bronwen, John, Melaine and Lewis Ciddor, Sherce, Bob, Shifra and Mimi Waks, Monica and Katherine Wangmann.

A FROG'S FATE Christina Rossetti 1830-1894

Contemptuous of his home beyond
The village and the village pond,
A large-souled Frog who spurned each byeway
Hopped along the imperial highway.

Nor grunting pig nor barking dog
Could disconcert so great a Frog.
The morning dew was lingering yet,
His sides so cool, his tongue so wet:
The night-dew, when the night should come,
A travelled Frog would send him home.

Not so, alas! The wayside grass
Sees him no more: not so, alas!
A broad-wheeled waggon unawares
Ran him down, his joys, his cares,
From dying choke one feeble croak
The Frog's perpetual silence broke: '
Ye buoyant Frogs, ye great and small,
Even I am mortal after all!
My road to fame turns out a wry way,
I perish on the hideous highway;
Oh for my familiar byeway!'

The croaking Frog sobbed and was gone;
The Waggoner strode whistling on,
Unconscious of the carnage done,
Whistling that Waggoner strode on -
Whistling (it may have happened so)
'A froggy would a-woooing go.'
A hypothetical frog trolled he,
Obtuse to reality.

This and other beautiful poems are to be found in "Little Book of Frogs" Weidenfeld & Nicholson 1996 London - an inexpensive treasure for your bookshelf



EIGHT FROGS BY CHARLES ALEXANDRE LESUEUR IN TERRE NAPOLEON

TERRE NAPOLEON EXHIBITION

We have been to the Terre Napoleon exhibition at the Museum of Sydney today. There is the original Lesueur painting of frogs, including the *Litoria lesueuri* (I think, the paintings are beautiful, rather than accurate). It's a great exhibition, about the French flora and fauna collections around 1800 - 1805. Lesueur and Peron (as of *Lit/Lim. peronii*) were on the ships captained by Baudin. The collections were much more substantial than the English ones, but only didn't get the fame they deserved, and the dreadful voyage, which included wrecks and scurvy. By the time they got back to France, the fame of the voyage was rather gilded. Only on until the 30th of May. **Karen Thumm**

With compliments Matthew Kemplay-Hill
Penrith Press 9 2 99

By Lea Blakesley

Froglets jump at chance to survive

THE magnificent broodfrog — found nowhere else in the world apart from a small area near Ravenshoe — has been given a second chance at life.

Currently listed as vulnerable to extinction, the frog, which has a distinctive reddish brown zone on its head and back, is at the centre of a Department of Environment and Heritage monitoring project to protect it from extinction.



ON the nose: Adam Barney displays the little known magnificent broodfrog from Ravenshoe. Picture: Sue Wellwood

Cairns Post 6 2 99
with compliments Barbara Harvey

Twenty froglets, which were bred in captivity from eggs collected from a site where the frog has been found, were released yesterday into a small creek outside Ravenshoe.

Tableland Frog Club publicity officer Neville Simpson said the project began in an attempt to find out more about the life cycle of the magnificent broodfrog, of which very little was known.

The frog has been found in the Millettsoom Falls National Park, and on the southwestern outskirts of Ravenshoe. Its distribution is limited to about 20sq km near Ravenshoe, although authorities believe it could be found elsewhere in the region.

Mr Simpson said the release of the froglets was fairly significant.

"Hopefully the release will add to the frog's long-term viability," he said.

"This is provided that things like its habitat are not lost and that there's a conservation management strategy put in place to make sure they don't become extinct."

The magnificent broodfrog, which prefers moist locations but has also been found near ponds and permanent watercourses, is commonly found in seepage areas in grassy open eucalypt forests and woodlands.

Mr Simpson said the frog club would support the conservation strategy with things like field trips to try and find a wider distribution of the species.

Frog defies the odds



by JILEA CARNEY

A SURPRISE colony of endangered frogs has been found alive and well, living near a degraded, polluted industrial site in the Blue Mountains.

Five members of a colony of Red Crowned Toadlets have been positively identified in the Deaneai Reserve at Springwood.

The discovery could force Blue Mountains Council to devise a management strategy for the area to protect the frogs.

Red Crowned Toadlets are found in only three Sydney suburbs, they are constantly under pressure from urban development and habitat loss.

They have also been identified in Blaxland on land which belonged to Blue Mountains Councilor Ralph Williams and which was subdivided for development.

A campaign to prevent development was waged over the toadlet population in Blaxland.

The Deaneai Reserve population was discovered by a National Trust contractor doing bushland regeneration on the reserve.

Mike Purtell from the Deaneai Landcare Group said the discovery would now be placed in the National Parks and Wildlife Service database and council would be approached for a plan to protect the colony.

A recent frog survey of the Deaneai Reserve found four species — the Blue Striped Marsh Frog, the Small and Large Green Tree Frog and the Common Eastern Frog.

EXTRACT

FROGBITS AND TADPIECES

DEFORMITIES IN *LITORIA PERONII*

I recently had an enquiry from a member of the public who had seen 2 deformed metamorphs of *Litoria peronii* east of Hoskinstown in NSW (just west of the ACT). I know very little about frog deformities and when they should be a cause for concern and so I am relaying the information provided to me with the hope that someone will be able to give me an indication of whether this incident was unusual, whether it is cause for concern, and whether it should be followed up in more detail.

"I was concerned about the mutations happening in a previously very healthy population of the tree frog *Litoria peroni* in a high altitude pristine area of old growth state forest. The other day we caught 3 transition froglets. Others were observed swimming away down into the weeds. No others were inspected 2 out of these had development problems of their front legs, although healthy, once adults would not be able to move about or hunt etc. One frog had a well developed front leg, the other leg was under developed similar to the affects of "thalidomide" on human children. the other had both front legs underdeveloped..." David Ferguson

Any information welcome Marjo Rauhala Wildlife Ecologist Wildlife Research and Monitoring Environment ACT marjo_rauhala@dpa.act.gov.au
SUCCESSFUL RESCUE MISSION

A central coast backyard children's paddling pool is holding about 100 green and golden bell frog tadpoles after a successful rescue mission. National Parks and Wildlife Service rangers and staff from the Australian Reptile Park saved about 100 tadpoles from a nearby lagoon that was opened to the sea. The Avoca lagoon's opening was part of an essential flood prevention measure. The tadpoles were almost lost when Avoca Lagoon emptied to the sea leaving the tadpoles high and dry. When the tadpoles turn into frogs, they will be re-released into the lagoon. State Environment Minister at the time, Pam Allan said the rescue was vital to the frog's future. Recent green and golden bell frog population counts in the lagoon suggest that about 200 adult frogs currently live in the area, making the rescue of these tadpoles of this endangered frog extremely important to their survival. A night noise survey suggests another colony of green and golden bell frogs may exist in the lagoon. With compliments Carl Spears

CANE TOADS USED IN CANCER RESEARCH

When I was surveying cane toads in FNQ back in 1993, I came across a former farmer who was hoping to farm cane toads for use in the pharmaceutical industry. Mention was also made of the use of their parotid secretions in cancer research. Does anyone know if such research is indeed underway, for cancer or any other illness, and whom I may contact to find out more info? Many thanks.
Dr Paul Olding BBC
Tomorrow's World paul.olding@bbc.co.uk

RED-CROWNED TOADLET

One of the world's rarest frogs, the red-crowned toadlet, has such short legs that it walks rather than hops. Gladsville MP, John Watkins, the frog's friend, who only just won his seat on the Green's preferences, announced the expansion of the Lane Cove National Park. The expansion includes a 5-kilometre protection zone for the frog. The addition to the park, which in the main is for the protection of the red-crowned toadlet, covers 12 hectares. The State Government's Threatened Species Conservation Act lists the frog as endangered. The frog is found only three Sydney suburbs. The frog, which grows to only three centimetres long, is found in sandstone ridges where housing development is highly sought.

With compliments Carl Spears

MIX UP?

One of our members, rang to tell me the newspaper report in our last Frogcall 'Frog digs in...' had a picture of a Giant Barred Frog, not a Stuttering Frog. The Stuttering Frog *Mixophyes balbus* can be distinguished from the Great Barred Frog, *Mixophyes fasciolatus* as it (*M balbus*) has no spots on its sides and its upper lip has dark markings. Comments anyone?, Carl Spears

FROGFACTS 6 TO 8

Are close to completion and will be included in future Frogcall newsletters. Some changes to FrogFacts 2 are being made:- Local Councils require ponds deeper than 30cm to be fenced, Striped Marsh Frogs are so prevalent what about the others ie ponds off the ground for tree frogs and a tadpole friendly *Rhadinocentris ornatus* Soft spinned rainbow fish for ponds. MW

200 SPECIES OF FROGS IN SRI LANKA

On Friday 7th May 8pm, Radio National telecast Asia Pacific with Peter Mares. Studies find more frog species in Sri Lanka than previously thought. A five-year study in Sri Lanka has found the island to be a frog paradise -- that its frog species are nearly four times the number previously thought. This is despite jungle conditions thought to be less than pristine. Over 200 species of frogs live Sri Lankan rainforests, surpassing even Costa Rica... once thought to have the most frog species in the world. Sen Lam reports. MW

FROG RESCUE PROGRAM

A waiting list for frogs is available at each FATS meeting. Just add your name and the type of frog you would like to the list. All those waiting for frogs should be satisfied over the next few months. At present not many frogs are at the markets but it is expected that the numbers increase in Autumn. Bring donation money (between \$25 and \$5, depending on the frog size) and licence number with you. The "donation" is to cover to cost of running the rescue program. These rescued frogs are intercepted at the markets and hopefully will help stop the spread of frog diseases entering Sydney. MW

NORTH. QLD THREATENED FROG RECOVERY TEAM

Meeting Minutes: Atherton, February 1999.

Agenda items discussed: Integrated Planning Act
An overview of the Queensland Integrated Planning Act was presented to Team members. In particular attendees were interested in how the Act would directly affect frog management especially through the Environmental Protection Act which is strongly linked with the I.P.A.

Pseudophryne covacevichae (Magnificent Brood Frog) State Funded Project The team was informed of the current status of the *Pseudophryne covacevichae* project. The primary focus of the project at this early stage is surveying suitable sites near Ravenshoe for new populations and co-ordinating public extension efforts. A Recovery Plan for this species is due in June. It is hoped that future funding identified in the Recovery Plan will help support an honours or masters student to conduct research on the ecology of the magnificent brood frog. Other issues discussed in relation to the Magnificent Brood Frog included forest management by DNR, land tenure and ecological research needed.

Actions arising from previous minutes Dispersant in the herbicide Roundup The dispersant used in Roundup has been changed to a type that is supposedly non-toxic to frogs. The team is currently trying to find out more information on this new dispersant. Roundup is no longer used on the Tablelands in National Parks nor is it used by DNR forestry in the Far Northern region. It was suggested that the use of herbicides in general is a national issue and should be referred to the National Frog Working Group. A general code of practise for the use of herbicides should be developed at a federal level. A product inquiry from the National Registration Authority on Rotenone was tabled. It is in a variety of products flea powder to cockroach baits and contains toxins which can effect frogs.

Minutes from last 'main' Recovery Team meeting Research at Freshwater Creek It was announced that a student had started research at Freshwater Creek examining frog and tadpole population dynamics on the stream.

UVB and frog declines A researcher from James Cook University presented the findings of his study on UVB. His conclusion was that UVB did not appear to have had a significant effect on frog disappearances as there was no indication that levels had increased during the time of the declines.

Conclusion of the team was that UVB can now be discounted as a cause of frog declines in eastern Queensland and northern New South Wales.

Progress Reports The monitoring is underway and at this stage running to schedule. Thirty two historic sites had been surveyed as well as the two intensive sites and a number of survey sites up until the end of December. Of note was the identification of calling *T. rheophilus* on Mt. Lewis for the first time in a couple of trips. It was suggested that the effort in future monitoring trips should be concentrated on identifying other sites nearby which may have *T. rheophilus*.

It was announced that after consultation with a number of people the experimental methodology has changed slightly to better answer the questions of frog declines. The final draft of the research plan has been submitted to the National Threatened Frogs Working Group for review and constructive comments. Currently enclosures are being built for the translocation experiments and suitable field sites are being checked.

Disease Research Comprehensive information is now available on the Web of the methodology and results so far (<http://www.jcu.edu.au/school/phtm/PHTM/frogs>). The key problem to the study so far has been the lack of historical baseline data available.

Automatic Recorders, Collection Protocol, Redlynch Development Proposal (DP) It was suggested that automatic call recorders should be used on Mt Bellenden Ker and Mt Lewis to monitor *T. rheophilus* populations at these sites as current monitoring trips are not frequent enough. After debate on some of the positives and negatives of this technique to monitor these populations it was decided by team that a preliminary trial will be carried out assess this methodology. A collection protocol for ill and dead frogs for members of the public and other non-scientists is currently in the final stages of completion. A brief overview of a housing development that is currently taking place at Redlynch was presented to the team along with how the developer is now required as part of their EIA to do a frog survey. One of the team will be surveying for *N. dayii* at this site. FROGNET

1999 EASTER SHOW DISPLAY

featuring
Russel Harland
Monica Wangmann
Karen Kennedy
and
Jane Hall

with compliments
Maree Barnes
Department of Land and
Water Conservation



By SIMON BENSON
Environment Reporter

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It was almost a repeat of an incident in 1997 at Taronga Zoo when a worker accidentally flushed thousands of tadpoles planned for the first captive breeding program down a drain.

Now the Avoca population will become the key breeding ground for the embattled frog which first gained notoriety when discovered at the Homebush Olympic site.

National Parks and Wildlife Service ranger Peter Bergman, who was notified by a local resident of the tadpoles' plight, organised a team last Thursday to rescue the amphibians and locate them to a nearby house at North Avoca.

Gosford council, which was



Jump ahead of extinction... green and golden bell fro

Green and golden bell frog

- *Litoria aurea* (scientific name)
- Grows up to 11cm — large for a frog
- Found in only a few locations including Homebush and Avoca Beach
- One of the State's most endangered amphibians
- New Avoca colony of between 150 and 200
- Made famous by discovery at Olympic site
- First listed as endangered in 1974

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3 draining the lagoon for flood mitigation purposes, did not inform the NPWS despite knowing of the colony.

"We went down there and confirmed the lagoon was drying up and there were only a few muddy puddles left, and we decided that the tadpoles would be dead by that afternoon," Mr Bergman said.

"We went in in gumboots and buckets and scooped them up but found that these things were the only things left. All the mosquito fish (gambusia — which predate on tadpoles) were dead.

"It was important because the green and golden bell frogs had their best breeding cycle in five

years. Saving these tadpoles is a significant achievement for the population. And we have spoken to Gosford council and they are co-operative on the issue of draining the lagoon."

The frog held up construction of the Olympic venue at Homebush when a colony was discovered living in an old brick pit at the site.

Construction schedules were changed to protect the frog, which later became the "star" of the Olympic transport commercials.

Environment Minister Pam Allan said the tadpoles now represented the future of one of the State's most important colonies of green and golden bell frog.

Gene pool rescued

The biologist

Peter Coad is a young biologist with a special passion and expertise for water catchment management.

He lives at Chakola Avenue,

Hornsby Heights, where the Landcom bulldozers first arrived. But he is

involved in the broader campaign covering all 18 Landcom

sites, including Widgeview, and is one of four residents' representatives in the mediation process.

"I am 25 and I have my grandfather stories already," said Coad. "I used to play down in those creeks and there were plenty of yabbies then."

He shares a love of bushland with many of the area's residents, and understands the pressures of population growth and changing demographics. "There is pressure to live somewhere, and fewer and fewer people are living in bigger and bigger houses."

Coad also has some praise for a new-look Landcom. "I really believe in the end that Landcom have been the good guys in all this. They had nothing to stop them developing, and every right to go ahead."



Fauna & flora

What may stop Landcom now is a handful of rare and endangered species of plants and animals.

At Widgeview these include small and obscure native flowering shrubs such as *Darwinia biflora* and



Tetratheca glandulosa

Tetratheca glandulosa, beautiful glossy black cockatoos, and the red-crowned toadlet, which lives in sand-

stone fissures in the cliffs below the proposed development area.

The toadlet has been a major headache for would-be developers in Hawkesbury sandstone country since the 1995 introduction of the Threatened Species Conservation Act.

There is also a possible peregrine falcon site at Widgeview.

Many of the 18 Landcom sites are on ridgetops, which have eco-systems different from those in the valleys below. But whereas most of the valleys are protected as parks, most of the ridgetops have already been built over.



Red-crowned toadlet

Growth targets

Department of Urban Affairs and Planning (DUAP) projections require Hornsby council to provide for 10,520 new dwellings between 1996 and 2021, as well as 640 dwellings from new land releases, to cater for an additional 20,800 people.

The council also needs to meet a target of 65 per cent of all new dwelling commencements to be multi-unit housing by 2021 — a target that the ESD study suggests is unachievable if all 600 Landcom lots proceed.

But the council objects to the DUAP's growth projections, fearing that transport and other infrastructure is already close to overload. It wants future population to be judged on the scientifically-assessed "carrying capacity" of its land and waterways.

The ESD study estimates that the 600 Landcom lots would mean at least 600 more cars, 198 more each of dogs and cats, a minimum 8,268 tonnes a year of greenhouse gas emissions, and an extra 10 tonnes of garbage each week.

The local

Debbie McMillan and her extended family of eight live at 39 Evelyn Trg, just off Widgeview, where they have lovely bushland views.

As the manager of a local video shop, McMillan is aware that more development and more people could mean more business.

But she still opposes the Landcom proposals. "You don't want to look over at 20 million houses," she says.

Water pollution is a particular problem for McMillan, but there is also the bushfire danger. Berowra Heights is highly vulnerable to fire and has only one road escape route for 10,000 people.

McMillan is critical of some locals on large blocks who have been pursuing their own subdivisions.

She says most people in the area are vigilant against more development: "Everyone always reads the development applications, so every one knows what is going on."



Debbie McMillan and family

Peter Coad



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Tests show NZ Maud Island frog unique. Wellington researchers have discovered that a species of native frog is even more endangered than first feared and is the world's rarest. The Royal Society of New Zealand said for years it was believed that frogs on Maud and Stephens Islands, Marlborough, were the same species. But genetic testing has revealed that the 10,000 frogs on Maud Island, in Pelorus Sound, are in fact a separate species, a fact previously not known. That means the 300 frogs on Stephens Island, at the Cook Strait end of Marlborough Sounds, are all that remain of the *L. hamiltoni* species.

The research was carried out by Dr Ben Bell and colleagues at Victoria University's School of Biological Sciences. A paper co-authored by Dr Bell, Professor Charles Daugherty and Jennifer Hay has been published in the Journal of the Royal Society of New Zealand. Dr Bell said the discovery meant that the Stephens Island *L. hamiltoni* frog was the world's rarest and it should get the highest level of conservation protection. The population of 300 is confined to a small rockpile near the summit of the island. Meanwhile, the new species has been named *Leiopelma pakeka* after the original name for Maud Island. New Zealand had just three native frog species, distinct from overseas species because they do not develop from tadpoles but grow directly from eggs. The latest genetic discovery adds a fourth to the list.

TOAD VIRUS PLAN SHELVED

The relentless march of the cane toad appears unstoppable following the revelation that a once promising biocontrol virus makes Australian frogs "croak". CSIRO scientists announced today they had ruled out using a family of viruses believed to keep cane toads under control in Venezuela as laboratory tests showed they also killed native frogs. And in a further slur on the unlovable toad's reputation, researchers believe Aussie toads may be carrying the double whammy of a similar home-grown virus with the potential to infect or kill Australian wildlife and a fungus already linked to frog deaths. CSIRO Animal Health researcher Dr Alex Hyatt said researchers became excited when trials showed the overseas viruses could kill the toxic toads. "We then injected the most virulent virus into an Australian frog species, the Green Tree Frog, which died," Dr Hyatt told AAP. "So based upon that, we are not recommending the use of this virus for biocontrol."

A New English-language reference book on the Amphibians of Former Soviet Union appears in January, 1999. The Amphibians of the Former Soviet Union by Sergius Kuzmin Pensoft Publishers, hardcover with dust jacket in color, 544 pages, 44 maps, 49 tables, 119 b/w photos and drawings, 126 color photographs, glossary, subject and systematic index, bibliography. ENGLISH text. Publication date: January 1999.

A fundamental review on all 41 species or 47 subspecies of Amphibia encountered in the territory of the former Soviet Union (FSU). The bulk of these taxa and their habitats are richly illustrated by numerous colour pictures, with only one species and two subspecies remaining depicted in black-and-white as too poorly-known. All distributions are grid-mapped (50x50 km), with simple conoid projection maps being preferred over UTM as better applicable to and more commonly used in the latitudinally extended FSU. Each species or subspecies is supplied with a list of synonyms and a detailed description of the morphology and, partly, karyology as well as of the current geographical range and its limits. Taxonomy of each species occurring in the FSU as well as their subspecific structure and/or geographical variability if any are discussed. Detailed data are presented on their ecology and biology, including habitats, abundance, thermobiology, activity cycles, reproduction, ontogeny, feeding, enemies and parasites, the impact of anthropogenic factors, conservation, etc. A historical overview of amphibian research in the FSU territory is given. Trophic spectra for each species are given in tabulary form. New species listings are compiled for every nature reserve and all red data books of all former Soviet republics. Keys are given to eggs (so far as known), the larvae and the adults of all FSU amphibians. A most comprehensive bibliography concerning FSU amphibians is provided (about 900 references).

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DT

Testing toads' potency

LIVE cane toad exports from Queensland have been fuelling Chinese biomedical research — but their very potency has the potential to poison patients.

A University of Newcastle pharmacologist has designed a test to measure the biological activity of cane toad skin, allowing for the more accurate production of medical products.

Dried toad skin and potions made from toad venom have been used for thousands of years in Chinese medicine and are still used to treat congestive heart failure.

Professor Alan Boura said his test would allow more accurate dosing, reducing the chances of accidental harm given that the poison acts directly on the heart.



FRESH FOOD FOR FROGS FRUIT FLY FUN

Here are some of the more sensible frog-eat-fruit-fly questions and the more sane (ha!) Frogwatch Helpline answers:

Q: So, small frogs like eating fruit flies. Even ground frogs?

A: Yep, just make sure the flies don't all go to the top of the cage because that's where the light's coming from, and that's where they go if they want out. If need be, put a dark towel or seed catcher bag over the cage. Keeps the fruit flies in, too. They don't push through cracks as determinedly as house or blow flies.

Q: How about middle sized frogs?

A: A 2 cm frog should be able to manage larger insects as well as fruit flies. A 4 cm frog will probably still deign to take fruit flies but would find it hard to get a square meal that way.

Q: Can you raise young frogs on fruit flies alone?

A: Frogs tend to eat whatever's in season, but it's probably always better to give them some variety. If you can't occasionally get ants, termites or baby crickets, at least dust your fruit flies very lightly with supplement powder. Get calcium/Vitamin D₃ tablets from the supermarket and grind them up as fine as you can, and ideally mix that with a brand of reptile supplement.

Q: Where do I get fruit flies from?

A: You can catch them or grow your own. Catching them can give you huge numbers for little effort but is unreliable. In really foul weather you might get nothing at all for a week or longer, and by then your baby frogs are stone-dead. Raising your own indoors is more dependable, and that's what you need in the long run if you have tiny frogs and no other food available.

Q: You mean they die that quickly?

A: Baby frogs, yes. Adults of dwarf species survive a few days famine much better, but even they should have access to food every day. They're not like the really big fellows.

Q: I'd better raise my own fruit flies then, so I always have something on hand. What do I do?

A: Get a few small jars, small enough to put through the clear plastic window in the cage lid (if that's the kind of cage you have). Stuff a bit of paper in the bottom of each jar, put a banana skin on top, then put a few dozen fruit flies

in - wild ones to start it off. Close off with a piece of coffee filter paper or newspaper and an elastic band. Keep it in a warmish place and after a couple of weeks you should have lots of fruit flies. To feed the froglets, put the jar in their cage and make small holes in the covering paper.

Q: And then I save some fruit flies to start the next jars?

A: Yes, they're easy to handle if you first keep them in the fridge for half an hour. Then just get the old banana skin out and shake it out into the next jar.

Q: Wouldn't it be easier if I started off with flightless ones?

A: A bit easier, if you can get hold of a starter culture. They can't fly out but they'd still walk out of your frog cage just as easily.

Q: What if I want to catch wild ones, tons of them?

A: One good way, at least in areas where fruit flies are no agricultural problem, is to put lots of old fruit peel on your compost heap. The fruit flies that breed there will fly up in a thick swarm when you disturb them. Get an aquarium fish net with very fine mesh, a large size one. Swish it around in the air space over the fruit and keep moving it so they can't fly out. Then grab the net from behind with your other hand, and they're trapped. Give them a light sprinkling with supplement powder, straight through the net. Empty the net into the cage, but not right into the frogs' water bowl of course. Quickly throw a tea towel over the cage (or a seed catcher, or a pair of tights with the legs half cut off and rolled up).

Q: What if there are too many rats and possums around for leaving fruit peel all over the place?

A: Then why not get a garbage bin and breed the fruit flies in there? If you keep the bin under cover, you should be able to harvest at least a few of them in bad weather, and often even in winter. You can also stand the bin in a large dish of water to keep the ants out. Into the bin goes a newspaper to soak up any gunk, then the fruit peel, and on top goes a lid with the top knob cut off. Leave the knob's rim standing, because when you collect the flies, that's where you put the inverted glass jar over. Kick the bin in the side a few times until most of the flies have flown up into the jar. Screw the lid on while the jar is still upside down and stand it in the fridge for half an hour. Then, at least every now and then, add a tiny bit of supplement powder and shake it around a bit. Pour the flies straight into the frog tank before they get warm again.

Q: Cool. Sounds easy enough. That's it? A: That's it L.V.



OPINION

11

YOU KNOW FRANK, I'M BEGINNING TO MISS THE CAT...



A frog who came to dinner

HEAD START: Michael Archer and pet green tree frog. April 11, 1999

THE SUN-HERALD



Picture: BARRY CHAPMAN

By KATE COX

IN 25 years, Michael Archer has only had one problem with a native animal.

A dinner guest mistook a green frog, living in a tray on his bathroom sink, for a bar of soap — until it moved. Her scream almost shattered the windows.

Dr Archer, director of the Australian Museum, wants more people to consider keeping native animals as pets, instead of dogs and cats.

"Native animals are rewarding, wonderful, stimulating, educational and bright," he said. "People would feel they have something special and precious and would look after it, as Aborigines have done for thousands of years."

Dr Archer said people would need basic training to care for a native animal, just as they did for cats and dogs.

The paleontologist and former curator of animals at Queensland Museum has taken home:

□ Frogs that ate cockroaches, didn't make any mess and could be kept inside and out.

□ Sugar gliders that licked his ear as he slept.

□ Cuddly ringtail possums that "loved you to death. You would wake up and find them curled up in your arms, looking up with their pink noses at you."

□ Pet kangaroos, which were great alternatives to goats and sheep, once you were used to their chronic diarrhoea.

□ Cute and gentle native rodents that "you would practically have to stand on to get them to open their mouths".

□ A bright, easy-to-feed, affectionate quoll he kept for five years. It wanted to play all the time, fell asleep in his lap and instantly learnt the art of kitty litter. It was so house-trained it even cleaned up after his cats.

Few Australian families get these opportunities. Because of concerns of abuse, it is illegal to keep most native species without permits, generally only available to industry professionals.

Dr Archer is one of many pet, wildlife and academic authorities arguing for feral animal extermination policies, subsidised animal breeding colonies to repopulate the many endangered native species and a system registering official breeders of native animals and licensing buyers.



"We're working within their natural instincts and activities," Dr Archer said. "If we don't teach an absolutely close interest in animal welfare we are likely to lose them."

"Naturally, they should receive basic training to care for an animal the same way we should train people to care for cats and dogs. There are mechanisms to make this work, but to get the laws changed you need public opinion to sway."

"It's immoral to think we can breed cats yet we can be thrown in jail for breeding native animals."

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 Australian Herpetological Society P.O. Box R79 Royal Exchange Sydney 2000
 Reptile Keepers Association of NSW P.O. Box 227 Gosford 2250
 Central Coast Reptile and Frog Group P.O. Box 828 Gosford 2250
 Cape York Herpetological Society P.O. Box 848 M Manunda 4870
 Victorian Frog Group P.O. BOX 424 Brunswick 3056
 Adelaide Snake Catchers Inc. P.O. Box 12 Kent Town 5071
 Orana Herpetological Society P.O. Box 809 Mudgee 2850
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Thank You to all those who contributed to this newsletter

We hold six informative, informal, topical and practical meetings each year at the Australian Museum (William Street entrance) in Sydney. Meetings are held on the first Friday of every even month (February, April, June, August, Oct. and Dec.) at 7 pm for a 7:30 pm start. JUNE'S MEETING WILL BE ON 11/6/99 DUE TO UNFORESEEN CIRCUMSTANCES BEYOND OUR CONTROL AND NO MEETINGS ON GOOD FRIDAY CHECK NEWSLETTER FOR ALTERNATE DATES. Visitors are welcome. We are actively involved in monitoring frog populations and in other frog studies, and we 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.

NATIVE ANIMALS AS PETS

WITHOUT LICENCE

Birds: brown quail, king quail, stubble quail, peaceful dove, diamond dove, budgerigar, cockatiel, little corella, long-billed corella, sulphur-crested cockatoo, galah, zebra finch. Aviary Registration Certificate needed to buy, sell or keep all other native birds.

Insects: mouse-eating spider, minoceros cockroach (not a pest).

WITH LICENCE

Some rodents, native possums, quolls, bandicoots, bilbies, sugar gliders, dunnarts, wallabies, grey kangaroos and wallaroos, possums and bandicoots.

Reptiles: Most native geckoes, legless lizards, dragons, monitors, skinks, tortoises, non-venomous/mildly venomous snakes (including red-bellied black) can be kept with class one licence. Venomous (eg tiger) with class two, extremely venomous (eg tiger) and some non-venomous snakes (eg southern blind) plus tortoises (eg Roroy) class three licence.

PROHIBITED

Crocodiles, sea turtles, pitted-shelled turtles, western swamp turtle, eared worm lizard, five-clawed worm skink, blue mountain water skink.