

President's Report by Rod Pattison

I hope everyone had a Merry Christmas and Happy New Year.

The prediction of one of the wettest summers on record has unfortunately not as yet come true. Although receiving some good rain falls this summer it is merely a drop in the bucket to what is needed. The drought has now come to the cities forcing government authorities to look at alternative water supplies such as bore water and salt water desalination plants to meet the demand. Sadly, in my experience, for the majority of people 'demand' is exactly what they do. Having safe clean water appear at the turn of a handle is simply taken for granted. The effects of global warming, extinction of species, and destruction of the world's forests seem to have little or no relevance to them. With current water

restrictions in place and talk of higher restrictions to come, let us hope that people will start thinking of the bigger picture and, if nothing else, realise just how precious water really is.

I am sitting on my back veranda writing this report, after a couple of heavy showers about an hour or so ago, and I am enjoying the sounds of the frogs calling. The cutest little juvenile Eastern Sedgefrog has just hopped across the veranda and climbed up onto the window. It's the easy way to see frogs. Turn on the light, which brings the insects around, and in turn watch the frogs come for dinner. Our scientists maybe devoted people but it is impossible for them to do it all. Observing the juvenile Eastern Sedgefrog not only places a species in a specific area but it also tells me that they

*cont'd on p3*

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**FROGSHEET BY MAIL**

We can send the Frogsheet by email (pdf of about 700kb) - or send you an alert that the newsletter is available for download (at your leisure) from the website. Send your email address to Jenny **qldfrogs@bigpond.net.au** stating your preference.

## AREA CO-ORDINATORS

### ASHGROVE

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Patricia Espin - 5446 7908 (North Arm)

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### UPPER BROOKFIELD

Phil Bird [phil.bird@uq.edu.au](mailto:phil.bird@uq.edu.au)

Most of the Co-ordinators now hold the "Frogs of Brisbane" poster and you can pick up your FREE (to members) poster from them.

## DIARY DATES

### CAMPS

1 - 2 APRIL 2006

Crows Nest National Park.

<https://www.epa.qld.gov.au/parks/iaparks/gds/!AGDS020.do?parkId=14>

suitable for caravans, camper trailers and tents

Further info re camps contact

Lawrence [mowerwizard@hotmail.com](mailto:mowerwizard@hotmail.com) PH 07-5427 9863

### WORKING BEES & WORKSHOPS

#### Bowman Park Habitat Working Bees:

First Sunday in April, June, August, October and December. Time: 8am to 11am. Please phone Jenny 3366 1868 for further information.

#### Restoring threatened frog habitat in the Upper Stanley Catchment Workshop

11 MARCH 2006

Workshop & Field Day & Treeplanting 9.30am - 5pm

MALENY COMMUNITY CENTRE - Maple St, Maleny

Ring Barung Office on 5494 3151 by Monday 7th March to book your place (for catering)

*Pearl Symonds and Harry Hines will be guest speakers*

**GREEN DAYS** (phone Jenny for more info. 3366 1868)

23 MARCH 2006 BCC Green Choice Gardening Expo: 10am - 1pm Victoria Park, Gilchrist Ave. Herston

9 APRIL 2006 BCC Green Choice Gardening Expo: 10am - 1pm Alexander Park (not finalized).

7 MAY 2006 BCC Green Choice Gardening Expo: 10am - 1pm Tillack St Parkland, Blackberry Street, Mansfield.

### FAIRS

#### Caboolture Sustainable Living Fair:

3 June 2006 - CREEC, 150 Rowley Road, Burpengary. 9am - 3pm. QFS Display and sales.

### NATURESEARCH EVENTS - FROG SURVEY CALENDAR.

MAR 2006 *Limnodynastes salmini* - Salmon Striped Frog.

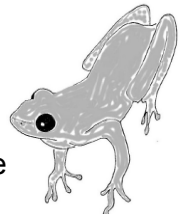
To register for NatureSearch activities, telephone Darren Phillips on (07) 3202 0271



## NEW MEMBERS

Lynette Wilmott; Janet Whish-Wilson; Sharlene Prowse; Sharon Aldous; James Mackay; Julie Wilson; George Sourrys; Janet Edwards & Eric Campbell; Paul Dubowski; Anitra Ross & Simon, Griffin & Ava Shakesby.

**WELCOME !**



*cont'd from p1*

are successfully breeding. I encourage all members to record the frogs they see. There are many cases where books are re-written due to a simple observation. Grab the torch and head out for a look around; in my experience it's a better show than anything you will see on TV.

With the money received from the gaming fund our new office computer is well and

truly in use and should assist Jenny to get through the mountain of work she does on our behalf. The laptop and power point projector have already been used in a number of presentations. There is still a lot of work to be done to bring our presentations up to speed but I am happy to say at least I have learnt the right buttons to push (most of the time).

Until next time keep those headlights shining and good frogging to all.

*Rod Pattison*

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## Lookout for Sick Frogs

If you see frogs that appear ill or you find a number of dead frogs around your property or whilst bush walking, please contact your local QFS co-ordinator and they will advise you on what you can do. Certainly outbreaks of very large numbers of dead or dying frogs on public land will be brought to the attention of the relevant governing agencies (local council or National Parks). However there are a lot of sick frogs found by the general public on private land, and the QFS is more than happy to help. Simple cases may only need some TLC and feeding, or may be passed onto a local vet. In some areas we have veterinarians who don't mind caring for frogs (*see BCC Grant p. 11*). Cases that we suspect may involve Chytridiomycosis will be passed on to me (Dr Pearl Symonds, University of Queensland Veterinary School) – I am researching the epidemiology of this disease in our region.

Please note: I can only get the best information from dead frogs if the specimen is recently dead and has been kept refrigerated. Specimens may have to be frozen or preserved in 70% methyl alcohol if there is a time delay in getting them to the University. Sick frogs will be given antifungal and antibiotic treatment as well as supportive therapy. Research in this area is ongoing so you will be helping frogkind greatly by keeping an eye on your local frogs and alerting us early to an outbreak. Taking a photo of the sick frog and emailing

it to us with whatever else you have noticed is also very useful. Please address it clearly as QFS related email (if I don't recognize the sender it will go into the junk mail - I have been bitten before with email viruses and they're a pain to sort out) and send to: [pearl66@bigpond.com.au](mailto:pearl66@bigpond.com.au)

*Pearl Symonds*

### **Frog research to help cattle survive drought**

CSIRO scientists hope studies on a western Queensland burrowing frog will help to improve Australia's beef industry.

Dr Nick Hudson says the fact the frogs can spend months or years underground in times of drought and emerge with no muscle wastage has great scope for livestock.

He is looking for a link between the frogs and cattle that do better in drought conditions.

"We're not interested in genetic engineering at all - what we want is to identify the key genes in the frog and use that to see if those same genes exist in natural livestock populations, and if they do then we can think about selecting for those animals specifically and they'll be animals that are really economical with their feed," Dr Hudson said.

After the current season, graziers will be well pleased not to have their cattle croak.

From ABC website 24 Feb 2006

<http://www.abc.net.au/news/newsitems/200602/s1577584.htm>

## CO-ORDINATORS' REPORTS

### SUNSHINE COAST NORTH

The rain is falling, the frogs are calling, the tadpoles are growing and the grass needs mowing. Does this sound like your place too? The frogs have certainly had a great catch up season this summer on the Sunny Coast. Another good indicator is the amount of phone calls and emails I have received from distressed and sleepless people, wanting to know how they can remove the calling frogs from outside their houses.

Last newsletter, I was caring for Michelle, the Common Green Treefrog (*Litoria caerulea*), who had been hit by a car. Her recovery period was about 4 weeks in all. Unfortunately, Michelle's hand on her broken arm withered up and blackened and she lost the use of that hand. This did not slow her down much, as she was still able to catch her own food and was able to hop around corners with ease.

Several weeks after her release, Michael, a half-grown Common Green Treefrog came into my care. Michael had just been nudged by a car tyre and was left with a piece of muscle hanging out of his back leg. The vet removed the 'clignon' and Michael took up residence in the fish tank/frog hospital at home for about a week. His needs were met nightly, with a few spoons of meal worms, as well as full room service, while he kicked back in his bath. Medication was applied to his skin each night.

I have just picked up a Common Green Treefrog from a very distressed lady, who described the frog as having its tongue hanging out of its mouth. The frog is puffed up in appearance and does appear to have its tongue hanging out. It obviously doesn't like me handling it and appears to be in a lot of pain. After doing some research, it turns out the frog has been poisoned and has actually regurgitated its entire stomach lining to rid itself of its lethal contents. So please, before you get out into the garden to spray chemicals onto your prize winning tomatoes, or to spray the weeds along the fence line, give a thought to the frogs, reptiles or birds that may be affected.

If anybody else needs to nurse a frog back to health, make sure you have a copy of "Basic Care for Injured Frogs" written by Ruth Wait. This is a must have for the novice carer and

available from QFS.

Also of interest, back in early January, I heard on ABC radio a report that stated scientists have linked the chytrid fungus with the increase in our climatic temperature. The report showed that global warming has had a direct effect and enabled the fungus to multiply more rapidly. This is not good news for the frog population, as climatic temperature is on the increase with no way of stopping it. So please froggers, keep an eye on your local surrounds and fill out some frog survey forms. Don't hand out chocolate rabbits this Easter - buy some chocolate frogs instead!

Keep on hopping.



### ASHGROVE

With the rain coming and going and threatening, the frogs' calls have fitted in to the uncertainty. Judging by some of the watercourses there has been quite a lot of spawn about but pools have dried up before time due to the lack of follow-up rain.

The Foraging for Frogs segment of Brisbane City Council's *Wildwatch* program was held in Bowman Park, Bardon recently. We had talks on frogs, diseases and surveying before setting out to see what was around the two habitat sites. *Adelotus brevis* (Tusked Frog) was calling near the bike track bridge and some *Adelotus* tadpoles were found in Ithaca Creek. Unfortunately, the new ponds at one site had dried up; during winter, work will be done to make them more water retentive. When we had our working bee there on January 26<sup>th</sup>, the ponds were teeming with tadpoles, possibly *Litoria gracilentia*. The plants we put in that day are all going well and we will have regular working bees to maintain them (see diary p2).

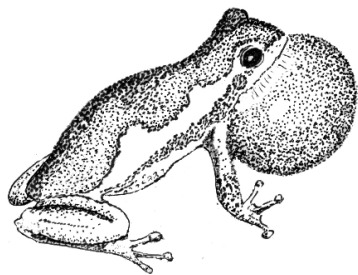
With my other hat on, the phone and emails have kept me very busy – some calls reporting frogs back in areas after many years. Wonderful!

Jenny Holdway

# Bowman Park Birthday Bee

It can be boring reading (and writing!) about working bees (even birthday ones) – so I've written poems instead! (Inspired by the cinquain\* poems in the Spring issue and this month's Junior's competition - and with apologies to real poets)

To celebrate Australia Day  
And Bowman's 6<sup>th</sup> birthday  
Twenty-two got



Down and dusty in the dirt  
Wrestling with wild weeds  
Fixing frog-friendly foliage

Happy and hungry  
Salivating for sausages  
Capped off by cake  
Spirit and stomach rewarded



Working-bee !  
Exhausting, exhilarating  
Planting, weeding, observing  
Hard work but fun  
Party !

Habitat  
Safe, wild  
Nourishing, protecting, inspiring  
Lungs of the planet  
Home

Party !  
Sociable, relaxed  
Eating, connecting, unwinding  
Tucker earned by hardwork  
Community



In fact, we (QFS, Men of the Trees and new local members from Bardon - Anitra, Simon, Griffin and Ava) weren't working at the creek site – we were restoring habitat at the original soak site. Work was initiated here in 1993 with fencing to keep mowers out and some excavation work to improve the water retention of the soak. Most planting took place between 1995 and 1997 with minor weeding done since then. Further work is needed to

ensure water stands long enough in the soak for tadpoles to complete metamorphosis.

*Janet White*

## Attention QFS Campers...

Would you like to be kept informed about future QFS camping trips? If so, please forward your email address to [mowerwizard@hotmail.com](mailto:mowerwizard@hotmail.com) and I will send out regular updates about forthcoming camps including directions and fees etcetera.

## We Need You...

Have you seen a place, or do you have a friend with a property, that we could hold a camp on?

Is it within a few hours drive of Brisbane?

**Well, tell us about it!**

contact Lawrence [mowerwizard@hotmail.com](mailto:mowerwizard@hotmail.com)

PH 07 – 5427 9863

\* cinquain form (from <http://home.vicnet.net.au/~poems/ps/html/cinquain.html>)

Line 1 - One word (a noun) naming the subject of the verse.  
Line 2 - Two words (adjectives) describing the subject.  
Line 3 - Three words (verbs) describing the subject's actions.  
Line 4 - Four words giving the writer's opinion of the subject.  
Line 5 - One word (noun) giving another name for the subject

~~ Question for you - the illustrated frogs have not (yet) been seen in Bowman Park - what are they?~~

## NIGHTCAP NATIONAL PARK

FROG CAMP — 3 DECEMBER 2005

Before joining the official camp, Victor and I spent two nights at nearby Rummery Park within the Whian Whian State Conservation Area. Light rain on the first night meant good frogging. We saw and/or heard *Litoria pearsoniana* (Cascade Treefrog), *Litoria peronii* (Emerald Spotted Treefrog), *Litoria wilcoxii* (Stony Creek Frog), *Mixophyes fasciolatus* (Great Barred Frog) and *Litoria fallax* (Eastern Sedgefrog) together with a small python feeding in the marshes.

I have a couple of minutes of taped frog calls that I haven't been able to identify. Perhaps somebody can help me with this at some stage?

We joined Rod, Stefan and Julia at the Protestor Falls campsite on Saturday. The night walk to the Falls provided a similar mix of species to the above. Unfortunately we didn't

encounter the rare and endangered Fleay's Barred Frog (*Mixophyes fleayi*). The later walk along Terania Creek was rather quiet except for *Litoria wilcoxii* (Stony Creek Frog), which were in abundance.

The other interests during the evening included the not often seen newly emerged cicada, a large python which lived in the downpipe of the toilet block and the array of glow worms on the 'walls' of the falls.

Staying for an extra night rewarded Victor and I with some good photos of the Cascade and Stony Creek frogs. During the day we came across a Stony Creek Frog sunbaking.

Two locals gave us an interesting account of the protests some 20 years ago. We even came across the local witch who was living at the campsite in her Kombi van.

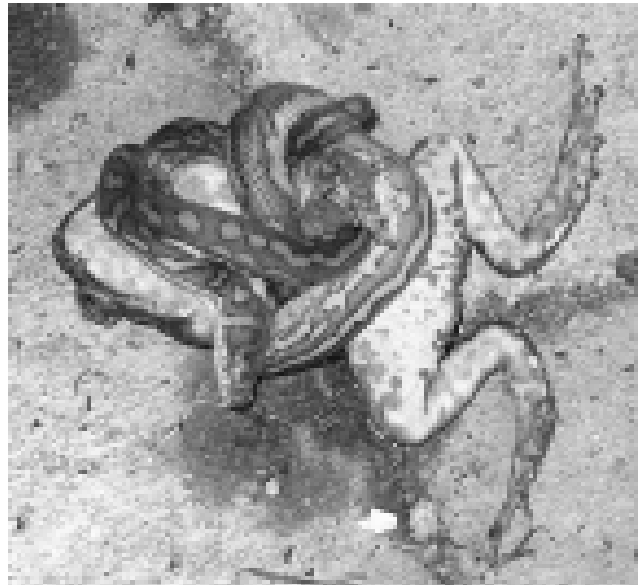
On his return to civilisation, I understood Rod was intending to recapture his misspent youth by detouring through Nimbin (naughty boy).

*Janece Eckhardt*

### 'TIL DEATH US DO PART ?



Brian Dean captured these images of an amazing tussle which occurred on his land at Anstead a while ago. Fascinated by the sight, Brian dashed off to get his camera. He then spent quite a bit of time just watching - wondering, due to the difference in sizes, who was going to win the battle. The snake rolled the Cane Toad over a few times but Brian didn't see it trying to bite it. Unfortunately he was called away and when he came back to see who had won, both the snake and toad had gone. Was it 'til death us do part? Or did the snake



*photographs: Brian Dean*

give up?

Brian is a member of both the Pullen Pullen Catchments Group Committee as well as the newly formed Anstead Bushcare Group who are restoring parts of the Anstead Bushland Reserve. I understand that there is an old quarry on this site and Brian, Ray Kraft and others are helping with an archaeological survey there and also hope to make a historical trail at the site.

If you are interested in this area, please contact Ray Kraft on 3202 6470.

*Jenny Holdway*

# CANE TOAD - CAUGHT IN THE ACT (FINALLY!)

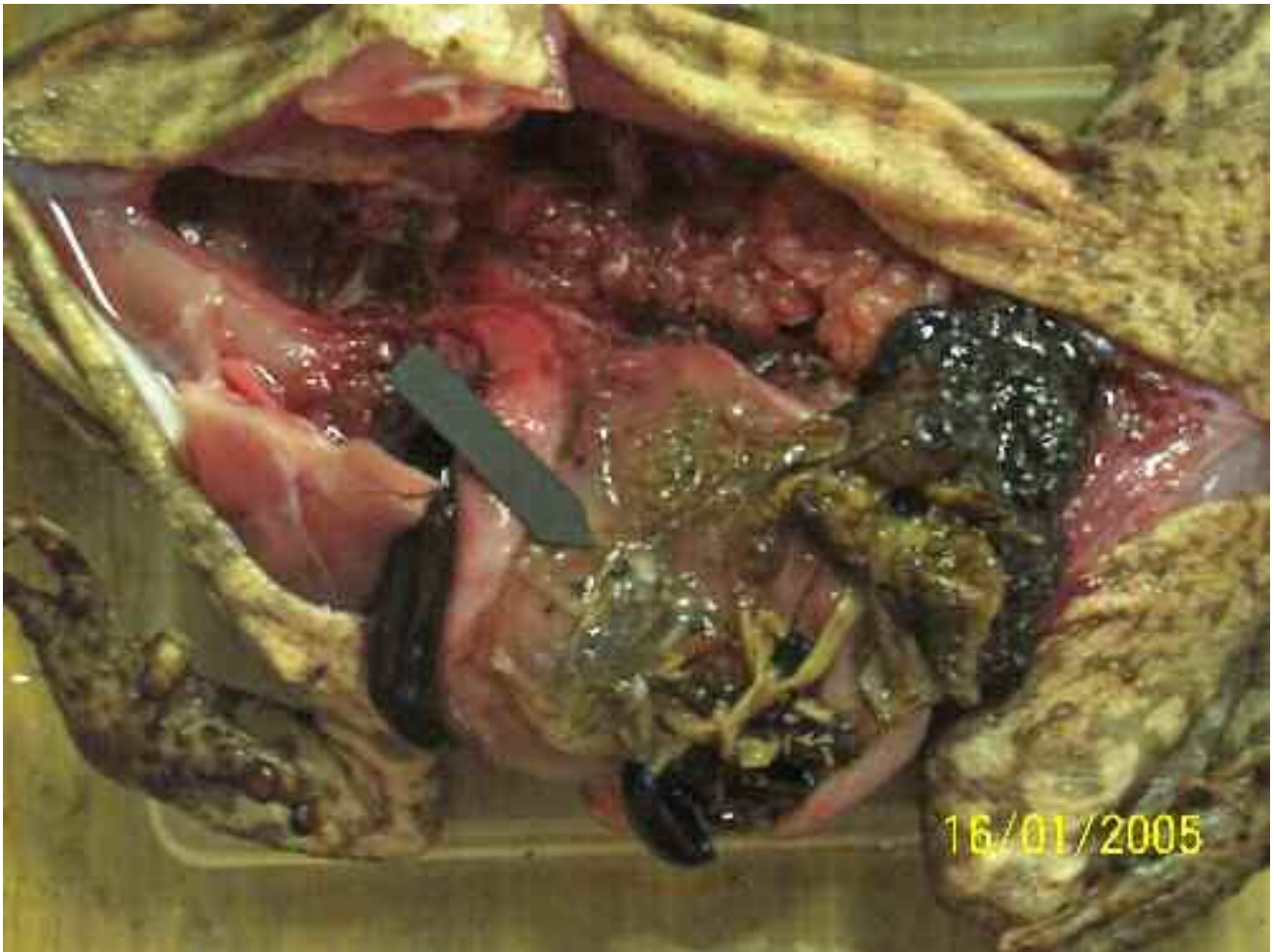


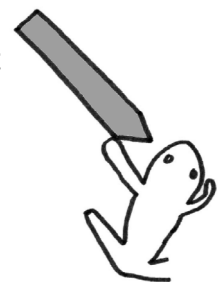
photo © E.P.Symonds

There has been a lot of conjecture about the direct impact of *Bufo marinus* on Australian native frogs. For example, the misplaced Cane Toad has recently been implicated as the ideal vector for the spread of Chytridiomycosis around the country (though this does not explain outbreaks in WA) but unfortunately we have not enough published evidence to say yay or nay to this. All I can tell you is that a captive colony of Cane Toad juveniles died in Geelong affected by Chytridiomycosis with a number of tadpoles found infected also. Subsequent efforts to experimentally infect Cane Toads have failed to produce disease - but we don't know if they can remain asymptomatic carriers.

One question that was raised long before we heard about the fungus is whether Cane Toads eat other frogs. I understand that there have been studies conducted on stomach contents that have been unrewarding. Unfortunately frogs do tend to become liquefied very quickly in the gut (as you will see in picture above). Cane Toads, like any amphibian, will no doubt eat anything that will fit in their mouths and is slow enough to catch. I have found stomachs full of

cigarette butts, snails and the odd bottle top, but no diamond rings or gold coins yet. This little tale will bring to rest that question – yes, Cane Toads will eat frogs when given the opportunity.

Our very observant president (we all know who that is - Rod) noticed one summer evening, earlier this year, a number of juvenile Eastern Sedgefrogs on his rear patio floor. Half an hour later he noted they had gone and were replaced by a large Cane Toad.



Wondering where those frogs may have gone Rod astutely kept the toad which was then

Can't see the frog? It is at end of grey arrow.

humanely euthanased and a post-mortem performed. The remains of at least one frog was found in the stomach - the others fortunately decided not to hang round.

Thankyou to "Sir" Rodney Pattison for the Cane toad specimen

Pearl Symonds

(See this photo in colour on the QFS website or choose to have your frogsheet sent by email)

## Frog farm aims to stop endangered species croaking

Western Australia's first dedicated frog farm is set to get approval in Waroona, in the state's south-west, as part of efforts to save the western green tree frog (*Litoria moorei*) from extinction. The frogs are only found in the south-west corner of WA, but have become endangered due to urban development and introduced predators.

The **Froget-Me-Not** Farm would run breeding and research programs and provide tours and educational material for schools and the general public.

Proponent Deirdre Whiting says the frogs need a helping hand to boost their population.

"What we hope to do is breed, obviously, a healthy stock of western green tree frogs ... as well as researching what we can do to make sure that we have continual stocks of native frogs," she said.

She says it is crucial that the frogs survive because they are a reliable indicator of the health of their ecosystems. "Western green tree frogs, and we have one other species of tree frog, which is a slender tree frog, live in our waterways. If they die in our waterways, it means that there is something radically wrong with our ecosystem," she said.

Waroona Shire councillors will this month consider a town planning scheme amendment needed to allow the proposal to proceed.

From ABC website 17 Feb 2006  
<http://www.abc.net.au/news/items/200602/1572226.htm?southwestwa>

## FROG SWEAT MAY KILL HIV

One day, the key ingredient of a vaginal cream used to prevent the spread of HIV could be "frog sweat."

Vanderbilt University researchers found that secretions from the skin of some Australian frogs were effective in the test tube at killing HIV, the virus that causes AIDS. They hope their findings will lead to the creation of a topical ointment containing synthetic secretions that will help cut the spread of the deadly worldwide pandemic.

HIV attacks the immune system. Specifically, it invades "T" cells, which help the body fight off germs and diseases.

In the study, researchers took healthy T cells and exposed them to HIV. Then they added the frog secretions, or peptides, to see whether they would prevent the cells from being infected. They did — 99% of the time.

The idea for the study sprang from a hallway chat between Unutmaz and Dr. Louise Rollins-Smith, a Vanderbilt associate professor of microbiology and immunology.

Rollins-Smith, a zoologist, studies secretions emitted by frogs when they are alarmed or their skin is injured that protect them from disease. It was already known that the peptides could kill bacteria, but Rollins-Smith told Unutmaz that she was curious to investigate whether they would act as an antiviral agent as well. Viruses are more complex than most bacteria, and treatments for viral illnesses, such as colds and the flu, are harder to develop. "I said, 'You know, why don't we try it on HIV?'" Unutmaz said.

The pair tested the secretions of 12 different frogs. The best results came from three species from Australia.

"They have special glands that are like antibiotic pumps," Rollins-Smith said.

The next step for the Vanderbilt researchers is to test to see if the secretions will protect monkeys from becoming infected. If that test and later ones are promising, it would still be several years before an ointment could be created and made available to the public.

Experts say an ointment is a needed alternative to condoms, which some people refuse to use because they diminish pleasure. Despite the widespread availability of condoms in the United States, there are still nearly 40,000 new HIV infections each year.

Rollins-Smith said the discovery that frog secretions may potentially save lives reinforces

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### QFS PUBLIC TRUST FUND

The Queensland Frog Society inc. may receive tax deductible donations of \$2.00 or more, property and bequests. Your donations will assist in research, education and helping to save our frogs. Cheques may be made payable to:

Qld Frog Society Public Trust Fund.

The balance is **unchanged** at **\$5009.48**



Cont'd from p8

the importance of protecting animals and their environments. She noted that the Australian frog species used in the study are being threatened by disease and disappearing habitat.

"We need to protect these frog species," she said, "because they may hold secrets that could be valuable to humans."

The findings of the team, which, in addition to the Vanderbilt researchers, included scientists from several countries, were published in the Sept. edition of the *Journal of Virology*.

edited version of story from Tennessean.com website 21 Oct 2005 by *Claudia Pinto*  
<http://www.tennessean.com/apps/pbcs.dll/article?AID=/20051021/NEWS07/510210406/0/BUSINESS01>

### **AUSSIE FROG ENLISTED IN BATTLE AGAINST MOZZIES**

A BOTTLE-GREEN Australian frog may hold the key to the next generation of mosquito repellents. Scientists are marvelling over secretions exuded by the dumpy tree frog, a species that inhabits forests in northern Australia and New Guinea.

Using a small electrical current, they gave a gentle zap to a frog, causing smooth muscles in its glistening skin glands to contract and secrete the fluid that covers its skin. The secretions were washed off with distilled water and applied to the tails of laboratory mice.

The mice were then exposed to dozens of *Culex annulirostris* mosquitoes - an aggressive Australian mozzie notorious for transmitting encephalitis among other diseases. Mice that had been given the frog's secretions remained bite-free for up to 50 minutes. Those that had been given DEET, the chemical that is typically used in commercial mosquito repellent, were protected for up to two hours. But the luckless rodents that had been selected as "controls" and were given neither frog secretion nor DEET lasted just 12 minutes before their tails were bitten.

Two other Australian species - the desert tree frog and Mjoberg's toadlet - were found to have a mosquito repellent odour from their skin, although their secretions were not tested on mice.

Although not considered a substitute to DEET, a paper in Britain's Royal Society in Biology Letters says the discovery highlights the potential of the unsung properties of amphibian skin. Frogs and toads have long been known to

exude toxic or malodorous chemicals on their skin as a form of protection against fungus and insect pests and to ward off predators. Previous research has found these secretions can also be powerful painkillers and hallucinogens. Work is now unfolding to synthesise such molecules so they can be reproduced pharmaceutically.

AFP ( in The Australian) 23 Feb , 2006  
(*Frogs mentioned are Litoria caerulea, Litoria rubella and Uperoleia mjobergii I think. JW*)

### **Offsetting Greenhouse Emissions**

If you are worried about the level of carbon dioxide you may be putting into the environment, then GREENFLEET may be the answer.

Greenfleet will calculate how much carbon you are producing and then plant trees to make you carbon neutral. The plantings are in most states and territories and Greenfleet uses local native trees that are grown from seed collected in the area. The cost to neutralise the average car is \$40 per year (17 trees planted). You can also offset your home emissions and your airline travel, based on your previous year's travel.

For more details and for you to be able to calculate your greenhouse emissions go to the website as [www.greenfleet.com.au](http://www.greenfleet.com.au).

### **Amphibian centre for London Zoo**

Frogs, toads and other amphibians are getting a new home at a conservation centre at London Zoo.

The project will allow scientists to find out more about diseases that threaten the animals, and should help protect the endangered breeds. The new centre will also include a breeding programme at Whipsnade Zoo, say the Zoological Society of London.

Scientists involved with the project say it is the first amphibian centre in the world to combine public awareness, laboratory work, captive breeding and field research.

It's thought the London Zoo exhibit, which is set to be called Frog World, should be up and running by 2007.

*Edited version of story on BBC website*  
[http://news.bbc.co.uk/go/pr/fr/-/cbbcnews/hi/newsid\\_4300000/newsid\\_4304100/4304114.stm](http://news.bbc.co.uk/go/pr/fr/-/cbbcnews/hi/newsid_4300000/newsid_4304100/4304114.stm) Published: 2005/10/03

## **ANE TOADS MAY NOT BE AS MENACING AS WE THOUGHT**

Cane toads are not the ecological catastrophe everyone seems to believe.

Native frog species may not be devastated by their invasion. And Australia's native predators actually are evolving to become toad-proof rather than being wiped out.

A collection of unassuming little eavesdropping poles plonked in the middle of wetlands in the Northern Territory may well deliver one of the biggest surprises in Australia's cane toad research.

"We were shocked, no doubt about it," says Hamish McCallum, an associate professor with The University of Queensland's zoology department.

Research carried out in the Northern Territory's Roper River region suggests that cane toads are not seriously damaging native frog populations when they move in.

Scientists have used the poles to record frog-mating choruses each night through the wet season since 1997-98. They then run the data through computer software which outlines exactly how many frog calls and what species are heard.

Early in the first few years of toad invasion, things looked bad. The research seemed to show serious damage to native frog populations, confirming the scientists' worst fears. But then something strange happened. It reversed.

"That early drop in numbers and species could have been a natural variation from season to season," says McCallum. "Since then we've seen frog numbers bounce back. We discovered all the frog species there and in significant numbers. Yes, green tree frog numbers have gone down but I don't believe toads are environmental catastrophes. There are far bigger threats to the environment."

His comments echo those of James Cook University expert Professor Ross Alford. There is still not a clear enough picture of the long-term effects to earn the toad its despised reputation, says Alford, who has been involved in research since 1986.

McCallum says cane toads have been on Queensland's tropical coast for 70 years. In that time not one total extinction can be attributed to them, he says, although he mentions that numbers of the marsupial cat, the quoll, have been heavily hit by the toad invasion, because they tend to bite the toad hard behind the neck exactly where the poison glands are.

"But there is recent evidence that their numbers are bouncing back," he says.

"Crows have learnt to flick toads on their backs and attack their bellies. And some snakes have actually evolved to become toad-proof."

University of Sydney researchers have shown that evolution has rescued some of the toad's native predators. They found that two species of snakes in Queensland have changed their body shape to avoid being killed by toads. The black and golden tree snakes' heads are now smaller and their bodies larger. This means the largest toad a snake can eat is small compared with its own body size and is therefore unlikely to kill it.

While cane toads are seen as a "Queensland problem", much of the research is being done in other states as the toads infiltrate. Scientists monitor the before, during and after of the invasion, making valuable comparisons. McCallum agrees with research which shows toads can have some impact on frog populations. Baby toads and tadpoles are poisonous, so anything preying on them may die. Toads may prey on smaller frog species and vie with frogs for resting places. They also compete for food.

While many scientists believe a biological control for cane toads will be discovered, McCallum says Australia may never be rid of them: "We just have to get used to living with them."

Dr Tony Robinson, of the CSIRO sustainable ecosystems unit in Canberra, is involved in the hunt for a biological control but says it is like looking for a needle in a haystack: "We are talking about very long-term research"

Someone who doesn't want to get used to living with toads is Graeme Sawyer, the founder of the Northern Territory group known as Frog Watch. He has been behind the push for toad trapping in the Territory.

"We can't just sit back and go 'Oh, well, let's give up'," he says. "They do devastate the native frog population and they do kill native predators like dingoes, crocs, quolls, goannas and snakes, simple as that."

"You know what really gets to me about scientists? They discount anything but what is scientifically proved. They talk about long-term research yet disregard what old-timers and Aborigines tell us. Well, the Aborigines tell me up here, they used to eat goannas once a week. Now one Aboriginal man said he hadn't seen a goanna for the past five years. Don't tell me that's not a devastated population."

Cont'd on p11

Cont'd from p10

The toad march does seem to be unstoppable. Since the original 101 let loose at Gordonvale, in north Queensland, their numbers have grown to hundreds of millions. No one really knows because they breed too fast for anyone to count.

While a female native frog lays between 100 and 300 eggs at a time, the female cane toad lays up to 40,000 eggs, twice a year. And the toads are faster than we think. Earlier research suggested the toad front moves between 10km and 20km a year but Professor Rick Shine at the University of Sydney discovered it is really around 70km a year as toads now choose the highway, rather than belting through bushland. They have reached as far south as Port Macquarie on the NSW mid-north coast.

Experts say they will leap into Sydney within 10 to 20 years. They have spread west to Longreach in Queensland, moved through the Territory's Kakadu National Park, are in Darwin and are now close to the Western Australian border.

Tasmania may be the only state to remain toad-free.

edited version of story by *Kathleen Noonan*  
11-12 Feb 2006 Courier Mail

## HE PLAGUE THAT NEVER WAS

Brisbane is not jumping like never before with cane toads, according to the experts. It just feels that way.

Since southeast Queensland's past two seasons of prolonged drought, cane toads are now breeding like rabbits on Viagra. A female cane toad can produce up to 40,000 eggs several times a year. Give her the right conditions and she's a tadpole factory.

So, in true survivor fashion, cane toads have bounced back in certain pockets of south-east Queensland, clogging pool filters, carpeting backyards and menacing pets. But the population jump is a long way from previous numbers.

"Those years of drought helped us forget what cane toad numbers were like before," says

Jenny Holdway of the Brisbane Frog Society. She says the cane toad population is nothing like it was 15 to 20 years ago.

Scientists say numbers fluctuate wildly year to year, mainly because of localised conditions, rather than global warming or a state-wide increase.

Queensland Natural Resources cane toad expert Frank Keenan says that populations vary from suburb to suburb, subject to availability of food, parasites and viruses.

"I live at Garden City, high on a ridge, and in the past I wouldn't see more than a couple of cane toads a year. I've spotted five in my yard in the past couple of weeks. So I understand how residents can be mistaken into thinking there's some great ncrease. But that's not the case."

*Kathleen Noonan*

11-12 Feb 2006 Courier Mail

### BRISBANE CITY COUNCIL GRANT

QFS has been successful in its BCC grant application. The grant will provide for QFS promotional magnets, the copying of "Care of Injured Frogs" booklets, a supply of our "Frogs in your Garden" brochures and help with the photocopying of our newsletter.

The magnets and booklet will enable us to give as many Veterinary Clinics as possible some support and information on how to care for the frogs that might be brought in to the clinics with injuries. This is important, as it has been brought to our notice that some vets do not feel at ease in treating amphibians.

To get this to as many Veterinary Clinics as possible, WE ARE ASKING THE MEMBERS FOR HELP. If you are able to help distribute the magnets and booklet, would you please contact Jenny on 3366 1868. A list of vets will be kept so that the public can be directed if necessary.

*Jenny Holdway*

The wonderful colour heading on the Frogsheet has been printed for QFS free of charge by

ASCOT PRINT & DESIGN P/L  
Ph 3266 6666

Thanks to Samford.net for hosting our website free of charge.



# Dept of (Toad) Transport

The toad mating season is almost upon us. Yes, from the end of January through to March, Britain's common toad (*Bufo bufo*) will make its annual migration to breed back at the same pond where it was itself a tadpole, often travelling up to half a mile across fields and busy roads to reach its destination. "It always seems to be the first warm, wet evening in early February," says Rick Anstis, secretary of the Surrey Amphibians and Reptile Group. "Unfortunately, it tends to coincide with the rush hour."

Helping toads across the road is a long-running problem. News this week has focussed on toads in Norton's Wood, Somerset, which make the annual breeding excursion to their spawning ground on the opposite side of the road. It is a perilous journey: in 2005, toad patrol volunteers helped more than 1,000 toads across the road, working a shift system but there were still heavy casualties. This year the road is to be closed for three months to provide safe passage throughout the mating season. However, there are many more ways to assist our amphibian friends in traversing the highway. The UK has some 300 toad patrols, where volunteers spend spring evenings ferrying the creatures across the road. If you are considering toad-lifting, ensure that you take buckets in which to carry the toads and wear

fluorescent jackets so that you can be seen by approaching motorists.

The organisation Froglife, which maintains a register of toad crossing sites for the Department of Transport, reports more than 600 official toad crossings in the UK. These employ special fences to direct the toads towards tunnels running under the road. Many councils are surprisingly enthusiastic about the introduction of such tunnels.

"You wouldn't feel it if you hit a toad in your car. They just go squish. But if there were a lot of them it might feel a bit bumpy," explains Paul Newman, chairman of the Somerset Reptile and Amphibian Group. "A lot of the highway authorities are very happy to put up signs and close roads, because squashed toads are very slippery, especially in large numbers." Not so much helping the toads to cross the roads, then, as helping the motorists to cross the toads.

From The Guardian UK 03.01.06 by *Laura Barton*

*Thanks to all who provided articles.  
Please note EVERYONE welcome to submit items. Send by email (subject line: frogbiz) or post.  
If you like the content, fine. If you'd like more local content - send it to me!  
Frog names in unpublished work changed in line with preferred names listed in "Frogs in the Community" Proc. Symp 1999.  
Cheers. Janet White*

If undeliverable, return to  
Qld Frog Society Inc  
PO Box 7017  
East Brisbane Qld 4169

Frogsheet - Spring 05  
Print Post Approved  
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**SURFACE  
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Hi ! I'd just like to say congratulations to the winners of last issue's colouring-in competition ! Jack Marshal (11 years) won for the ten and over years and Megan Angel (9 years) for the under-ten years!  
I hope that you enjoy this issue!

Gemma! xoxox

# Junior Frog Page

## Jokes



## Froggy Links

Q: What do stylish frogs wear?

A: Jumpsuits!

[www.froggyville.com](http://www.froggyville.com)

Q: What do frogs play at recess?

A: Jumping Jacks and leapfrog!

<http://allaboutfrogs.org>

Q: What do you call a young punk frog?

A: A radpole

<http://www.digitalfrog.com>

# Frog Poem Competition!

Write a froggy poem and send it to QFS PO Box 7017 East Brisbane Qld 4169 to win! Simply fill out the entry form below and send it to us. Best of luck!

Name \_\_\_\_\_ Age: \_\_\_\_\_ Address: \_\_\_\_\_  
Post Code: \_\_\_\_\_ Membership no.: \_\_\_\_\_

**PLEASE NOTE: Must be original work. ALSO: The prize is a froggy puzzle!**

