

FrogSheet

Highlights

AUTUMN 2002

FROM THE PRESIDENT

Shortly after you receive this FrogSheet, the long awaited Frogs in the Community Proceedings will be arriving. After a long hard slog, we've managed to get more than 20 of the symposium presentations into the 200 page book. Despite the fact the conference itself was in 1999, the book contains excellent work still fresh and relevant today. Our patron Glen Ingram and the Archangel Keith McDonald have combined with a little input from me to revise the Common Names for Queensland Frogs. Hopefully the other states will cease procrastinating and come to a consensus, but if not there is a sound foundation for them to work on. Keith McDonald has produced a magnificent piece of work on the status of Queensland frogs, considering each species in turn and suggesting up to date status on each one. His paper sets the scene for the rest of the book. The chytrid fungus paper by Berger, Speare and Kent has full colour illustrations of the microscopy and will guide veterinary pathologists to the correct diagnosis. Ruth Waite and coauthors have provided the first detailed standards of care for injured frogs - a how-to and must for wildlife carers. Other scientific papers include the results of research by Jean-Marc Hero, Harry Hines, Clare Morrison, Kirsten Parris, Steve Hodgkison, Martin Cohen and more. Community papers which include the History of the Queensland Frog Society

and RANA are history-making. All symposium participants will receive their copies within the next few weeks. Those not fortunate enough to have attended the symposium might think seriously about buying a copy. At \$25 it is a steal.

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CO-ORDINATOR'S REPORTS:

John Eveleigh - Beaudestert/Canungra

Hi Fellow Froggers, I have received two contacts over the last few months. One lady, west of Jimboomba, sought information on how to join the Society and questioned why she has not been seeing frogs in the numbers she used to? A short discussion revealed much development in the area over the last eighteen months, especially along the creek. No doubt clearing and possible use of chemicals could be a reasonable cause? The other lady from Coomba way (has called in the past) called to tell me she had found some little green frogs in the garden. She thought they were baby Green Treefrogs, but a neighbour told her they were Sedge frogs. I confirmed they were Eastern Sedge frogs and she was very excited having attracted a new frog to her garden. The weather at Wonglepong has been hell - 42 deg. cel. maximum on the back verandah, but the frogs have been pretty persistent, especially the Eastern Sedge frogs, Dusky toadlets, Great Barred frogs, Striped Marsh frogs, Ornate Burrowing frogs, Southern Pobblebunks, Broad Palmed Rocketfrogs, Beeping froglets and Emerald Spotted Treefrogs, so life is still very interesting. We had to rescue some Ornate Burrowing frog tadpoles from a small pool; it was about to dry up. We have them in a bucket at present; will release them in the dam when they get a bit bigger. Have seen the large cicada killer wasps (*Exeirus lateritius*) and the Cuckoo Wasps this summer for the first time. Cicadas are very numerous too this summer, so it is very noisy, even well into the evenings. It's fascinating to see a cicada killer wasp struggling through the grass dragging a cicada towards its burrow. Hope good persistent summer rains fall soon. John

Joi Jardine - Central Queensland

Central Queensland Happy New Year and welcome to the new members in this district, it is wonderful to have you on board. All members are invited to a frog discussion evening at Tondoon Gardens Gladstone on Tuesday 26th March, 6pm – 8.30pm. This will be a good opportunity for members to get to know each other. We will finish the evening with a spot of frogging. Please bring a plate to share, a torch and suitable frogging shoes/clothes. RSVP - by Friday 22nd March. Rockhampton district members who are unable to attend this get together might like to pop in and say hi at the Garden and Leisure Expo on Sunday 24th March at Rockhampton show grounds. If anyone can help out with the display throughout the day please let me know. I desperately need a couple of people from 10am – 11am while I give a talk in the pavilion. Venue suggestions for a frog discussion evening in Rockhampton later in the year would also be greatly appreciated. A series of Wildlife workshops are planned for Yeppoon in the near future. A variety of wildlife including frogs is planned along with a

selection of other interesting topics. Dates have not been finalised as yet, so keep an eye out or contact Shantelle James envirolink@cqnet.com.au or P.O. Box 727, Yeppoon 4703. A member who told me this story recently highlighted the importance of checking cane toads to ensure they are toads. The member was about to dispose of a 'toad' that she found in her chook pen. Thankfully, the member had been to a workshop and decided to check the 'toad' only to find that the toad had red in the groin. The 'toad' was not a toad at all. Thank you and well done to this member for her cautiousness and for sharing this experience. Keep smilin' Jodi P.S. The Kroombit Tinker Frog (*Taudactylus pleione*) has just been upgraded to critically endangered.

TRUST FUND BALANCE:

Trust Fund Balance as at February 7th 7 2002 is \$3056.50. Thank you to:- Mr.J.Close, Energex, Mrs. J.Love & Mrs J.Curran. Fred Frog, our donation frog, has collected \$25.90 and this is part of the total.

FROG IDENTIFICATION:

Frog Identification CD ROM I have not received any interest in our CD Rom library and I am wondering if this is because not many of our members have this facility on their computers, or the area in which I live. If you are interested, please phone me on 3366 1868 and we can discuss a way for you to borrow it. Jenny Holdway

FROM WAR-TORN ISRAEL CAME AN EMAIL.....

“Dear Jenny, Hello there, I'm an 18 year old Israeli naturalist who's striving to make a difference. But, before I continue writing down my 'wildlife coordinated' life story, I would just like you to know that I would be very much obliged if you were to assist me in helping your fund the best way I can, for I have entirely devoted my life (literally) to saving and protecting our worlds wildlife.....Itai” In answering this first email from Itai (it was too long to print it all) QFS has now got an Hon. member in Israel. It blew Ric and myself away to think that someone living in the middle of a war zone would be thinking of ways to help with our Public Trust Fund. Itai (pronounced – 'I' as in the e for email and 'tai' as tie) and I have sent many emails since then and I have found out that as well as being an academic (he received 100% in his exams) he is also an artist. He decided, that one way to raise money for the Trust fund, was to do some drawings of Australian frogs, send them to me and we could sell or raffle them. So far 5 have arrived and some are on their way and they are good – we are having them framed, but have not decided the best way they can raise funds. Itai has been very busy around his area trying to save the habitat of one of their endangered frogs Siryan cat-eyed spade frog – *Pelobates syriacus syriacus*. He has been recognised by the Mayor and the director at the Jane Goodall Institute in Israel for the foundation work he has done on a protection plan for endangered species. In his last email, he said: “Yesterday, I officially completed the Spade-footed frog breeding program. It was a total success, 7,500 tadpoles and larvae were released in my floodplain, the local 'conservancy zone' and the number of breeding individuals is ever increasing , and the water

FROG SURVEYS -----Stefan Durtschi

Frogs of Peachester

Two surveys were carried out during the early part of this year to assess frog populations north of Brisbane. Frogs of Peachester The first, at Peachester west of Beerwah on the weekend of January 26th, was at the request of local environmentalist Mark Russell and was primarily to ascertain whether the Cascade Treefrog (*Litoria pearsoniana*) was living in the MacDonald Reserve. On arrival I met up with Mark and we headed off for a daylight tour of the site, a remnant lowland rainforest area with an extensive creek system which seemed however to lack the overhanging vegetation around the water that is favoured by this frog.

Mark had spread the word amongst the local landowners, and a group of around twenty five very enthusiastic froggers mustered in the car park of the Peachester Community Hall at seven o'clock that evening. I gave a short talk about the frogs that could perhaps be encountered in the area, with illustrations passed around and the frog CD to demonstrate the calls, then we all set off for the first site - a revegetation area and woodland on the banks of the Stanley River.

We found adult and juvenile Great Barred frogs (*Mixophyes fasciolatus*) and Giant Barred frogs (*Mixophyes iteratus*) amongst the deep leaf litter, and also heard what I thought was an Eastern Gungan (*Uperoleia laevigata*) calling from an area that could not be accessed. Next, we headed back to the Reserve - sadly no Cascade Treefrogs were to be found, but Great Barred frogs were calling, and in the surrounding paddocks we heard Striped Marsh frogs (*Limnodynastes peronii*), Tusked frogs (*Adelotus brevis*) and Copper-backed Broodfrogs (*Pseudophryne raveni*).

Taking up a keen offer from one of the couples we then drove to their property, where a creek with billabongs and thick surrounding vegetation flows through agricultural paddocks. One of these billabongs was alive with frogs, easy both to see and photograph. We recorded the Laughing Treefrog (*Litoria tyleri*) numbering in the thirties, the Naked Treefrog (*Litoria rubella*), and the Emerald Spotted Treefrog (*Litoria peronii*). Eastern Sedgefrogs (*Litoria fallax*) were present in a nearby lilycovered dam, and the Striped Rocketfrog (*Litoria nasuta*), was found on the homeward walk in a bathtub used as a horse trough!

Finally, I awoke during the night to hear Cascade Treefrogs calling from a deep gully on Mark's land - a total of twelve species and better than expected in the dry conditions.

Frogs of Elanda Point

The second survey was held on the weekend of the 2nd February, thanks to an invitation from Adrian and Sally, on an 800 hectare property near the border of Lake Cootharaba west of Elanda Point. Extensive regeneration work is being carried out here and the owner was interested to know which frog species were present. Again there was a large turnout of interested people. Around fifty attended a talk and slide show with barbeque provided, and a welcome short shower of rain set some Green Treefrogs

(*Litoria caerulea*) and a Naked Treefrog (*Litoria rubella*) calling even before we headed off in a convoy to investigate a large nearby dam.

Striped Marsh frogs (*Limnodynastes peronii*), Striped Rocketfrogs (*Litoria nasuta*), Eastern Sedgefrogs (*Litoria fallax*) and Beeping froglets (*Crinia parinsignifera*) were recorded here, with our last frogs for the night being Graceful Treefrogs (*Litoria gracilentata*), heard calling from high in the trees around a creek in a forested Reserve - seven frog species in total and far short of a possible twenty.

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Interesting Websites to check out

Frog Diseases.

www.jcu.edu.au/school/phtm/PHTM/frogs/pmfrog.htm

www.jcu.edu.au/school/phtm/PHTM/frogs/adrec.htm Environment Problems? www.unh.edu/news/Nov00/sk_20001103frogs.html

www.ionet.net/~tslade/canetoad.htm

<http://elib.cs.berkeley.edu/aw>

Educational.

www.asx.frogfocus.com

What is happening in other States?

Northern Territory: <http://www.frogwatch.org.au>

Western Australia: www.museum.wa.gov.au/frogwatch

Victoria: www.frogs.org.au

New South Wales: www.fats.org.au

A Frog By Any Other Name.....

As one who has just received the (dubious?) honour of having a newly-discovered species of Australian frog named after him, I was led to reflect on the somewhat complicated and unwieldy system by which scientists bestow names on animals. “My” frog is called *Uperoleia martini* (one of my colleagues instantly and unkindly remarked: Sounds more like a new kind of cocktail than a new kind of frog!). In the description of the animal it is said to have “moderately long hind limbs” and “no webbing between the toes” which I can live with quite comfortably. On the other hand it also possesses “a well developed supracloacal flap” and “cream patches in the groin” which are the sorts of things you don’t like even your closest friends to know about. How very embarrassing!

In fact, though, when an animal is named after a person it is not because of any perceived resemblance between the creature and the person; it is usually because the person has contributed in some way to knowledge of that group of animals. Thus, in this case, I have worked and published quite extensively on frogs in the genus *Uperoleia*. Similarly there are Australian frogs named for other biologists who have made significant contributions to our knowledge of the frog fauna: *spenceri* for Sir Walter Baldwin Spencer, *coplandi* for Stephen J. Copland, *moorei* for John A. Moore, *tyleri* for Michael J. Tyler, and so on.

There are in fact a few notorious cases where a mischievous describer used someone’s name in a derogatory sense (“I name this fat and sluggish creature *smithi* because it reminds me so much of Mr. Fred Smith”) but this is definitely not cricket. Animals not named for people are usually given descriptive specific names, which are conventionally based on Latin or Greek roots. Thus there is another stumpy-legged *Uperoleia* with the specific name *micromeles*, derived from the Greek *mikros*, small, and *melos*, limb.

There is a Queensland frog with the specific name *terraereginae*, which is simply Latin for Queensland. We named another one *bilingua* because, unusually for frogs, it made two quite distinct kinds of call. Sometimes the describer shows a little more imagination: John Moore named the brilliantly black-and-yellow striped alpine toadlet *Pseudophryne corroboree*; Glen Ingram and Chris Corben bestowed the name *Kyarranus kundagungan* on a frog they discovered in the Great Dividing Range in south-eastern Queensland; the derivation is for the dialect of the Kabi tribe who lived in that area: *kunda*, mountain, and *gungan*, frog.

One of the essential purposes of a system of scientific nomenclature is that it should provide internationally recognized stability of names; names can be changed, but only under very special and strictly-defined circumstances. There is a long and complicated International Code of Zoological Nomenclature whose prescriptions in this regard must be followed to the letter. It quite often happens that a name later turns out to be inappropriate or misleading, but this does not in itself constitute grounds for making a change.

An Australian frog *Crinia tasmaniensis* was described from Tasmania, and is indeed restricted to that state; but another one, *Limnodynastes tasmaniensis*, has since been found to occur widely on the Australian mainland as well. More famous cases are those of the Indian Elephant, *Elephas maximus*: *maximus* means greatest, but the African Elephant is in fact larger. A man-like fossil from South Africa was called *Australopithecus*, meaning southern ape; it is now clear that it was much more man-like than ape-like, and a better name would have been *Australanthropus*, southern man, but the die cannot be recast.

Yet another trap for bestowers of names is the problem of priority, best illustrated by an example. A colleague and I found that a frog in Victoria, until then regarded as belonging to the same species as a Tasmanian one, *Crinia loeuis*, was in fact representative of a distinct species. We started to dream up names for it, but on looking into the literature discovered that J.J. Fletcher in 1891 has already described Victorian specimens under another name, *Crinia froggatti*, named for W.W. Froggatt. Since we were confident that we and Fletcher were in fact talking about the same animal, we were obliged under the law of priority to use the published name. We didn't mind in the least: a frog called froggatti would, we felt, be a distinct adornment of Victoria's cultural heritage. But alas! further checking revealed that there was an even earlier name, *Crinia uictoriana*, used by G.A. Boulenger in 1888 to refer to what was also undoubtedly the same frog; although Fletcher didn't realize that. So now the frog goes under the more patriotic but less appealing name of *victoriana*. The name game: it provides hours of harmless fun for zoologists! Good hunting! Angus Martin. (Reprinted in part from Zoo News Vol. 7 No.1 1987)

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FROM THE COMPUTER - Email Questions & Answers:

Dear whom may read it,

I have 5 questions about frog. Thanks and please answer my questions and reply soon. From TaeHo.

Q.1 Is frog use asexual or sexual reproduction, or both?

A. Frogs have sexual reproduction. Asexual or parthenogenesis has not been recorded. However, frogs have been cloned since the 1950's just by pricking an unfertilised egg with a needle.

Q2. What are the structures and functions of the reproductive parts of the organism including male and female gametes if they have them?

A. Ova and sperm, as with humans.

Q3. What is the method of fertilization in frog?

A. Nearly all frogs have external fertilization. Internal fertilization has only been recorded in the Tailed Frog, *Ascaphus truei*.

Q4. What is the reproductive strategy? (r-strategy or k-strategy) of frog?

A. Some species are r- and some k-.

Q5. How does the reproductive strategy of frog make it better to continue the species?

A. Some species produce tens-of-thousands of eggs e.g Cane Toad (*Bufo marinus*) to ensure some survive to adulthood. Even so, some only have twenty young but the parent care for the eggs and young e.g Gastric-brooding Frog (*Rheobatrachus silus*) and the Australian Marsupial Frog (*Assa darlingtoni*) to ensure they survive. Probably best to say that their breeding strategies exploit that largely unexploited ecotone where land and water meet (i.e they are amphibians). Answers supplied by Dr. Glen Ingram.

Hi There,

Recently I was on holidays in Queensland and visited Mapleton Falls National Park in the Blackall Range. While I was there, I saw some really unusual tadpoles and I was hoping you could help me identify them. Here is some info about them:

1. They were in a pond about 1m deep. The water was light brown muddy colour, and you could not see the bottom. The tadpoles stayed in the deep part and could only be seen when they came to the surface.
2. When they came to the surface, they swam really quickly and were only there for a second. They literally jumped out of the water to take a breath, then swam straight back down to the bottom.
3. They were big compared to all other tadpoles I've seen, between 30-60mm (mostly on the bigger size). The colour was dark brown and I can not tell you much more than that as they only came to the surface for a second. If you can not help me, would you be able to forward this message to someone who could? I really appreciate it and I love frogs so much I can't bear not to know what these strange tadpoles are. Thank you again for your help, Nancy.

Dear Nancy,

Going by size, colour and habit, the tadpoles you saw could be *Limnodynastes terraereginae*, *Limnodynastes peronii* or *Mixophyes* spp. (barred frog) larvae. Larvae of all these species may be brown in colour and all can attain a size of 6cm. The diving/surfacing behaviour you described, however, is more typical of *Limnodynastes* species. Larvae of the striped marsh frog (*L. peronii*) and Scarlet sided Popplebonk (*L. terraereginae*) surface regularly when oxygen is in short supply, as is often the case at the bottom of deep ponds. Where oxygen is in short supply, larvae may breathe air at the water's surface, filling their lungs (which in the case of *Limnodynastes* species develop at an early age) with fresh air. With fresh oxygen in their lungs, larvae can tolerate the hypoxic conditions (low oxygen level) at the bottom of ponds where they feed.

Limnodynastes tadpoles, however, aren't the only frog larvae which surface to breathe. *Mixophyes* (barred frog) larvae will similarly surface for oxygen, although less frequently. Larvae of many tree frogs (*Litoria*) species will also surface to breathe but rather than bobbing up and diving straight back down, they'll spend time gulping air at the surface before diving down again (unless of course they're disturbed, in which case they'll dive straight under).

Limnodynastes larvae on the other hand 'bob up' from below, gulp air once (in a blink of an eye) and dive straight down again. *L. terraereginae* larvae regularly throw their entire body out of the water making a splash on re-entry when surfacing to breathe. *Mixophyes* species exhibit similar behaviour but

tend to surface less frequently and, at times, spend time gulping air at the water's surface in the same way *Litoria* larvae do. *Mixophyes fasciolatus*, the great barred frog, is a common species at Mapleton and, if these are *Mixophyes* tadpoles they are more likely *M.fasciolatus*.

If you want more information on tadpoles identification, grab your self a copy of Marion Anstis's 'Tadpoles of South-eastern Australia' (available through Qld. Frog Society). 'Wet Forest Frogs of SE Qld' (also available through Qld Frog Society) which has information on tadpoles of wet forest frogs in the Mapleton area might be worth a look. Ed Myer.

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