15 JULY 2025 WWW.QLDFROGS.ASN.AU MID-WINTER EDITION

FROGSHEET

Litoria rubella; Photo by Ashley Keune

IN THIS ISSUE

Litoria peronii; Photo by Ashley Keune

Thank you to our supporters!

Public Trust Fund: Total now stands at $13,024.42

Any donations over $2.00 are tax deductable, and all are added to our **research grant fund**, which is awarded annually

President's Report

Hello once again to all our QFS members. It has been lovely to have a good stretch of drier weather finally. We have had some glorious days around the southeast of the state with a few cooler mornings and plenty of sunshine. I would like to congratulate Jono and Bethany on the birth of their second child towards the end of May, little Oliver Patrick Hooper. We welcome your new baby with wishes of good health and happiness.

From July 11th to 13th, the QFS participated in the Queensland Garden Expo at Nambour. We express our sincere gratitude to the Sunshine Coast Council for providing us with the opportunity to be part of the Living Backyard section of the expo. It was great to participate in this significant event once again, as it is the most prominent event on our calendar. The Queensland Garden Expo consistently offers a valuable platform for disseminating information about frogs in our environment and educating attendees on how to attract frogs to their gardens. Throughout the three days of the expo, we engaged with numerous individuals and provided educational support regarding frog conservation.

We extend special thanks to all the volunteers who contributed to the success of our stall this year. These include Jono, Desley, Kayla, Julia, Olivia, Jani and Elizabeth. Your support was essential in ensuring the successful operation of our stall at the event. It was a pleasure working with many of you during the expo, and we look forward to collaborating with you again in future displays and workshops. We are particularly grateful to Jono for his efforts in coordinating our involvement with the council and expo organizers prior to the event.

During the Queensland Garden Expo, we proudly showcased our new marquee, which was mostly funded by the Sunshine Coast Regional Council. A massive thank you for the support and helping us with the costs of this new addition. We are extremely impressed with the addition of this marquee to our educational display. The marquee looks amazing and allows us to be identified easily, and it also gave us the opportunity to be able to use the marquee walls as an interactive display. Another big thank you to Jono for all the work liaising with the council and the marquee company and also for putting the designs together for the printing of the roof and walls. A big effort!!

Our Vice President, Ryan has been organising our newest addition to the sale items over the last few months. We now have our frog stress toys which have our logo on them which are a cool addition to our sales. A big thank you for getting these ready for the QFS. If you are interested in buying one of these, they will be available in the online shop in the coming weeks or available at our displays.

In the upcoming weeks, we will participate in another major event which is the Off Grid Lifestyle Expo at Gympie Showgrounds. This event will take place on Saturday, August 2nd, and Sunday, August 3rd, from 9:00 am to 4:00 pm each day.

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Having been involved with this event for several years, we eagerly anticipate our involvement and to observe the continued growth of this event. If you are interested in volunteering on either day of this event, please contact us. Additionally, if you are in the vicinity, we encourage you to visit our stall and come check out our new marquee and sale items.

The Containers for Change Program has successfully continued to receive donations over the past several weeks. We appreciate everyone who has donated recyclable containers to the Queensland Frog Society. Up until the end of the financial year we have raised $530 since we joined the program in January 2024, which represents a victory for both environmental conservation and frog research. Our team member number for donations to the Queensland Frog Society is C11218433. Please feel free to share this number with friends and family to further support our cause. Also a big thank you to those who have donated to the Public Trust Fund towards the end of the financial year. All of this money will go towards our next Ric Nattrass Research Grant recipient.

Regarding the Ric Nattrass Research Grant, there will be a few changes to the application times, the amount available and a few other aspects of the grant. We are excited to put these changes into place over the coming weeks as well. We will send out more information about these changes once they have all been implemented. We look forward to seeing if these changes encourage more people to take up research into frogs in Queensland.

Take care of yourselves, look out for each other and our environment.

Kind regards
Ashley Keune

PHIL BIRD RECOGNISED WITH COOPER GREATS AWARD

Congratulations to Phil Bird, long-time convenor of the Bowman Park Frog Habitat Group in Bardon, on receiving a Cooper Greats Award in recognition of his outstanding service to the community.

Phil has been instrumental in transforming and protecting the frog habitats along Ithaca Creek and the aptly named "Frog Creek" in Bowman Park. Through his leadership, the group has helped restore vital riparian habitat in Brisbane's inner west, supporting local biodiversity and creating a haven for native frog species.

As he steps down from his role with the Habitat Brisbane group he helped establish, Phil leaves behind a legacy of environmental stewardship and grassroots conservation.

Thank you, Phil, for your incredible contribution to frog conservation in Queensland.

BUILD A FROG SPA TO HELP FIGHT DEADLY FUNGUS

Have you heard of the frog spa? We mentioned it in our Mid-Winter 2024 edition as an exciting new tool in the fight against chytrid fungus, but we didn't share how to make one yourself.

To recap: frog spas (also called saunas) help frogs recover from chytridiomycosis by raising their body temperatures high enough to clear the infection. Once recovered, frogs are often resistant to reinfection, even in cooler conditions. Best of all, the design is cheap, easy, and backyard-friendly.

HOW TO BUILD A FROG SPA

You'll need:

- 10 perforated masonry bricks
- Black furniture paint
- A small greenhouse (from a garden centre or DIY version)

Steps:

1. Paint bricks black (furniture paint) to absorb heat.
2. Stack three bricks on their sides with holes horizontal and a thumb-width gap between each.
3. Add two more layers, alternating direction for stability, and place one brick on top.
4. Cover with your greenhouse, leaving a small gap at the bottom so frogs can enter and exit.

Tip:
Place your spa in a sunny, damp area—ideally near a pond or dense vegetation. Winter and early spring are the most helpful times to set one up.

Photo from University of Tasmania

FROZEN, NOT DEAD: THE INCREDIBLE SURVIVAL OF THE WOOD FROG

In the freezing forests of Alaska, one frog pulls off a near-impossible survival trick. The wood frog (Lithobates sylvaticus) endures the harsh winter by freezing solid, heart stopped, body stiff, only to thaw out and hop away come spring.

This isn't a death sentence. It's a survival strategy.

When cold weather hits, the wood frog's body begins to freeze. But instead of being damaged by ice, it goes into a suspended state. The liver releases large amounts of glucose into the blood, while the kidneys retain urea. Together, these substances act like natural antifreeze, protecting the frog's cells from bursting or collapsing during freezing.

The result? A frozen frog that can survive for months in sub-zero temperatures as low as −18°C. Once warmer weather returns, the frog thaws out and continues on as if nothing happened.

Scientists believe that repeated freeze-thaw cycles in nature may actually increase the frog's cold tolerance by gradually building up higher concentrations of glucose in its tissues.

The wood frog's incredible adaptation is rivalled only by a few species worldwide, including Siberian salamanders that survive even lower temperatures.

It's a powerful reminder that frogs aren't just delicate, they're some of the toughest survivors around.

CLIMATE CRISIS CREEPS UP ON AMPHIBIANS

A new global study has found that rising temperatures are already proving deadly for amphibians, and the situation could worsen fast.

Published in Nature, the research shows that over 100 amphibian species (about 2%) are currently facing heat stress in their natural habitats, with temperatures exceeding what their bodies can tolerate. If global warming continues unchecked, this number could rise to 7.5% of all amphibians by the end of the century.

Amphibians, including frogs, toads, and salamanders, rely on external temperatures to regulate their body heat. When their environments get too hot, they simply can't survive.

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The study identified climate "hotspots" such as the southeastern U.S., the Amazon, and parts of northern Australia where many amphibians are already overheating. Ground-dwelling species are especially at risk, while aquatic species fare slightly better.

Perhaps most worrying is the forecasted tipping point: if the planet warms by 2–4°C beyond pre-industrial levels (which is likely without urgent emissions cuts), overheating days will increase dramatically.

This matters not just for frogs, but for entire ecosystems. Amphibians help control insect populations, cycle nutrients, and serve as food for birds, mammals, and fish. Their decline can even affect human health — one study linked amphibian loss in Central America to a rise in malaria cases.

The researchers stress the need to protect shade-rich, water-abundant habitats and invest in conservation strategies like captive breeding and habitat restoration. But they also make one thing clear: unless we tackle climate change at its source, these efforts may not be enough.

HYBRIDS THREATEN RARE AUSSIE FROG

The Booroolong frog, once thought extinct, was rediscovered in New South Wales in 2017. Since then, conservationists have worked hard to protect it, but a new challenge has emerged.

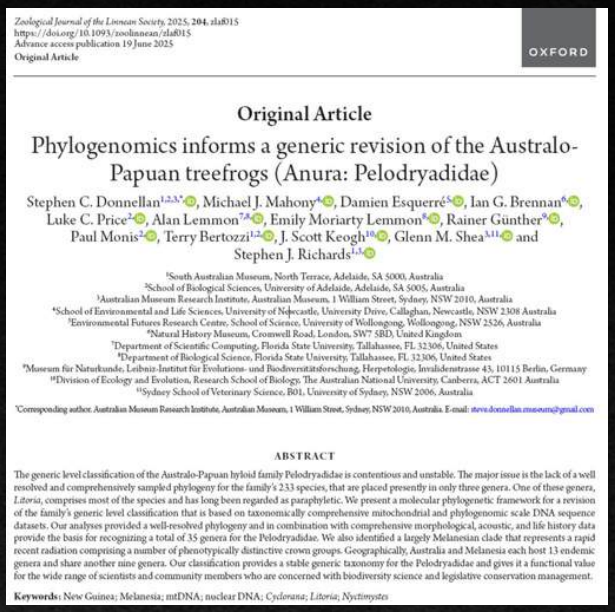
Litoria booroolongensis; Photo by Ken Griffiths

Researchers recently found that Booroolong frogs are interbreeding with the more common eastern stony creek frog. These hybrid frogs can be hard to spot, with many looking identical to one parent species. In some areas, over 30% of frogs tested were hybrids.

While hybridisation is natural, it can threaten rare species if hybrids begin outcompeting them for food or habitat. For frogs already under pressure, this added strain could push them closer to extinction.

The findings highlight the importance of genetic testing in conservation. Without it, species like the Booroolong frog may be disappearing right before our eyes.

22 AUSTRALIAN TREEFROG GENERA NOW RECOGNISED



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Original Article

OXFORD

Original Article

Phylogenomics informs a generic revision of the Australo-Papuan treefrogs (Anura: Pelodryadidae)

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ABSTRACT

The generic level classification of the Australo-Papuan hyloid family Pelodryadidae is contentious and unstable. The major issue is the lack of a well resolved and comprehensively sampled phylogeny for the family's 233 species, that are placed presently in only three genera. One of these genera, *Litoria*, comprises most of the species and has long been regarded as paraphyletic. We present a molecular phylogenetic framework for a revision of the family's generic level classification that is based on taxonomically comprehensive mitochondrial and phylogenomic scale DNA sequence datasets. Our analyses provided a well-resolved phylogeny and in combination with comprehensive morphological, acoustic, and life history data provide the basis for recognizing a total of 35 genera for the Pelodryadidae. We also identified a largely Melanesian clade that represents a rapid recent radiation comprising a number of phenotypically distinctive crown groups. Geographically, Australia and Melanesia each host 13 endemic genera and share another nine genera. Our classification provides a stable generic taxonomy for the Pelodryadidae and gives it a functional value for the wide range of scientists and community members who are concerned with biodiversity science and legislative conservation management.

Keywords: New Guinea; Melanesia; mtDNA; nuclear DNA; *Cyclorana*; *Litoria*; *Nyctimystes*

In mid-June a very large study was published, reviewing the taxonomy of the Austro-Papuan "treefrogs" previously assigned to Litoria, Nyctimystes and Cyclorana (or Ranoidea).

This study recognises 35 genera to capture the wide range of morphologies and life histories contained within this group of some 230+ species, that occur from deserts through to semi-arid, alpine, subalpine, temperate, subtropical and tropical realms of Australia, New Guinea and the Solomons.

There are now 13 endemic genera each within Australia and Melanesia. 22 genera occur within Australia, of which, 18 occur in Queensland.

We expect it will take a while for these revised genera to be bedded down within the taxonomies used by state conservation agencies (e.g. WildNet), museums, Atlas of Living Australia and citizen science platforms like FrogID and iNaturalist. Please be patient as we at the QFS begin to update our resources and website to account for the revised genera.

Senior Conservation Officer at QPWS and QFS life member Harry Hines commented on the paper: "...it is highly likely that this taxonomy will be widely accepted and utilised."

Since the paper has been released, we have been putting together a few resources to assist the keen frogger through to the ecologist to better understand exactly what the changes are and explain some of the reasoning behind the new genera.

- Spreadsheet with list of all treefrogs with former and new Genus included (courtesy of Grant W).
- Spreadsheet with etymology of new Genera explained

Below are Australian frogs sorted alphabetically by species name showing their new genus and species combinations. Those occurring in Queensland indicated by an X or ?:

X Cyclorana alboguttata
X Cyclorana australis
X Cyclorana brevipes
X Cyclorana cryptotis
X Cyclorana cultripes
? Cyclorana longipes
? Cyclorana maculosa
? Cyclorana maini
X Cyclorana manya
X Cyclorana novaehollandiae
Cyclorana occidentalis
X Cyclorana platycephalus
Cyclorana vagitus
X Cyclorana verrucosa
Coggerdonia adelaidensis
X Melvillihyla andiirrmalin
Ranoidea aurea
Mahonabatrachus aurifer
Litoria axillaris
X Colleeneremia balatus
Dryopsophus barringtonensis
X Chlorohyla bella
X Carichyla bicolor
Rhyaconastes booroolongensis
X Sylvagemma brevipalmata
Saganura burrowsae
X Pelodryas caerulea
Rawlinsonia calliscelis
Ranoidea castanea
Pelodryas cavernicola
X Chlorohyla chloris
Dryopsophus citropa
X Drymomantis cooloolensis
X Litoria coplandi
X Rawlinsonia corbeni
Ranoidea cyclorhyncha
Megatestis dahlii
Dryopsophus daviesae
X Eremnoculus dayi
X Colleeneremia dentata
X Colleeneremia electrica
X Spicicalyx eucnemis
X Rawlinsonia eungellensis
Rawlinsonia ewingii
X Drymomantis fallax
X Litoria freycineti
Pelodryas gilleni
X Chlorohyla gracilenta
X Litoria inermis
X Sandyrana infrafrenata
Rawlinsonia jervisiensis
X Rhyaconastes jungguy
X Dryopsophus kroombitensis
Colleeneremia larisonans
X Litoria latopalmata
Rhyaconastes lesueurii
Rawlinsonia littlejohni
X Mahonabatrachus longirostris
X Mosleyia lorica
Mahonabatrachus meirianus
X Mahonabatrachus microbelos
Ranoidea moorei
X Spicicalyx myola
X Mosleyia nannotis
X Litoria nasuta
X Litoria nigrofrenata
Dryopsophus nudidigitus
X Mosleyia nyakalensis
X Drymomantis olongburensis
X Litoria pallida
Rawlinsonia paraewingi
X Dryopsophus pearsoniana
X Pengilleyia peronii
Litoria personata
Dryopsophus phyllochrous
Dryopsophus piperata
X Colleeneremia pyrina
Colleeneremia quiritatus
Ranoidea raniformis
X Rawlinsonia revelata
X Mosleyia rheocola
X Pengilleyia ridibunda
X Pengilleyia rothii
X Colleeneremia rubella
X Spicicalyx serrata
Rawlinsonia sibilus
X Litoria spaldingi
Dryopsophus spenceri
Pelodryas splendida
Litoria staccato
X Dryopsophus subglandulosus
X Litoria tornieri
X Pengilleyia tyleri
X Rawlinsonia verreauxii
Litoria watjulumensis
Rawlinsonia watsoni
X Rhyaconastes wilcoxii
X Chlorohyla xanthomera

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A WARM WELCOME TO NEW QFS MEMBERS!

Christine Crane, Mudge Stephen, Lily Steel, Dana Bertram.

DATES FOR YOUR DIARY...

2-3 August 2025
Off Grid Expo
Gympie Showgrounds

2pm-3.30pm 17 August 2025
Toowoomba Bromeliad and Succulent Society Inc.

PLEASE EMAIL **EDITOR@QLDFROGS.ASN.AU** WITH ARTICLES FOR INCLUSION IN FROGSHEET!

DEADLINE FOR THE WINTER FROGSHEET CONTRIBUTIONS IS

14 AUGUST 2025