

Two new species of frogs in the genus *Adelotus* Ogilby, 1907 from Queensland Australia (Anura: Limnodynastidae).

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ABSTRACT

The divergent genus *Adelotus* Ogilby, 1907 has until now been recognized by all herpetologists as consisting just one species. The relatively non-descript small brown frog known as *Adelotus brevis* (Günther, 1863) otherwise known as the Tusked Frog, is a common species found from the central coast of New South Wales, through wetter areas to south-east Queensland. Outlier populations are found in relictual areas of wet forests and hilly wet forests away from the coast in South-east Queensland and also near the coast in mid north Queensland, near Mackay and Townsville.

Inspection of specimens from two locations (namely Canarvon Gorge, National Park) and Eungella in Queensland shows that the specimens differ significantly in morphology from the geographically separated type race and they are herein described as two separate species in accordance with the *International Code of Zoological Nomenclature*, current, in force edition (Ride *et al.* 1999).

Keywords: Taxonomy; frogs; Anura; Limnodynastidae; genus *Adelotus*; species; *brevis*; Queensland; New South Wales; Australia; Canarvon Gorge; Eungella; Mackay; new species; *griffithsi*; *valentici*.

INTRODUCTION

The divergent genus *Adelotus* Ogilby, 1907 has until now been recognized by all herpetologists as consisting just one species.

This is seen for example in the major publications of Cogger *et al.* (1983), Wells and Wellington (1985) and more recently that of Cogger (2014).

The relatively non-descript small brown frog known as *Adelotus brevis* (Günther, 1863) otherwise known as the Tusked Frog, is a common species found from the central coast of New South Wales, through wetter areas to south-east Queensland. Outlier populations are found in relictual areas of wet forests and hilly wet forests away from the coast in South-east Queensland and also near the coast in mid north Queensland, near Mackay and Townsville.

Notwithstanding the fact that the species (as recognized) is found in areas with species that are larger and "more interesting" to herpetologists, the neglect by taxonomists of the species (or species complex as asserted herein) is surprising considering the publication of a significant paper by Ken Griffiths in 2001.

That paper, cited herein as:

Griffiths, K. 2001. Observations of unusual *Adelotus* in the Carnarvon Ranges, Queensland. *Herpetofauna*, 31(2):97-98, gave in effect a detailed description of what was clearly a new and distinct species of *Adelotus* from the Canarvon Ranges National Park in Queensland.

Had he named a holotype, (he cited a candidate animal in the Queensland Museum) and had he published the paper as a description with a new name in accordance with the provisions of the *International Code of Zoological Nomenclature* (Ride *et al.*

1999), he would have published a very good description of the said taxon, albeit with a few relatively minor mistakes that could be easily corrected by later authors.

At the time I read the paper, my sentiments were exactly as surmised above and in view of the provisions of the *International Code of Zoological Nomenclature* that effectively states that persons with a stated interest in a new and unnamed taxon should have priority in rights to name it, I did not seek to describe the taxon on the assumption someone else would.

Since then, published accounts of *Adelotus*, including for example Cogger (2014) have continued to refer to this outlier population as *Adelotus brevis* and some 15 years have elapsed and the taxon remains unnamed!

In order to correct this anomaly, the unnamed taxon from the Canarvon Ranges National Park in Queensland is herein named *Adelotus griffithsi* sp. nov. in recognition of the work he did in compiling his 2001 paper cited herein, which in turn assisted in directing me to inspect further specimens of the relevant taxa, noting I have been working with these animals since the 1970's.

Specimens from the Mackay/Eungella region were also inspected and found to be significantly different from those of the nominate form found further south (in NSW), and so they too are named as a new species in accordance with the rules of the *International Code of Zoological Nomenclature*.

That taxon is named *Adelotus valentici* sp. nov. in honour of Robert Valentic of Donnybrook, Victoria in recognition of more than two decades of excellent intensive herpetological fieldwork across Australia and more recently in south-east Asia, best encapsulated in the many high class photographs he has

produced and published, which are readily found by search of the internet and are of use to scientists such as myself.

ADELOTUS GRIFFITHSI SP. NOV.

Holotype: A preserved specimen, specimen number J86019 at the Queensland Museum, Brisbane, Queensland, Australia collected at Canarvon Gorge National Park, Queensland, Australia. (The specimen has a second number of 1312814).

The Queensland Museum is a government owned facility that allows access to its holdings.

Paratype: A preserved specimen, specimen number J16269 at the Queensland Museum, Brisbane, Queensland, Australia collected at Canarvon Gorge National Park, Queensland, Australia.

Diagnosis: In contrast with the nominate form, the species *A. griffithsi sp. nov.* has a venter in both sexes that is generally an opaque off-white in colour with well defined tiny white flecks, which sometimes merge to form small blotches. The dark grey venter with large white blotches, splotches or marbling as seen in the nominate form from northern NSW and southern Queensland in both sexes is not seen in *A. griffithsi sp. nov.* Griffiths (2001) noted an absence of the "red colouration on the backs of the legs and groin region which is typical of *Adelotus brevis* in New South Wales", (the non-italicized name a typographical error in that paper) but (obviously unknown to Griffiths in 2001), this red colouration is in fact seen in females of *A. griffithsi sp. nov.*

However other comments by Griffiths (2001) relating to differences in colour between the taxa are in fact correct.

The red flashes on the back of the hind legs and groin region is orange in *Adelotus griffithsi sp. nov.*

Adelotus valentici sp. nov. are separated from the other two species by a grayish-white venter characterised with numerous white flecks, and orange flecks under the forebody. There is a semi-distinct whitish line along the labial line (the mouth), not seen in the other species. The red flashes on the back of the hind legs and groin region is orange in *Adelotus valentici sp. nov.*

Cogger (2014) gives a detailed diagnosis of the genus *Adelotus* and how it is separated from all other genera of frogs in Australia.

Distribution: Known only from the Canarvon Gorge National Park in south-east Queensland, Australia.

Etymology: Named in honour of Sydney based reptile enthusiast Ken Griffiths, not only in recognition of his 2001 paper on *Adelotus*, but also of his other work in producing mass-market books on the identification of Sydney's reptiles.

ADELOTUS VALENTICI SP. NOV.

Holotype: A preserved specimen, specimen number J59473 at the Queensland Museum, Brisbane, Queensland, Australia collected at Broken River, Eungella, Queensland, Australia. (The specimen has a second number of 1877541).

The Queensland Museum is a government owned facility that allows access to its holdings.

Paratype: A preserved specimen, specimen number J53387 at the Queensland Museum, Brisbane, Queensland, Australia collected at Rocky Dam Ck, via Crediton (near Mackay, NQ), Queensland, Australia. (The specimen has a second number of 1977757).

Diagnosis: *Adelotus valentici sp. nov.* are separated from the other two species by a grayish-white venter characterised with numerous white flecks, and orange flecks under the forebody. There is a semi-distinct whitish line along the labial line (the mouth), not seen in the other species, which have dark bands, blotches and the like running to the labial line of the mouth. The red flashes on the back of the hind legs and groin region is orange in *Adelotus valentici sp. nov.*

In contrast with the nominate form, the species *A. griffithsi sp. nov.* from the Canarvon Ranges National Park in Queensland,

has a venter in both sexes that is generally an opaque off-white in colour with well defined tiny white flecks, which sometimes merge to form small blotches. The dark grey venter with large white blotches, splotches or marbling as seen in the nominate form from northern NSW and southern Queensland in both sexes is not seen in *A. griffithsi sp. nov.*

Griffiths (2001) noted an absence of the "red colouration on the backs of the legs and groin region which is typical of *Adelotus brevis* in New South Wales", (the non-italicized name a typographical error in that paper) but (obviously unknown to Griffiths in 2001), this red colouration is in fact sometimes seen in females of *A. griffithsi sp. nov.*

However other comments by Griffiths (2001) relating to differences in venter colour between the taxa are in fact correct and diagnostic of the two forms in terms of separating them.

The red flashes on the back of the hind legs and groin region is orange in *Adelotus griffithsi sp. nov.* as opposed to red.

Nominate *A. brevis* are characterised by significantly darker base colour of the throat and venter (dark grey to black), than seen in the other two newly described species of *Adelotus*.

Cogger (2014) gives a diagnosis of the genus *Adelotus* and how it is separated from all other genera of frogs in Australia.

Distribution: Known only from the Mackay area, lower north Queensland coast, Australia.

Etymology: Named in honour of Robert Valentic of Donnybrook, Victoria, Australia, in recognition of a lifetime's work in the field collecting and studying reptiles, including many lesser known forms, across most parts of Australia and also various places outside Australia.

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CONFLICT OF INTEREST

The author has no known relevant conflicts of interest.

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