Australasian Journal of Herpetology 75:60-62.
Published 6 May 2025.

ISSN 1836-5698 (Print)
ISSN 1836-5779 (Online)

Yet another new species of *Crinia* Tschudi, 1838, subgenus *Ranidella* Girard, 1853 from New South Wales, Australia.

LSIDURN:LSID:ZOOBANK.ORG:PUB:B04F5BA5-7E25-46A0-AF78-5C57933B6E90

RAYMOND T. HOSER
LSID urn:lsid:zoobank.org:author:F9D74EB5-CFB5-49A0-8C7C-9F993B8504AE

488 Park Road, Park Orchards, Victoria, 3134, Australia.
***Phone*: +61 3 9812 3322 *Fax*: 9812 3355 *E-mail*: snakeman (at) snakeman.com.au**
Received 26 March 2025, Accepted 30 March 2025, Published 6 May 2025.

ABSTRACT

Following on from the paper of Hoser (2023) that named four species and two subspecies in the *Crinia* (*Ranidella*) *signifera* Girard, 1853 species group, this paper formally names a hitherto unnamed species until now treated by most authors either as an aberrant population of *Crinia* (*Ranidella*) *signifera* Girard, 1853 or alternatively an "unidentified" small frog.

It is known to occur within a fairly small area of central and western New South Wales, from the upper Blue Mountains at Wentworth Falls, where it appears to be sympatric with typical *C. signifera* and remains so to near Bathurst and west to at least as far as Orange and Canobolas.

Formally named herein as *C. vellai sp. nov*. it is readily separated from all other species in the *Crinia* (*Ranidella*) *signifera* Girard, 1853 complex as described by Hoser (2022) by a unique combination in adult females of large size 35 mm (versus to 30 mm in *C. signifera* and 30 mm or less in other species in the genus), extensive elongated ridging on the upper part of the dorsum, between eye and body, being either side of the vertebral axis, raised warts on the upper surfaces of the limbs and carbuncles on the upper surface of the rear of the body, ventrally scaly in appearance, a slightly stockier build, shorter body and blunter snout, distinctive black post-ocular bar to the axila of the front leg and reddish above the iris rather than below. Ventrally (in females) the posterior is mainly whitish posteriorly and anteriorly mainly black, on the black scaly areas, each so-called scale is usually smudged white or white tipped and differentiation between black and white on the lower abdomen is sharp and well defined, typically with black on either side and in the centre and the rest white, versus marbled black (white interspaces) on the side black areas in adult female typical *C. signifera*.

Keywords: Taxonomy; Amphibia; nomenclature; frog; Australia; NSW, Victoria; Bairnsdale; Cann River; *Crinia*; *Ranidella*; *Lowingdella*; *Oxyodella*; species; *signifera*; *roypailsei*; *aagh*; *lynnepailsae*; *fiacummingae*; subspecies; *aberrans*; *kroombitensis*; new species; *vellai*.

INTRODUCTION

In recent years, as a result of an audit of most of Australia's frogs, I, Raymond Hoser published descriptions of dozens of new frog genera and species, including in the papers of Hoser (2016, 2019a, 2020a-f, 2023).

These papers effectively audited all Australasian frogs except for the microhylids; that group being subject of an ongoing audit.

Included in the earlier papers were four species and two subspecies in the *Crinia* (*Ranidella*) *signifera* Girard, 1853 species group.

These were *Crinia aagh* Hoser, 2023, *Crinia aberrans* Hoser, 2023, *Crinia fiacummingae* Hoser, 2023, *Crinia lynnepailsae* Hoser, 2023, *Crinia roypailsei* Hoser, 2023 as well as the subspecies *Crinia signifera aberrans* Hoser, 2023 and *Crinia signifera kroombitensis* Hoser, 2023.

Hoser (2020) also named six taxa within the *Crinia* Tschudi, 1838 subgenera of *Lowingdella* Hoser, 2020 and *Oxyodella* Hoser, 2020.

A very small number of candidate species were not formally named at the time the preceding papers were published, pending inspection of further specimens.

One of these taxa was putative *Crinia signifera* Girard, 1853 from the upper Blue Mountains and west of there in nearby parts of New South Wales, Australia.

MATERIALS, METHODS AND RESULTS

Live specimens of relevant putative *C. signifera* from the region between Wentworth Falls and Orange as flagged in the book of Hoser (1989) and the paper of Symula *et al.* (2008) were inspected and compared with all other known and named forms as including those published or identified by name in Hoser (2023).

They did not match any previously named forms, but based

on the image on page 43 bottom of Hoser (1989) and the molecular results of Symula *et al.* were both morphologically and genetically divergent from the type form of *C. signifera* from the same region.
Symula *et al.* at fig. 3, found divergences of all relevant forms to be in excess of 2 MYA, including the larger than usual form found in the Upper Blue Mountains at Wentworth Falls, west to at least Orange and Canobolas, flagging it as a candidate species.
Since the publication of Hoser (2023), Matthew Vella a herpetologist from Penrith in New South Wales, sent me a number of images of a second female of the same taxon photographed in Hoser (1989) on page 43 bottom and we spoke at length about our findings with regards to the taxon.
I then was able to inspect other specimens of putative *Crinia signifera* from the Upper Blue Mountains and west to Orange in New South Wales, including photos sent to me by Matthew Vella of the larger form.
From a viewing of relevant images on the photo sharing websites "Inaturalist" and "Flickr" it appeared that at least as far as Lithgow, both forms appeared to be sympatric and not hybridising, implying a full species division.
From west of Lithgow to Orange in New South Wales, the larger form appears to be the only taxon.
In any event, these findings confirmed that the larger form was an unnamed species and so it is formally named herein as *Crinia (Ranidella) vellai sp. nov*..
References cited within the papers of Hoser (2016, 2019a, 2020a-f, 2023) and sources cited therein also formed the basis of the taxonomic and nomenclatural conclusion herein.
The statements with respect of the species description herein are those of Hoser (2023) and the comments with regards to the long-term conservation of the species and subspecies named in Hoser (2016, 2019a, 2020a-f, 2023) apply herein to this taxon.
I also mention that with a divergence of over 3 MYA from nominate *C. signifera*, *C. signifera aberrans* Hoser, 2023, should in retrospect be treated as a full species and so is herein elevated to that status.
The other subspecies named in Hoser (2023), *C. signifera kroombitensis* Hoser, 2023, is also quite likely a full species rather than a subspecies, but it is presently still treated as a subspecies in the absence of molecular evidence one way or other.

INFORMATION RELEVANT TO THE FORMAL DESCRIPTION THAT FOLLOWS

There is no conflict of interest in terms of this paper or the conclusions arrived at herein.
Several people including anonymous peer reviewers who revised the manuscript prior to publication are also thanked as a relevant staff at museums who made specimens and records available in line with international obligations.
In terms of the following formal description, spelling should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature, being the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as administered by the International Commission on Zoological Nomenclature.
Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 28 March 2025.
Unless otherwise stated explicitly, colour descriptions apply to living adult female specimens of generally good health and not under any form of stress by means such as excessive cool, heat, dehydration or abnormal skin reaction to chemical or other input.
Adult males are on average smaller in size and with a less elongate body.
While numerous texts and references were consulted prior to publication of this paper, the criteria used to separate the relevant species has already been spelt out and/or is done so within each formal description and does not rely on material within publications not explicitly cited herein.
Delays in recognition of this species could jeopardise the long-term survival of thus taxon as outlined by Hoser (2019b, 2019c, 2023) and sources cited therein.
This is especially with respect of this newly named taxon as it may be at risk of hybridisation with translocated individuals of putative *C. signifera* from elsewhere, which regularly get transported by people in pot plants and the like, overlooked often due to their tiny size and cryptic colouration.
See also Hoser (1995) and Hoser and Valentic (1996).

CRINIA* (*RANIDELLA*) *VELLAI SP. NOV.

LSIDurn:lsid:zoobank.org:act:49708750-A4C4-40F4-943D-22E2A8378196

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.167692 collected at Macquarie Woods, New South Wales, Australia, Latitude -33.41146 S., Longitude 149.30896 E. This government-owned facility allows access to its holdings.
Paratypes: Two preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.167695 and R.167699 both collected at Macquarie Woods, New South Wales, Australia, Latitude -33.41146 S., Longitude 149.30896 E.
Diagnosis: *C. vellai sp. nov*. it is readily separated from all other species in the *Crinia* (*Ranidella*) *signifera* Girard, 1853 complex as described by Hoser (2022) by a unique combination of the following characteristics:
In adult females, being of an unusually large size of 35 mm length (versus to 30 mm in *C. signifera* and 30 mm or less in other species in the subgenus *Ranidella* Girard, 1853), amplified by a stockier and more robust build, versus obviously more elongate and rectangular in shape on the body of other *Ranidella* species; extensive elongated ridging on the upper part of the dorsum, between eye and body, being either side of the vertebral axis similar to that seen in *C. roypailsei* Hoser, 2023, raised warts on the upper surfaces of the limbs and carbuncles on the upper surface of the rear of the body, ventrally scaly in appearance, caused by the extreme expansion in size of the tubercles, distinctive black post-ocular bar to the axila of the front leg and reddish above the iris rather than below. Ventrally (in females) the posterior is mainly whitish posteriorly and anteriorly mainly black, on the black scaly areas, each so-called scale is usually smudged white or white tipped and differentiation between black and white on the lower abdomen is sharp and well defined, typically with black on either side and in the centre and the rest white, versus marbled black, distinctive white interspaces or peppered black on white on the side black areas in adult female typical *C. signifera* and other species in the subgenus *Ranidella.*
Flanks of females are distinctively dark greyish or blackish in overall colour.
Adult male *C. vellai sp. nov*. while smaller than females are relatively larger than those seen in the other *Ranidella* species. They are also stockier in average build than counterparts in the other *Ranidella* species.
The most common colour form of males is with a dorsal colour pattern that is a three-way combination of dark brown, light brown and light reddish brown.
These are arranged with light brown on the anterior snout, infused with stripes of dark brown from eye to snout and in the middle of the top of the anterior snout. There is a triangular dark brown crown between the eyes, the apex pointing in a posterior direction. Behind that is a V-shaped section of light brown, followed by two broad dark-brown paravertebrtal stripes that extend to the rear of the body. On either side of these paravertebral stripes the dorsum is a light reddish brown, bordered on the vertebral edge by a rapid lightening to form a thin near yellow stripe. Flanks are mainly an even dark brownish grey colour.
Both sexes have a distinctive orange-brown wash through their colouration or colour pattern and/or alternatively large areas of pigment colour that is orangish to reddish brown.
Males have a call that is an extended single pulse, versus a distinctive alternating two pulse call in the type form of *C.*

signifera (Girard, 1853), which is otherwise the most similar other species in the genus and that to which *C. vellai sp. nov*. is closest to by way of molecular divergence.
The call of *C. vellai sp. nov*. can be found online at:
https://www.inaturalist.org/observations/228574604
recorded by Marita Sydes on 11 July 2024 at Bloomfield Road, Orange, New South Wales, Australia.
C. vellai sp. nov. is depicted in life in Hoser (1989) on page 43 at bottom right and online at:
https://www.inaturalist.org/observations/153304470
being an adult female photographed by Brian Rosenberg at Vittoria, New South Wales, 2799, Australia on 27 March 2023, and
https://www.inaturalist.org/observations/102402804
being a pair of adults (male and female) in amplexus photographed by "telopea95" on 29 November 2021 at Windradyne, New South Wales, 2795, Australia.
C. signifera of the type form from New South Wales is depicted in Hoser (1989) on page 23, Anstis (2013) pages 576 (right) to 579 and Cogger 2014 on page 83, or online at:
https://www.inaturalist.org/observations/55013920
All species within the *Crinia signifera* (Girard, 1853) species group, including that formally named for the first time in this paper and those named in Hoser (2023), and those otherwise resurrected from synonymy with that species (*C. signifera*) in Hoser (2023), are separated from all other species in the genus *Crinia* Tschudi, 1838, by the following unique suite of characters: Obviously granular belly in adults, ranging to near scaly in appearance in *Crinia vellai sp. nov.*; adults have more-or-less dermal fringes on the toes; no pink or red on the hind side of the thighs; no median white line on the throat; throat of breeding male is dark with white pectoral spots; belly of female is boldly blotched with black and white in some kid of configuration; both sexes usually but not always have warts or carbuncles of some form, although some individuals of some species mat be wholly smooth skinned, palm is tubercular; vomerine teeth absent (derived from Cogger, 2014).
Cogger (2014) on page 71, also provides a key that separates species of the genus *Crinia* from other Myobatrachid frog species.
According to Symula *et al*. (2008) *Crinia vellai sp. nov.* diverged from its nearest relatives more than 2 MYA, the closest related species being the type form of *C. signifera* (Girard, 1853).
Distribution: To date *Crinia vellai sp. nov.* is only known from a fairly small area of central and western New South Wales, from the upper Blue Mountains at Wentworth Falls, where it appears to be sympatric with typical *C. signifera* and remains so to near Bathurst and west to at least as far as Orange and Canobolas.
Etymology: The species *Crinia vellaii sp. nov.* is named in honour of well-known herpetologist Matthew Vella of Penrith, New South Wales, Australia in recognition of his ongoing contributions to herpetology in Australia.

REFERENCES CITED

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh Edition). CSIRO Publishing, Collingwood, Victoria, Australia:1033 pp.
Girard, C. 1853. Descriptions of new species of reptiles, collected by the U.S. Exploring Expedition, under the command of Capt. Charles Wilkes, U.S.N. Second part: including the species of batrachians, exotic to North America. *Proceedings of the Academy of Natural Sciences of Philadelphia* 6:420-424.
Hoser, R. T. 1989. *Australian Reptiles and Frogs*. Pierson and Co., Sydney, NSW, Australia:238 pp.
Hoser, R. T. 1995. Release into Hell. *Monitor, Journal of the Victorian Herpetological Society Incorporated* 7(2):77-88.
Hoser, R. T. 2016 New frogs of the genus *Mixophyes* Günther, 1864 from Eastern Queensland, and New South Wales, Australia (Anura:Myobatrachidae). *Australasian Journal of Herpetology* 33:60-64.
Hoser, R. T. 2019a. A new species of *Philocryphus* Fletcher, 1894 (Amphibia: Myobatrachidae) from north-east Victoria and south-east New South Wales. *Australasian Journal of Herpetology* 39:6-8.
Hoser, R. T. 2019b. 11 new species, 4 new subspecies and a subgenus of Australian Dragon Lizard in the genus *Tympanocryptis* Peters, 1863, with a warning on the conservation status and long-term survival prospects of some newly named taxa. *Australasian Journal of Herpetology* 39:23-52.
Hoser, R. T. 2019c. Richard Shine *et al*. (1987), Hinrich Kaiser *et al*. (2013), Jane Melville *et al*. (2018 and 2019): Australian Agamids and how rule breakers, liars, thieves, taxonomic vandals and law breaking copyright infringers are causing reptile species to become extinct. *Australasian Journal of Herpetology* 39:53-63.
Hoser, R. T. 2020a. Three new species of frog in the genus *Limnodynastes* Fitzinger, 1843 from east Australia, two new *Platyplectron* Peters, 1863 species from east Australia and three new species of *Ranaster* Macleay, 1878 from north Australia. *Australasian Journal of Herpetology* 43:3-14.
Hoser, R. T. 2020b. The inevitable reassessment of the Australasian frog genera *Mixophyes* Günther, 1864 and *Taudactylus* Straughan and Lee, 1966, resulting in the formal descriptions of two new families, new subfamilies and tribes, three new genera, 2 new subgenera, 1 new species and 2 new subspecies. *Australasian Journal of Herpetology* 43:15-26.
Hoser, R. T. 2020c. For the first time ever! An overdue review and reclassification of the Australasian Tree Frogs (Amphibia: Anura: Pelodryadidae), including formal descriptions of 12 tribes, 11 subtribes, 34 genera, 26 subgenera, 62 species and 12 subspecies new to science. *Australasian Journal of Herpetology* 44-46:1-192.
Hoser, R. T. 2020d. Four new species of frog in the genus *Assa* from eastern Australia. *Australasian Journal of Herpetology* 47:57-63.
Hoser, R. T. 2020e. A new species of Tree Frog in the genus *Shireenhoserhylea* Hoser, 2020 from north Queensland, Australia. *Australasian Journal of Herpetology* 49:7-8.
Hoser, R. T. 2020f. 3 new tribes, 3 new subtribes, 5 new genera, 3 new subgenera, 39 new species and 11 new subspecies of mainly small ground-dwelling frogs from Australia. *Australasian Journal of Herpetology* 50-51:1-128.
Hoser, R. T. 2023 Four new species of *Crinia* Tschudi, 1838, subgenus *Ranidella* Girard, 1853 from south-east, Australia. *Australasian Journal of Herpetology* 63:38-47.
Hoser, R. T. and Valentic, R. 1996. Notes on a herpetological field trip in the Australian State of Victoria. *Monitor, Journal of the Victorian Herpetological Society Incorporated* 7(2):24-34.
Ride, W. D. L. (*ed.*) *et al.* (on behalf of the International Commission on Zoological Nomenclature) 1999. *International code of Zoological Nomenclature*. The Natural History Museum - Cromwell Road, London SW7 5BD, UK (also commonly cited as "The Rules", "Zoological Rules" or "ICZN 1999").
Symula, R., Keogh, J. S. and Cannatella, D. C. 2008. Ancient phylogeographic divergence in southeastern Australia among populations of the widespread common froglet, *Crinia signifera*. *Molecular Phylogenetics and Evolution* 47:569-580.
Tschudi, J. J. von. 1838. *Classification der Batrachier mit Berücksichtigung der fossilen Thiere dieser Abtheilung der Reptilien.* Neuchâtel: Petitpierre.

CONFLICTS OF INTEREST

None.

Cite this paper as:

Hoser, R. T. 2025. Yet another new species of Crinia Tschudi, 1838, subgenus *Ranidella* Girard, 1853 from New South Wales, Australia. *Australasian Journal of Herpetology* 75:60-62.
Published 6 May 2025.