Issue 72, 24 June 2024

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

Australasian Journal of Herpetology

Contents on page 2

Australasian Journal of Herpetology ®

Issue 72, 24 June 2024.

Contents

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

Australasian Journal of Herpetology ®

Publishes original research in printed form in relation to reptiles, other fauna and related matters, including classification, ecology, public interest, legal, captivity, "academic misconduct", etc. It is a peer reviewed printed journal published in hard copy for permanent public scientific record in accordance with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999 as amended online since), with sizeable print run and global audience and high impact.

Full details at: http://www.herp.net

Online journals (this issue) do not appear for a month after the actual and listed publication date of the printed journals. Minimum print run of first printings is at least fifty hard copies.

Australasian Journal of Herpetology 72:3-13.
Published 24 June 2024.

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

Small and overlooked. New species and subspecies within the Australian skink genera *Morethia* Gray, 1845 and the closely associated *Solvonemesis* Wells and Wellington, 1984.

LSIDURN:LSID:ZOOBANK.ORG:PUB:0A12CC84-C6E8-461E-9A4C-11291A12993A

RAYMOND T. HOSER
LSIDURN: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 12 March 2023, Accepted 20 April 2024, Published 24 June 2024.

ABSTRACT

As part of an audit of the Australian herpetofauna, a number of previously unnamed species and subspecies within the genera *Morethia* Gray, 1845 and *Solvonemesis* Wells and Wellington, 1984 were identified.

These are formally named in this paper in accordance with the *International Code of Zoological Nomenclature* (Ride *et al*. 1999) as amended (ICZN 2012).

The newly identified taxa are as follows:

Morethia woolfi sp. nov. a taxon previously identified as a divergent northern population of *M. lineoocellata* (Duméril and Bibron, 1839);

M. boulengeri bulliardi subsp. nov. from the Warburton Range, Western Australia;

M. boulengeri ralphbabeti subsp. nov. from Central Australia;

M. boulengeri robrobertsi subsp. nov. from north-east Queensland;

M. butleri scottgranti subsp. nov. from South Australia;

M. obscura wiradjuri subsp. nov. from western New South Wales;

Solvonemesis taeniopleura timhudsoni subsp. nov. from southern Queensland;

Solvonemesis taeniopleura anthonyjacksoni subsp. nov. from far north Queensland.

It is noted that the published phylogeny of Pyron *et al.* (2013) confirmed the sensibility of the erection of the genus *Solvonemesis* Wells and Wellington, 1984 to accommodate the Australian Fire-tailed Skinks, a group divergent from all the other *Morethia* species.
Keywords: Taxonomy; nomenclature; lizard; skink; *Morethia*; *Solvonemesis*; Australia; *lineoocellata*; *boulengeri*; *adelaidensis*; *butleri*; *obscura*; *exquisitus*; *taeniopleura*; *petros*; *eyremaeus*; *ruficauda*; *storri*; new species; *woolfi*; new subspecies; *bulliardi*; *ralphbabeti*; *robrobertsi*; *scottgranti*; *wiradjuri; anthonyjacksoni*; *timhudsoni.*

INTRODUCTION

As part of an audit of the Australian herpetofauna, the skink genus *Morethia* Gray, 1845 *sensu* Cogger (2014) and all component species were scrutinized to see if there were any unnamed forms.

This audit included a comprehensive review of the relevant literature and examination of large numbers of specimens of all putative species from across the country.

The most relevant texts to the taxonomy of the genus are probably those of Duméril and Bibron (1839), Peters (1874), Ogilby (1890), Lucas and Frost (1895), Storr (1963), Storr (1972), Greer (1980), Cogger *et al*. (1983), Wells and Wellington (1984) and Wells and Wellington (1985) which, listed herein in date order, do in combination encompass all forms formally named as species as well as the relevant generic arrangements proposed.

Other particularly relevant papers included those of Boulenger (1887), Edwards *et al*. (2012), Rawlinson (1976), Smyth (1972) and Smyth and Smith (1974).

With the exception of Wells and Wellington (1984 and 1985) all relevant publishing authors post-dating Cogger *et al.* (1983) have placed all the species subject of this paper into the all-encompassing genus *Morethia*, with a type species of *Morethia*

anomalus Gray, 1845, being a junior synonym of *Ablepharus lineoocellatus* Duméril and Bibron, 1839.

Counter to this, in 1984 and 1985, Wells and Wellington split of the northern Fire-tailed skinks from the rest and placed them into a new genus *Solvonemesis* Wells and Wellington, 1984, with a type species of *Ablepharus* (*Morethia*) *taeniopleura* Peters, 1874.

There was in 1987 an ultimately unsuccessful attempt by Richard Shine and the Wolfgang Wüster gang of thieves to have the *International Commission of Zoological Nomenclature* (ICZN) to formally erase the Wells and Wellington publications from the scientific record (ICZN 1991).

The plan was to erase the names of Wells and Wellington, known to be generally correctly assigned to previously unnamed species and genera so that the Wüster gang could then rename all the same species and genera and make the false claim of "discovery".

Following the defeat of the gang in their application in 1991, the same gang had another attempt at suppressing the Wells and Wellington names and failed again (ICZN 2001).

In 2021, the ICZN lost a third application along similar lines (ICZN 2021), this time trying to erase my own publications which had quite appropriately adopted and used the Wells and Wellington taxonomy and nomenclature when seen as the correct concepts.

In the case of the genus *Morethia sensu lato*, the works of Storr (1963 and 1972) and later Greer (1980), provided a sound evidentiary basis for the taxonomy and nomenclature of the recognized species to that date.

Cogger *et al.* (1983) published their catalogue of Australia's herpetology, including known species, genera and synonymies.

In general, when in doubt, Cogger *et al.* (1983), would synonymise entities. This was done to appease associates he worked with and at times in defiance of biogeographic realities.

Notwithstanding this, the near comprehensive bibliography published by Cogger *et al.* (1983) was and remains one of the most valuable bits of published infrastructure for ongoing work on the taxonomy of Australia's reptiles and frogs.

Much to the chagrin of Cogger and others in the Australian herpetological community, Wells and Wellington published two major papers (Wells and Wellington, 1984, 1985) which forensically went through the Cogger *et al.* (1983) document and combined it with their own extensive knowledge of Australia's herpetology and biogeography to effectively rewrite the taxonomy and nomenclature of Australia's herpetology.

They named hundreds of new genera and species, almost all being done on the basis of splitting larger entities.

That the pair were generally correct in their assessment was well known at the time and because the two men, Wells and Wellington, had, or so it seemed, named pretty much everything previously unnamed in Australian herpetology, other Australians aspiring to be recognized taxonomists saw their future dreams shattered by the actions of Wells and Wellington.

The work of Cogger *et al*. (1983) was also made effectively redundant within 24 months of publication in that anyone working on the taxonomy of Australian reptiles and frogs would be forced to consult both Cogger *et al*. (1983) and Wells and Wellington (1984 and 1985) for synonymies and available names for taxa before daring to attempt to name anything new in Australian herpetology.

Mention of all this is to draw attention to the fact that in the tiny two paragraphs that deal with the taxonomy and nomenclature of *Morethia sensu lato* in Wells and Wellington (1985), these authors were alone in presenting an accurate and proper taxonomy and nomenclature for both species and genera.

That paper also named two new species.

The 1984 paper of Wells and Wellington in one short paragraph split the genus *Morethia* into two, creating the genus *Solvonemesis* Wells and Wellington, 1984 as mentioned above, and also correctly resurrected from synonymy names and taxa that had been foolishly synonymised by Cogger *et al*. (1983).

In my own audit of the relevant lizards some 39 years later and with the added benefits of molecular studies not available to Wells and Wellington more than 39 years back, I found that alone among Australian herpetologists, Wells and Wellington (1984 and 1985) had got the genus and species level taxonomy of the group wholly correct.

My adoption of the Wells and Wallington taxonomy is not a favour to them or done because of any personal attachment.

Quite the opposite in fact.

In the early stages, it was apparent and self-evident that the so-called fire-tailed skinks were sufficiently divergent from the other species within *Morethia* to warrant being placed in a new genus.

Had Wells and Wellington not reassigned them to their genus *Solvonemesis*, this paper would not hesitate to have erected a new genus and named it.

I note also that the phylogeny of Pyron *et al.* (2013) showed genus-level divergence between the fire-tailed skinks and the other *Morethia* species, meaning that from this time on, there should have been no resistance from Australia's publishing herpetologists to adopting and using the genus name *Solvonemesis*.

The accuracy of the Wells and Wellington (1985) taxonomy is seen in that they recognized a total of

11 species in the group, being six in *Morethia* and another five species in *Solvonemesis*.

39 years later I am only able to identify just one overlooked species from a small area in a relatively remote part of Western Australia.

That taxon, being previously treated as a variant of *Morethia lineoocellata* (Duméril and Bibron, 1839) was flagged as a potentially undescribed species in a molecular study of several species by Edwards *et al*. (2012), which I note did not inspect any actual specimens with a view to ascertaining whether or not there were two species involved.

It would therefore be improper for me to whinge about Wells and Wellington overlooking that taxon 39 years earlier.

By stark contrast, noting that in 1985 Wells and Wellington had recognized 11 species in the complex, Peter Uetz in his non-ICZN compliant "The reptile database" only recognizes 8 species, the two Wells and Wellington ones omitted along with a third species that Wells and Wellington resurrected from the synonymy of Cogger *et al*. (1983).

The allegedly complete herpetology database also has no mention of *Solvonemesis*, even by way of as a synonym. Uetz and others in the Wolfgang Wüster gang aggressively market "The reptile database" as the complete list of names and synonymies in herpetology (Wüster *et al*. 2021).

The disgusting act by Uetz of deliberately omitting *Solvonemesis* from his database either as a correct name or even as a synonym of *Morethia* is to recklessly attempt to entice another innocent third party to rename the genus in line with Wüster *et al*. (2021) in complete ignorance of the fact that they would be defying the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) and creating an illegal junior synonym in breach of the Australian Copyright Act and reciprocal laws in all other Berne Convention Nations.

Uetz regularly erases scientific names and authors from his "the reptile database" and recently removed over 1000 Russian names and papers from his database in protest at the Russian/ Ukranian war.

He called the taxonomic and nomenclatural chaos he created "*collateral damage*" (Uetz 2022a-b).

More recently it was suggested Uetz was intending to remove

all names and publications of, or honouring Jewish scientists on his database, being a few thousand more entries, this time in protest of the Israeli Defence Forces (IDF) bombing murderers and kidnappers hiding in hospitals, schools and Mosques in the Gaza Strip.

To get a general idea of the kind of people in the Wolfgang Wüster gang see Mackay (2024) who details the unlawful actions of gang member Adam Britton.

To remove any element of doubt as to what species of *Morethia sensu lato* exist and are recognized herein (as in predating this paper and in this paper), the eleven taxa are listed below:

Genus *Morethia* Gray, 1845.

Morethia lineoocellata (Duméril and Bibron, 1839) (type species)

Morethia adelaidensis Peters, 1874

Morethia boulengeri (Ogilby, 1890)

Morethia butleri Storr, 1963

Morethia obscura Storr, 1972

Morethia petros Wells and Wellington, 1984.

Genus *Solvonemesis* Wells and Wellington, 1984.

Solvonemesis taeniopleura (Peters, 1874) (type species)

Solvonemesis exquisitus (Storr, 1972)

Solvonemesis eyremaeus Wells and Wellington, 1985

Solvonemesis ruficauda (Lucas and Frost, 1895)

Solvonemesis storri Greer, 1981

MATERIALS AND METHODS

Preceding this paper and as a methodology, all the relevant published literature was reviewed to 1/ Confirm that the above-named taxa were valid species and correctly assigned at the genus level and,

2/ Flag any potentially unnamed forms at genus or species levels, including subgenera or subspecies.

This was backed up by way of inspection of specimens, alive, dead, in photos and preserved in museums.

As already mentioned the results of this study were confirmation of the 11 above-listed species in the two above-named genera.

In addition to all the papers cited above and including those in which the relevant taxa were named, Boulenger (1887) and Rawlinson (1976) with his lectotype designation, of MNHP 3092 (Old number 3101) confirmed that the provenance of the type material for both *Ablepharus lineoocellata* (Duméril and Bibron, 1839) and the synonymous *Morethia anomalas* Gray, 1845 were from the environs of Perth, Western Australia based on the number of mid-body rows of the relevant type specimens, thereby excluding northern specimens of the same putative species as laid out by Storr (1972).

The paper of Edwards *et al*. (2012) showed a molecular basis for splitting the putative species two ways (north and south) but did not consult the relevant earlier literature or inspect specimens, thereby in effect leaving the question of one or two species unanswered.

Inspection of specimens from the relevant areas was done to confirm what was mooted by way of literature review.

RESULTS

Following both literature review and inspection of specimens, other divergent populations of *Morethia* and *Solvonemesis* species were identified as worthy of taxonomic recognition.

However, in the absence of good molecular data for any species save for putative *Morethia lineoocellata* I formed the view that it was most prudent for me to formally name each of these taxa as new subspecies.

These are formally named in this paper in accordance with the *International Code of Zoological Nomenclature* (Ride *et al*. 1999) as amended (ICZN 2012).

The newly identified taxa are as follows:

Morethia woolfi sp. nov. a taxon previously identified as the divergent northern population of *M. lineoocellata* (Duméril and Bibron, 1839);

M. boulengeri bulliardi subsp. nov. from the Warburton Range, Western Australia;

M. boulengeri ralphbabeti subsp. nov. from Central Australia;

M. boulengeri robrobertsi subsp. nov. from north-east Queensland;

M. butleri scottgranti subsp. nov. from South Australia;

M. obscura wiradjuri subsp. nov. from western New South Wales;

Solvonemesis taeniopleura timhudsoni subsp. nov. from southern Queensland;

Solvonemesis taeniopleura anthonyjacksoni subsp. nov. from far north Queensland.

It is noted that the published phylogeny of Pyron *et al.* (2013) confirmed the sensibility of the erection of the genus *Solvonemesis* Wells and Wellington, 1984 to accommodate the Australian Fire-tailed Skinks, a group divergent from all the other *Morethia* species.

Recognition of *Morethia petros* Wells and Wellington, 1984 in this paper is tentative and pending a proper molecular study to confirm or refute the concept.

Recognition of the species is done so on the basis of consistent morphological divergence between New England Tableland specimens of putative *M. boulengeri* and putative *M. petros* as outlined in Wells and Wellington, 1984.

The species-level split of *Morethia lineoocellata* in this paper is not without precedent.

Hoser (2023) did the same with respect of a putative gecko species (*Diplodactylus ornatus* Gray, 1845) found across the same biogeographical barriers and with a similar extant distribution.

That putative species was also split two ways with the second formally named for the first time as *D. swedoshorum* Hoser, 2023.

INFORMATION RELEVANT TO THE FORMAL DESCRIPTIONS THAT FOLLOW

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 are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling of names should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (Ride *et al*. 1999 and ICZN 2012) including the *International Code of Zoological Nomenclature* (Ride *et al*. 1999) and amendments as of 2012 (ICZN 2012).

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 18 April 2023, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

Unless otherwise stated explicitly, colour descriptions apply to living adult male 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.

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.

CONSERVATION

Delays in recognition of these species and subspecies could jeopardise the long-term survival of the taxa as outlined by Hoser (2019a, 2019b) and sources cited therein.

Therefore attempts by taxonomic vandals like the Wolfgang Wüster gang via Kaiser (2012a, 2012b, 2013, 2014a, 2014b) and Kaiser *et al.* (2013) (as frequently amended and embellished, e.g. Rhodin *et al.* 2015, Thiele *et al.* 2020, Hammer and Thiele 2021, Wüster *et al*. 2021) to unlawfully suppress the recognition of these taxa on the basis they have a personal dislike for the person who formally named it should be resisted (e.g. Dubois *et al*. 2019 and Ceriaco *et al*. 2023).

Claims by the Wüster gang against this paper and the descriptions herein will no doubt be no different to those the gang have made previously, all of which were discredited long ago as outlined by Ceriaco *et al*. (2023), Cogger (2014), Cotton (2014), Dubois *et al*. (2019), Hawkeswood (2021), Hoser, (2007a-b, 2009, 2012a, 2012b, 2013, 2015a-f, 2019a, 2019b), ICZN (1991, 2001, 2012, 2021), Mosyakin (2022), Wellington (2015) and sources cited therein.

Some material within descriptions is repeated to ensure each fully complies with the *International Code of Zoological Nomenclature* (Ride *et al*. 1999).

Fortunately, none of the relevant named taxa appear to be under any immediate threat and in the scheme of things their conservation status should be presently treated as being of "least concern".

However, it is trite to mention the many previously "common" species of vertebrate that have disappeared rapidly over a short period of time.

MORETHIA WOOLFI SP. NOV.

LSIDurn:lsid:zoobank.org:act:99A8C397-963F-4651-95FA-2547B8E7D0E6

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R117112, collected 30 km south of Canarvon, Western Australia, Australia, Latitude -25.066667 S., Longitude 113.683333 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R117026, collected from Bush Bay, Western Australia, Australia, Latitude -25.15 S., Longitude 113.783333 E.

2/ A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R119203 collected from 9 km north of Carey Downs Homestead, Western Australia, Australia, Latitude -25.533333 S., Longitude 115.466667 E.

Diagnosis: Until now the West Australian species *Morethia woolfi sp. nov.* found from Geraldton north along the coast and environs to Cape Range and Islands to the north-east in has been treated as a northern population of the Western Australian *M. lineoocellata* (Duméril and Bibron, 1839), with a type locality believed to be the environs of Perth, Western Australia, being a taxon found along the coast and environs south from Jurian Bay, through Perth and south to about Pemberton.

M. woolfi sp. nov. is readily separated from *M. lineoocellata* by having 28 or more midbody rows, versus 26 or less in *M. lineoocellata. M. woolfi sp. nov*. has well developed white spotting running in rows down the back, versus poorly developed white spotting that is usually semi-distinct and reduced in size and intensity, or in the case of Rottnest Island specimens, large jagged edged white rectangles running in rows down the back.

The dark post-ocular band is brown in *M. woolfi sp. nov*. versus blackish in *M. lineoocellata.*

The two preceding species are separated from all other Australian skinks in the genera *Morethia* Gray, 1845 and *Solvonemesis* Wells and Wellington, 1984 by the following combination of characters:

Having the back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots. The subdigital lamellae are obtusely keeled or smooth. The fourth supraciliary is not smaller than the third. The fifth supraciliary (like third and fourth) penetrates deeply between the supraoculars. The supranasal is often fused to the nasal; dorsal ocelli and midlateral white stripe are usually well developed.

Further diagnostic information for the two species as *M. lineoocellata* can be found in Storr (1972) on page 77.

M. lineoocellata in life is depicted in Cogger (2014) on page 661 at bottom right, Wilson and Swan (2021) on page 413 at second from top on left and online at:
https://www.inaturalist.org/observations/179133733

and

https://www.inaturalist.org/observations/153628493

and

https://www.inaturalist.org/observations/186683407

M. woolfi sp. nov. is depicted online at:
https://www.flickr.com/photos/julesfarquhar/52682384173/
and
https://www.inaturalist.org/observations/199351619
and

https://www.flickr.com/photos/julesfarquhar/52681877181/
and

https://www.flickr.com/photos/gondwanareptileproductions/23192687323/

Distribution: *Morethia woolfi sp. nov.* is found from Geraldton, then north along the coast and environs to Cape Range and Islands to the north-east in Western Australia, Australia. The related taxon *M. lineoocellata* (Duméril and Bibron, 1839), with a type locality believed to be the environs of Perth, Western Australia, is a taxon found along the coast and environs south from Jurian Bay, through Perth and south to about Pemberton, also all in Western Australia.

Etymology: *M. woolfi sp. nov.* is named in honour of Paul Woolf of Walloon, west of Brisbane in Queensland, Australia, the foundation president of the Herpetological Society of Queensland, in recognition of more than four decades of services to herpetology in Australia and globally.

MORETHIA BOULENGERI BULLIARDI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:ADFC1DB5-F32B-45CA-A671-446D9E85A9E2

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R22016 collected from Warburton Mission, Western Australia, Australia, Latitude -26.133333 S., Longitude 126.583333 E.

This government-owned facility allows access to its holdings.

Paratypes: 3 preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R22110 and 22111 both collected from Warburton Mission, Western Australia, Australia, Latitude -26.133333 S., Longitude 126.583333 E., and specimen number R18296 collected from Ainslie Gorge Western Australia, Australia, Latitude -26.25 S., Longitude 126.65 E.

Diagnosis: *Morethia boulengeri bulliardi subsp. nov*. a taxon confined to the Warburton Ranges of the far central eastern interior of Western Australia is separated from the nominate form of *M. boulengeri* (Ogilby, 1890) with a type locality of Brawlin, New South Wales, Australia and all other subspecies of *M. boulengeri* as well as the related taxon *M. petros* Wells and Wellington, 1985 from the New England region of northern New South Wales and whom as a group of taxa occupy most of the drier eastern two thirds of Australia south of the tropics as well as not occurring in the very most arid regions by having 20-23 subdigital lamellae, versus 18-20 in all the other subspecies

and *M. petros* and subdigital calli reduced and narrowed to form obtuse keels, versus broadly callose in all other subspecies and *M. petros*.

M. boulengeri ralphbabeti sp. nov. from central Australia (the Macdonell Ranges region and elevated regions to the northeast, as well as west of the main Simpson Desert are separated from all other subspecies of *M. boulengeri* as well as the related taxon *M. petros* by having a first parietal that is not straight edged and very diamond shaped with edges of even length, but rather the points extend out and the edges are concave inwards giving it a very different shape.

M. boulengeri ralphbabeti sp. nov. is a chocolate-brown to light brown lizard and with significantly heavier spotting on the head and neck than the body in a configuration not seen in the other related subspecies or *M. petros.*

M. boulengeri robrobertsi subsp. nov. from north-east Queensland is unique among *M. boulengeri* subspecies and the related taxon *M. petros* by having a distinctively beige coloured anterior dorsum which half-way down the back rapidly becomes orange-brown further down the body.

M. boulengeri have a grey anterior and more brownish posterior, but this is not like what is seen in *M. boulengeri robrobertsi subsp. nov*..

I note that there is a distinct possibility that *M. petros* is merely a subspecies of *M. boulengeri* and not withstanding morphological divergence. This question will be best answered with a proper molecular study.

M. petros is separated from all other forms of *M. boulengeri* (all subspecies of that taxon), by having the unique combination of being a distinctive light brown on top and with a dark brownish rather than blackish dorso-lateral stripe.

M. boulengeri of all subspecies and *M. petros* are separated from all other species of *Morethia* Gray, 1845 by the following combination of characters:

Back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots; subdigital lamellae broadly callose or forming obtuse keels; fourth supraciliary much smaller than the third (modified from Storr 1972).

Type *M. boulengeri* in life are depicted in Hoser (1989) on page 105 top and middle and online at:

https://www.inaturalist.org/observations/74831466

and

https://www.inaturalist.org/observations/186372978

M. boulengeri ralphbabeti sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/132254593

M. petros is depicted in life online at:

https://www.inaturalist.org/observations/184612964

M. boulengeri robrobertsi subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/86348052

and

https://www.inaturalist.org/observations/109733666

and

https://www.inaturalist.org/observations/109626244

Distribution: *Morethia boulengeri bulliardi subsp. nov*. is believed to be a taxon confined to the Warburton Ranges of the far central eastern interior of Western Australia, having evolved in reproductive separation from the other subspecies for a considerable period.

Etymology: *M. boulengeri bulliardi subsp. nov*. is named in honour of Kaj-Erik Bulliard of Esperance, Western Australia, formerly of Sydney, New South Wales (NSW), Australia in recognition of his contributions to herpetology in Australia. He was forced to leave New South Wales as a fugitive of the National Parks and Wildlife Service (NPWS).

MORETHIA BOULENGERI RALPHBABETTI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:966A5F3D-B5A4-43F7-9E6F-E1E1C3E7990F

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.52049 collected from Ellery Creek, near Hermannsburg, Northern Territory, Australia, Latitude -23.916 S., Longitude 132.916 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Two preserved specimens at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen number R15516 and R15523 both collected from Inturtupa Waterhole, Ellery Creek, Central Australia, Northern Territory, Australia, Latitude -23.817 S., Longitude 133.067 E. 2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R18714, collected from a ridge on the south side of Illara Rock Hole, Northern Territory, Australia, Latitude -24.325 S., Longitude 132.35 E., 3/ A preserved specimen at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen number R33688 collected from the Palm Valley Reserve, Central Australia, Northern Territory, Australia, Latitude -24.133 S., Longitude 132.083 E.

Diagnosis: *M. boulengeri ralphbabeti sp. nov*. from central Australia, being the Macdonell Ranges region and elevated regions to the northeast, west of the main Simpson Desert are separated from all other subspecies of *M. boulengeri* (Ogilby, 1890) as well as the related taxon *M. petros* Wells and Wellington, 1985 by having a first parietal that is not straight edged and very diamond shaped with edges of even length, but rather the points extend out and the edges are concave inwards giving it a very different shape.

M. boulengeri ralphbabeti sp. nov. is a chocolate-brown to light brown lizard and with significantly heavier spotting on the head and neck than the body in a configuration not seen in the other related subspecies or *M. petros.*

Morethia boulengeri bulliardi subsp. nov. a taxon confined to the Warburton Ranges of the far central eastern interior of Western Australia is separated from the nominate form of *M. boulengeri* with a type locality of Brawlin, New South Wales, Australia and all other subspecies of *M. boulengeri* as well as the related taxon *M. petros* from the New England region of northern New South Wales and whom as a group of taxa occupy most of the drier eastern two thirds of Australia south of the tropics as well as not occurring in the very most arid regions by having 20-23 subdigital lamellae, versus 18-20 in all the other subspecies and *M. petros* and subdigital calli reduced and narrowed to form obtuse keels, versus broadly callose in all other subspecies and *M. petros*.

M. boulengeri robrobertsi subsp. nov. from north-east Queensland is unique among *M. boulengeri* subspecies and the related taxon *M. petros* by having a distinctively beige coloured anterior dorsum which half-way down the back rapidly becomes orange-brown further down the body.

M. boulengeri have a grey anterior and more brownish posterior, but this is not like what is seen in *M. boulengeri robrobertsi subsp. nov*..

I note that there is a distinct possibility that *M. petros* is merely a subspecies of *M. boulengeri* and not withstanding morphological divergence. This question will be best answered with a proper molecular study.

M. petros is separated from all other forms of *M. boulengeri* (all subspecies of that taxon), by having the unique combination of being a distinctive light brown on top and with a dark brownish rather than blackish dorso-lateral stripe.

M. boulengeri of all subspecies and *M. petros* are separated from all other species of *Morethia* Gray, 1845 by the following combination of characters:

Back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots; subdigital

lamellae broadly callose or forming obtuse keels; fourth supraciliary much smaller than the third (modified from Storr 1972).

Type *M. boulengeri* in life are depicted in Hoser (1989) on page 105 top and middle and online at:

https://www.inaturalist.org/observations/74831466

and

https://www.inaturalist.org/observations/186372978

M. boulengeri ralphbabeti sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/132254593

M. petros is depicted in life online at:

https://www.inaturalist.org/observations/184612964

M. boulengeri robrobertsi subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/86348052

and

https://www.inaturalist.org/observations/109733666

and

https://www.inaturalist.org/observations/109626244

Distribution: *M. boulengeri ralphbabeti sp. nov*. is a taxon apparently confined to central Australia, being the Macdonell Ranges region and elevated regions to the northeast, and generally west of the main Simpson Desert.

Etymology: *M. boulengeri ralphbabeti sp. nov*. is named in honour of Ralph Emmanuel Didier "Deej" Babet, a Palmer United Party Senator who bravely went against the corrupt fascist Australian government narrative and spoke out publicly in favour of Elon Musk, multi billionaire owner of "X" (formerly twitter) supporting his courageous stand in calling out the fascism of the Australian government in 2024. That was when they tried to censor the internet globally and allow only their own false narrative to be peddled online in the wake of a police protected thug attacking a priest in Sydney's west and the video footage of the assault being posted on various "social media" platforms.

MORETHIA BOULENGERI ROBROBERTSI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:2CCFF654-900F-444F-8A6B-3934CB1910DE

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.63088 collected from about 48 km northwest of Clermont, Queensland, Australia, Latitude -22.416 S., Longitude 147.383 E.

This government-owned facility allows access to its specimens.

Paratypes: 1/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.63089 collected from about 48 km northwest of Clermont, Queensland, Australia, Latitude -22.416 S., Longitude 147.383 E., 2/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.63093 collected from a petrol station at the Belyando River near the Mount Douglas Station, Queensland, Australia, Latitude -21.533 S., Longitude 146.85 E., 3/ A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J72982 collected from the Epping Forest National Park, Queensland, Australia, Latitude -22.3152439 S., Longitude 146.7175178 E.

Diagnosis: *Morethis boulengeri robrobertsi subsp. nov*. from north-east Queensland is unique among *M. boulengeri* (Ogilby, 1890) subspecies and the related taxon *M. petros* Wells and Wellington, 1985 by having a distinctively beige coloured anterior dorsum which half-way down the back rapidly becomes orange-brown further down the body.

M. boulengeri have a grey anterior and more brownish posterior, but this is not like what is seen in *M. boulengeri robrobertsi subsp. nov*..

M. boulengeri ralphbabeti sp. nov. from central Australia, being the Macdonell Ranges region and elevated regions to the northeast, generally west of the main Simpson Desert are separated from all other subspecies of *M. boulengeri* as well as the related taxon *M. petros* by having a first parietal that is not straight edged and very diamond shaped with edges of even length, but rather the points extend out and the edges are concave inwards giving it a very different shape.

M. boulengeri ralphbabeti sp. nov. is a chocolate-brown to light brown lizard and with significantly heavier spotting on the head and neck than the body in a configuration not seen in the other related subspecies or *M. petros.*

Morethia boulengeri bulliardi subsp. nov. a taxon confined to the Warburton Ranges of the far central eastern interior of Western Australia is separated from the nominate form of *M. boulengeri* with a type locality of Brawlin, New South Wales, Australia and all other subspecies of *M. boulengeri* as well as the related taxon *M. petros* from the New England region of northern New South Wales and whom as a group of taxa occupy most of the drier eastern two thirds of Australia south of the tropics as well as not occurring in the very most arid regions by having 20-23 subdigital lamellae, versus 18-20 in all the other subspecies and *M. petros* and subdigital calli reduced and narrowed to form obtuse keels, versus broadly callose in all other subspecies and *M. petros*.

I note that there is a distinct possibility that *M. petros* is merely a subspecies of *M. boulengeri* and not withstanding morphological divergence. This question will be best answered with a proper molecular study.

M. petros is separated from all other forms of *M. boulengeri* (all subspecies of that taxon), by having the unique combination of being a distinctive light brown on top and with a dark brownish rather than blackish dorso-lateral stripe.

M. boulengeri of all subspecies and *M. petros* are separated from all other species of *Morethia* Gray, 1845 by the following combination of characters: Back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots; subdigital lamellae broadly callose or forming obtuse keels; fourth supraciliary much smaller than the third (modified from Storr 1972).

Type *M. boulengeri* in life are depicted in Hoser (1989) on page 105 top and middle and online at:

https://www.inaturalist.org/observations/74831466

and

https://www.inaturalist.org/observations/186372978

M. boulengeri ralphbabeti sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/132254593

M. petros is depicted in life online at:

https://www.inaturalist.org/observations/184612964

M. boulengeri robrobertsi subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/86348052

and

https://www.inaturalist.org/observations/109733666

and

https://www.inaturalist.org/observations/109626244

Distribution: *M. boulengeri robrobertsi subsp. nov*. is a form from north-east Queensland whose exact distributional limits are uncertain, but believed to be within the general region of south of Townsville, north of Maryborough and east of the Black Soils of the central Queensland/Carpentaria fold.

Etymology: *M. boulengeri robrobertsi subsp. nov*. is named in honour of the One Nation MLC in New South Wales, Australia, Rod Roberts who also happened to be a former police officer.

In 2021 under parliamentary privilege, he exposed NSW Cop Constable Daniel Keneally then aged 24 and the son of former NSW premier and then federal senator Kristina Keneally as corrupt and for fabricating evidence against a corruption whistle-blower.

As a result of the ensuing media publicity, Daniel Keneally was formally charged with fabricating evidence. Keneally had charged Luke Moore with threatening to kill him in a phone call and had him imprisoned. Bail was refused at the time by a corrupt magistrate in a New South Wales criminal court.

Fortunately for Moore he had recorded the call and was later able to prove his innocence, but only after a long, life destroying stint in jail.

While the audio file of the phone call confirmed the fact that Keneally was a pathological serial liar and therefore he was proven guilty in the court, on 1 Feb 2024 the notoriously corrupt NSW magistrate Rodney Brender, refused to imprison Keneally and effectively gave him a rap across the knuckles (being a token fine and order).

Kristina Keneally, a career politician served as Premier of NSW from 2009 to 2011.

For further details see Ferri (2024) and Lewis (2024).

In a parallel case some decades earlier, Alan Anthony Brygel had his life destroyed when a corrupt Victorian cop did exactly the same thing.

John Cullen fabricated a threat to kill charge against Brygel.

Cullen alleged Brygel had threatened to kill him over the telephone.

The reverse was the case and we know this because Brygel also recorded the conversation.

This inconvenient fact did not stop Cullen getting a corrupt Victorian judge to have Brygel jailed for seven months, after which Brygel successfully appealed the criminal conviction.

However, while Brygel was cleared by the government's courts, the same government refuses to amend their official records to reflect the historical fact.

Cullen successfully claimed "crimes compensation" alleging stress and suffering from the threat that was never made and did not have to refund the cash after he was proven to have lied to get the money.

Cullen the crooked cop was later forced to leave the Victorian Police after the media got a tip off and reported on another case he was involved in.

This time he was busted by a female store security officer at K-mart East Burwood for stealing a $40 hair dryer. This is significant as at the time Cullen had a bald head!

Cullen produced his police badge and asked to be let off, but because the security officer had been previously sexually abused by another Victorian Police officer she pressed charges.

Cullen was given a token fine by a friendly police-protecting magistrate, but because he was reported in the media as a thief, he was forced from the force.

However, like most ex-cops in Australia he was obscenely flush with cash and then purchased a number of businesses (for details see Hoser 1994, 1999a-b).

MORETHIA BUTLERI SCOTTGRANTI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:CCC5546E-FF1A-467B-8EE6-5D5997437ECB

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R682 collected from Ooldea, South Australia, Australia, Latitude -30.45 S., Longitude 131.83 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R68077 collected 49.43 km south-west of Ooldea, South Australia, Australia, Latitude 132.2453 S., Longitude 132.2453 E., 2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R32060 collected 5.5 km south of Immarna Spring, South Australia, Australia, Latitude 30.5519 S., Longitude 132.145 E., 3/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R61173 collected from 14.9 km east of Pidinga Tank, South Australia, Australia, Latitude -30.8714 S., Longitude 132.2631 E.

Diagnosis: *Morethia butleri scottgranti subsp. nov*. a taxon from South Australia, generally occurring east of the Nullarbor to the northern part of the Eyre Peninsula, South Australia is separated from the southern Western Australian type subspecies of *Morethia butleri* Storr, 1963 by being a generally greyish-brown and somewhat sandy in appearance dorsally, versus plain brown above in the nominate form of *M. butleri.* Additionally in *M. butleri scottgranti subsp. nov*. the supraciliary-supraocular junction is not linear in that the fourth supraciliary tends to protrude.

The type form of *M. butleri* has supraciliaries forming a straight-edged boundary with the supraocular. In the otherwise morphologically similar species, *M. boulengeri* (Ogilby, 1890) the supraciliary-supraocular junction is not linear in that the third (not fourth) supraciliary tends to protrude.

M. butleri of both subspecies are separated from all other species of *Morethia* Gray, 1845 and *Solvonemesis* Wells and Wellington, 1984 by the following unique combination of characters:

Back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots; subdigital lamellae sharply keeled; supraciliaries normally 6 and forming a straight-sided series (*M. butleri butleri*) or with the fourth supraciliary that tends to protrude (*M. butleri scottgranti subsp. nov*.).

M. butleri scottgranti subsp. nov. is depicted in life online at: https://www.inaturalist.org/observations/134719380
M. butleri butleri of the type form is depicted in life online at: https://www.flickr.com/photos/brian_busho/47947485667/

Distribution: *M. butleri scottgranti subsp. nov*. is a taxon from South Australia, generally occurring east of the Nullarbor to the northern part of the Eyre Peninsula, South Australia.

M. butleri butleri is found generally west of the Nullarbor across most of the southern half of Western Australia, except for the colder parts of the south-west.

Etymology: Named in honour of Scott Grant of Whyalla, South Australia, formerly of Colac, Victoria, Australia, the former owner of the Whyalla Fauna and Reptile Park, whose successful wildlife conservation enterprise commenced in 2018 was hastily shut down at gunpoint by the South Australian government on Monday 15 November 2021.

This outrageous government action was done solely to protect their own government business Zoos South Australia ("Zoos SA") and their monopoly of the wildlife space in that state (see media release posted online at: https://www.whyalla.sa.gov.au/our-city/news-and-events/latest-news/2021/eyre-reptile-and-wildlife-park-closure).

This government department, Zoos SA, are exempt from wildlife and animal cruelty laws and they run the dysfunctional Adelaide Zoo and Monarto Safari Park.

Scott Grant is among the many wildlife conservation icons whose conservation enterprises were wiped out by evil government agents in South Australia, an earlier casualty being Dr. John Wamsley, whose hugely successful Warrawong Wildlife Sanctuary in the Adelaide Hills and his associated Earth Sanctuaries Limited business was similarly killed off to protect the income stream of Zoos South Australia (see https://johnquiggin.com/2006/09/01/farewell-to-earth-sanctuaries/).

MORETHIA OBSCURA WIRADJURI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:E58989BE-4BB7-41D1-9A32-41707DA659BA

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.27838

collected from Round Hill Nature Reserve, New South Wales, Australia, Latitude -33.05 S., Longitude 146.2 E.

This government-owned facility allows access to its holdings.

Paratypes: Four preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.27883, R.40826, R.92296 and R.92297 all collected from Round Hill Nature Reserve, New South Wales, Australia, Latitude -33.05 S., Longitude 146.2 E.

Diagnosis: The subspecies *Morethia obscura wiradjuri subsp. nov*. is apparently confined to the interior of western New South Wales. The nominate form of *M. obscura* Storr, 1972 with a type locality of 6 miles east of Kalamunda, Western Australia, Australia, Latitude 31.58 S., Longitude 116.08 E., is found in the southern parts of Western Australia as well as southern South Australia and far western Victoria and south-west New South Wales.

M. obscura wiradjuri subsp. nov. is separated from the type form of *M. obscura* by having a body that is heavily flecked black above with no whitish flecks or only small ones versus lightly so with black and/or with prominent white flecks joined to the black in *M. obscura* of the type form.

M. obscura wiradjuri subsp. nov. is further separated from the type form of *M. obscura* by having a bold and well defined dark lateral band on the upper flank versus not well defined, especially on the lower edge in the type form of *M. obscura.*

Both forms of *M. obscura* are readily separated from all other species of *Morethia* Gray, 1845 and *Solvonemesis* Wells and Wellington, 1984 by the following unique combination of characters:

Back and sides olive grey, olive brown or rufous brown, with or without black and white stripes, ocelli and spots; subdigital lamellae obtusely keeled or smooth; Fourth supraciliary not smaller than the third; fifth supraciliary not penetrating deeply between supraoculars; supranasal always separate from nasal; dorsal ocelli attached to black spots if present and midlateral white stripe absent or weakly developed; fourth supraciliary not smaller than the third; fifth supraciliary not penetrating deeply between supraoculars; supranasal always separate from nasal; dorsal ocelli attached to black spots if present and midlateral white stripe absent or weakly developed.

Nominate *M. obscura* is depicted in life in Wilson and Swan (2021) on page 413, second from top and online at: https://www.inaturalist.org/observations/185358732

and

https://www.inaturalist.org/observations/203986544
M. obscura wiradjuri subsp. nov. is depicted in life in Cogger (2014) on page 662 at top left.

Distribution: The subspecies *M. obscura wiradjuri subsp. nov*. is apparently confined to the interior of western New South Wales, not including the far south-west. The nominate form of *M. obscura* Storr, 1972 with a type locality of 6 miles east of Kalamunda, Western Australia, Australia, Latitude 31.58 S., Longitude 116.08 E., is found in the southern parts of Western Australia as well as southern South Australia and far western Victoria and far south-west New South Wales.

Etymology: *M. obscura wiradjuri subsp. nov*. is named in honour of the Wiradjuri people being the original Aboriginal inhabitants of the region where this subspecies occurs in central New South Wales, Australia. Most of these people were exterminated in the late 1700's and early 1800's when the British invaders moved inland from the coast and stole the land to graze sheep on.

Those who survived were pushed further north-west to the most arid parts of New South Wales, being where the British invaders saw no commercial interest in the desert lands, where for generations the surviving Wiradjuri people have typically eked out a miserable existence living under sheets of tin and abandoned car wrecks.

SOLVONEMESIS TAENIOPLEURA ANTHONYJACKSONI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:DEE77EBA-B44A-4A69-86C4-B43794EDB45D

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.97859 collected from the Wenlock River Crossing on the road to Portland Roads, Queensland, Australia, Latitude -13.116 S., Longitude 142.75 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.94013 and R.94463 collected from mine workings 1 km west of the Wenlock River Crossing on the road to Iron Range, Queensland, Australia, Latitude -13.116 S., Longitude 142.75 E.

Diagnosis: The three subspecies of *Solvonemesis taeniopleura* Peters, 1874, with a type locality of Bowen in north-east Queensland are separated from one another by the following unique combinations of characters:

S. taeniopleura anthonyjacksoni subsp. nov. from far north Queensland occurs in a region north of Townsville to the tip of Cape York and as a rule not extending to the far western parts of the Cape.

It is separated from the other two subspecies, namely *S. taeniopleura timhudsoni subsp. nov.* from wetter parts of south-east Queensland and the nominate form of *S. taeniopleura* which is found generally south of Ravenswood and Home Hill in the north, along the coastal and near coastal regions to the north of the Sunshine coast and hinterland, by the following unique suite of characters: The dorsum is a light brownish-grey and the line of the lateral band on the upper two thirds of the flank is very large.

S. taeniopleura is a brownish coloured lizard above and the black lateral stripe only extends about half-way down the flank, versus about 2/3 in *S. taeniopleura anthonyjacksoni subsp. nov.*

S. taeniopleura timhudsoni subsp. nov. is separated from the two preceding subspecies by having a back that is greyish anteriorly and then brownish posteriorly, the brown being well established on the body well before the pelvic girdle.

In all three subspecies the tail gets its characteristic red colour beyond the pelvic girdle.

All three subspecies of *S. taeniopleura* are separated from all other species of *Solvonemesis* Wells and Wellington, 1984 by having the pale dorso-lateral stripe on each side separated from the other by six rows of scales, versus five or less in all other species.

Species within *Solvonemesis* Wells and Wellington, 1984 are separated from all species within the closely related genus *Morethia* Gray, 1845 by having an ear opening generally without obvious anterior lobules; ground colour of back and sides brown to black, with two or more conspicuous stripes on either side; no palpebral slit (versus present in *Morethia*) (adapted mainly from Cogger 2014).

The nominate form of *S. taeniopleura* is depicted in life online at:

https://www.inaturalist.org/observations/141844106

and

https://www.flickr.com/photos/jono-dashper/52187810669/

S. taeniopleura anthonyjacksoni subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/70873827

and

https://www.inaturalist.org/observations/182606042

and

https://www.flickr.com/photos/moloch05/45286011085/

and

https://www.flickr.com/photos/zimny_anders/9532614819/

S. taeniopleura timhudsoni subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205211364

and

https://www.inaturalist.org/observations/63445749

Distribution: *S. taeniopleura anthonyjacksoni subsp. nov.* occurs in far north Queensland in a region north of Townsville to the tip of Cape York and as a rule not extending to the far western parts of the Cape.

Etymology: *S. taeniopleura anthonyjacksoni subsp. nov.* is named in honour of Gold Coast Queensland, Australia snake catcher Anthony Jackson who works with Tim Hudson at Hudson Snake Catching Gold Coast at Gilston, Queensland, Australia in recognition of his services to wildlife conservation and public safety.

SOLVONEMESIS TAENIOPLEURA TIMHUSDONI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:DBD527FF-B366-457A-9BB8-EA489D58E21C

Holotype: A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J71464 collected from Crows Nest National Park, east of Crows Nest, Queensland, Australia, Latitude -27.25 S., Longitude 152.1 S.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the at the Queensland Museum, Brisbane, Queensland, Australia, specimen numbers J26304, J71466 and J72670 all collected from Crows Nest National Park, east of Crows Nest, Queensland, Australia, Latitude -27.25 S., Longitude 152.1 S.

Diagnosis: The three subspecies of *Solvonemesis taeniopleura* Peters, 1874, with a type locality of Bowen in north-east Queensland are separated from one another by the following unique combinations of characters:

S. taeniopleura anthonyjacksoni subsp. nov. from far north Queensland occurs in a region north of Townsville to the tip of Cape York and as a rule not extending to the far western parts of the Cape.

It is separated from the other two subspecies, namely *S. taeniopleura timhudsoni subsp. nov.* from wetter parts of south-east Queensland and the nominate form of *S. taeniopleura* which is found generally south of Ravenswood and Home Hill in the north, along the coastal and near coastal regions to the north of the Sunshine coast and hinterland, by the following unique suite of characters: The dorsum is a light brownish-grey and the line of the lateral band on the upper two thirds of the flank is very large.

S. taeniopleura is a brownish coloured lizard above and the black lateral stripe only extends about half-way down the flank, versus about 2/3 in *S. taeniopleura anthonyjacksoni subsp. nov.*

S. taeniopleura timhudsoni subsp. nov. is separated from the two preceding subspecies by having a back that is greyish anteriorly and then brownish posteriorly, the brown being well established on the body well before the pelvic girdle.

In all three subspecies the tail gets its characteristic red colour beyond the pelvic girdle.

All three subspecies of *S. taeniopleura* are separated from all other species of *Solvonemesis* Wells and Wellington, 1984 by having the pale dorso-lateral stripe on each side separated from the other by six rows of scales, versus five or less in all other species.

Species within *Solvonemesis* are separated from all species within the closely related genus *Morethia* Gray, 1845 by having an ear opening generally without obvious anterior lobules; ground colour of back and sides brown to black, with two or more conspicuous stripes on either side; no palpebral slit (versus present in *Morethia*) (adapted mainly from Cogger 2014).

The nominate form of *S. taeniopleura* is depicted in life online at:

https://www.inaturalist.org/observations/141844106

and

https://www.flickr.com/photos/jono-dashper/52187810669/

S. taeniopleura anthonyjacksoni subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/70873827

and

https://www.inaturalist.org/observations/182606042

and

https://www.flickr.com/photos/moloch05/45286011085/

and

https://www.flickr.com/photos/zimny_anders/9532614819/

S. taeniopleura timhudsoni subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205211364

and

https://www.inaturalist.org/observations/63445749

Distribution: *S. taeniopleura timhudsoni subsp. nov.* occurs in the wetter parts of south-east Queensland including the coastal sand islands as well as drier nearby hinterland areas.

Etymology: *S. taeniopleura timhudsoni subsp. nov.* is named in honour of Gold Coast Queensland, Australia snake catcher Tim Hudson of Hudson Snake Catching Gold Coast at Gilston, Queensland, Australia, who works 24/7 as a snake catcher, in recognition of his services to wildlife conservation and public safety.

REFERENCES CITED

Boulenger, G. A. 1887. *Catalogue of the lizards in the British Museum (Nat. Hist.) III. Lacertidae, Gerrhosauridae, Scincidae, Anelytropsidae, Dibamidae, Chamaeleontidae*. London: UK:575 pp.

Ceraico, L. M. P., Aescht, E., Ahyong, S. T., Ballerio, A., Bouchard, P., Bourgoin, T., Dmitriev, D., Evenhius, N., Grygier, M. J., Harvey, M. S., Kottelat, M., Kluge, N., Krell, F. T., Kojima, J., Kullander, S. O., Lucinda, P., Lyal, C. H. C., Pyle, R. L., Rheindt, F. E., Scioscia, C. L., Welter-Schultes, F., Whitmore, D., Yanega, D., Zhang, Z. Q., Zhou, H. Z., Pape, T. (being a unanimous voice of the ICZN) 2023. Renaming taxa on ethical grounds threatens nomenclatural stability and scientific communication. *Zoological Journal of the Linnean Society*, 197:283-286.

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia*. Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Cotton, T. 2014. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see BZN 70: 234-237, 71: 30-38; 133-135). *Bulletin of Zoological Nomenclature* 71(3):181-182.

Dubois, A., Bauer, A. M., Ceriaco, L. M. P., Dusouler, F., Fretey, T., Lobl, I., Lorvelec, O., Ohler, A., Stopiglia, R. and Aescht, E. 2019. The Linz Zoocode project: a set of new proposals regarding the terminology, the Principles and Rules of zoological nomenclature. First report of activities (2014-2019). *Bionomina*, 17:1-111.

Duméril, A. M. C. and Bibron, G. 1839. *Erpétologie Générale on Histoire Naturelle Complète des Reptiles. Vol. 5*. Roret/Fain et Thunot, Paris, France:871 pp.

Edwards, D. L., Keogh, J. S. and Knowles, L. L. 2012. Effects of vicariant barriers, habitat stability, population isolation and

environmental features on species divergence in the south-western Australian coastal reptile community. *Molecular Ecology* Online:14 pp.

Ferri, L. 2024. Ex-NSW premier's son Daniel Keneally sentenced for fabricating evidence. News item posted online at: https://www.news.com.au/national/nsw-act/courts-law/exnsw-premiers-son-daniel-keneally-guilty-of-fabricating-evidence/news-story/8e366ffd9985c0dd113345e27f0af1d9 on 1 Feb 2024.

Gray, J. E. 1845. *Catalogue of the specimens of lizards in the collection of the British Museum*. Trustees of the British Museum/ Edward Newman, London, UK:xxvii+289 pp.

Greer, A. E. 1981. A new species of *Morethia* (Lacertilia: Scincidae) from northern Australia, with comments on the biology and relationships of the genus. *Records of the Australian Museum* 33(2):89-122.

Hammer, T. A. and Thiele, K. R. 2021. Proposals to amend Articles 51 and 56 and Division III, to allow the rejection of culturally offensive and inappropriate names. *Taxon* 70(6):1392-1394.

Hawkeswood, T. J. 2021. Time to end taxonomic vandalism by Wolfgang Wüster *et al*.: The Snakeman, Raymond Hoser's publications are validly published and his names available according to the ICZN: Objective investigation finds Hoser's taxonomic works as scientific best practice and in every relevant case identifies valid entities. *Calodema* 860:1-59.

Hoser, R. T. 1989. *Australian Reptiles and Frogs*. Pierson and Co, Mosman, NSW, Australia:238 pp.

Hoser, R. T. 1991. *Endangered Animals of Australia*. Pierson Publishing, Mosman, NSW, Australia:240 pp.

Hoser, R. T. 1993. *Smuggled: The Underground Trade in Australia's Wildlife*. Apollo Books, Moss Vale, NSW, Australia:160 pp.

Hoser, R. T. 1994. *The Hoser Files: The fight against entrenched official corruption*. Kotabi Publishing, Doncaster, Victoria, Australia:324 pp.

Hoser, R. T. 1996. *Smuggled-2:Wildlife Trafficking, Crime and Corruption in Australia*, Kotabi Publishing, Doncaster, Victoria, Australia:280 pp.

Hoser, R. T. 1999a. *Victoria Police Corruption: The book that the Victoria Police don't want you to read*. Kotabi Publishing, Doncaster, Victoria, Australia:732 pp.

Hoser, R. T. 1999b. *Victoria Police Corruption-2: Including what the media didn't tell you*. Kotabi Publishing, Doncaster, Victoria, Australia:732 pp.

Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet. *Calodema* Supplementary Paper 1:1-9.

Hoser, R. T. 2009. Creationism and contrived science: A review of recent python systematics papers and the resolution of issues of taxonomy and nomenclature. *Australasian Journal of Herpetology* 2:1-34. (3 February).

Hoser, R. T. 2012a. Exposing a fraud! *Afronaja* Wallach, Wüster and Broadley 2009, is a junior synonym of *Spracklandus* Hoser 2009! *Australasian Journal of Herpetology* 9 (3 April):1-64.

Hoser, R. T. 2012b. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology* 14:37-64.

Hoser, R. T. 2013a. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology* 18:2-79.

Hoser, R. T. 2015a. Dealing with the "truth haters" ... a summary! Introduction to Issues 25 and 26 of *Australasian Journal of Herpetology*. Including "A timeline of relevant key publishing and other events relevant to Wolfgang Wüster and his gang of thieves." and a "Synonyms list". *Australasian Journal of Herpetology* 25:3-13.

Hoser, R. T. 2015b. The Wüster gang and their proposed "Taxon Filter": How they are knowingly publishing false information, recklessly engaging in taxonomic vandalism and directly attacking the rules and stability of zoological nomenclature. *Australasian Journal of Herpetology* 25:14-38.

Hoser, R. T. 2015c. Best Practices in herpetology: Hinrich Kaiser's claims are unsubstantiated. *Australasian Journal of Herpetology* 25:39-64.

Hoser, R. T. 2015d. PRINO (Peer reviewed in name only) journals: When quality control in scientific publications fails. *Australasian Journal of Herpetology* 26:3-64.

Hoser, R. T. 2015e. Rhodin *et al.* 2015, Yet more lies, misrepresentations and falsehoods by a band of thieves intent on stealing credit for the scientific works of others. *Australasian Journal of Herpetology* 27:3-36.

Hoser, R. T, 2015f. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; comments *BZN* 71:30-38, 133-135). *Australasian Journal of Herpetology* 27:37-54.

Hoser, R. T. 2019a. 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. 2019b. 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. 2023. Species diversity seriously under-estimated! 23 new species and 4 new subspecies within the Australian Gecko genus *Diplodactylus* Gray, 1827. *Australasian Journal of Herpetology* 64:1-64.

International Commission of Zoological Nomenclature (ICZN) 1991. Decision of the commission. Three works by Richard W. Wells and C. Ross Wellington: proposed suppression for nomenclatural purposes. *Bulletin of Zoological Nomenclature* 48(4):337-338.

International Commission of Zoological Nomenclature (ICZN) 2001. Opinion 1970. *Bulletin of Zoological Nomenclature* 58(1):74, (30 March 2001).

International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the *International Code of Zoological Nomenclature* to expand and refine methods of publication. *Zootaxa* (PRINO) (Online) 3450:1-7.

International Commission of Zoological Nomenclature (ICZN) 2021. Opinion 2468 (Case 3601) - *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and *Australasian Journal of Herpetology* issues 1-24: confirmation of availability declined; Appendix A (Code of Ethics): not adopted as a formal criterion for ruling on Cases. *Bulletin of Zoological Nomenclature* 78 (30 April 2021):42-45.

Kaiser, H. 2012a. SPAM email sent out to numerous recipients on 5 June 2012.

Kaiser, H. 2012b. Point of view. Hate article sent as attachment with SPAM email sent out on 5 June 2012.

Kaiser, H. 2013. The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power). *Bulletin of Zoological Nomenclature* 70(4) December 2013:293-302.

Kaiser, H. 2014a. Comments on *Spracklandus* Hoser, 2009

(Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature*, 71(1):30-35.

Kaiser, H. 2014b. Best Practices in Herpetological Taxonomy: Errata and Addenda. *Herpetological Review*, 45(2):257-268.

Kaiser, H., Crother, B. L., Kelly, C. M. R., Luiselli, L., O'Shea, M., Ota, H., Passos, P., Schleip, W. D. and Wüster, W. 2013. Best practices: In the 21st Century, Taxonomic Decisions in Herpetology are Acceptable Only When supported by a body of Evidence and Published via Peer-Review. *Herpetological Review* 44(1):8-23.

Lewis, A. 2024. Daniel Keneally handed 15-month intensive correction order after being found guilty of fabricating evidence. News report posted online at: https://www.abc.net.au/news/2024-02-01/daniel-keneally-sentenced-fabricating-evidence-nsw-police/103413136 on 1 Feb.

Lucas, A. H. S. and Frost, C. 1895. Preliminary notice of certain new species of lizards from central Australia. *Proceedings of the Royal Society of Victoria* 7:264-269.

Mackay, M. 2024. 'Sadistic' zoologist Adam Britton remains behind bars as sentencing for bestiality, child abuse material charges delayed again. News report posted on the website of the Australian Broadcasting Corporation (ABC) on 6 Feb 2024 at:

https://www.abc.net.au/news/2024-02-06/zoologist-adam-britton-bestiality-child-abuse-sentencing-delayed/103431386

Mosyakin, S. L. 2022. If "Rhodes-" must fall, who shall fall next? *Taxon* 71:49-255.

Ogilby, J. D. 1890. Redescription of an *Ablepharus* from Australia. *Records of the Australian Museum* 1:10-11.

Peters, W. C. H. 1874. Über einige neue Reptilien (*Lacerta*, *Eremias*, *Diploglossus*, *Euprepes*, *Lygosoma*, *Sepsina*, *Ablepharus*, *Simotes*, *Onychocephalus*). *Monatsberichte der Königlich preussischen Akademie der Wissenschaften zu Berlin* 1874 (Jun):368-377.

Pyron, R. A., Burbrink, F. T. and Weins, J. J. 2013. A phylogeny and revised classification of Squamata, including 4161 species of lizards and snakes. *BMC Evolutionary Biology* 13, 93. Published online at: http://www.biomedcentral.com/1471-2148/13/93.

Rawlinson, P. A. 1976. The endemic Australian lizard genus *Morethia* (Scincidae: Lygosominae) in southern Australia. *Memoirs of the National Museum of Victoria* 37:27-41.

Rhodin, A. *et al*. (70 listed authors, with some later publishing that they had never read the document they allegedly co-authored) 2015. Comment on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; 71: 30-38, 133-135, 181-182, 252-253). *Bulletin of Zoological Nomenclature* 72(1)65-78.

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").

Smyth, M. 1972. The genus *Morethia* (Lacertilia, Scincidae) in South Australia. *Records of the South Australian Museum* 16(12):14 pp.

Smyth, M. and Smith, M. J. 1974. Aspects of the natural history of three Australian skinks, *Morethia*

boulengeri, *Menetia greyii* and *Lerista bougainvillii*. *Journal of Herpetology* (8):329-335.

Storr, G. M. 1963. *Ablepharus butleri*. A new scincid lizard from Australia. *Western Australian Naturalist* 9:46-47.

Storr, G. M. 1972. The genus *Morethia* (Lacertilia: Scincidae) in Western Australia. *Journal of the Royal Society of Western Australia* 55:73-79 [1973].

Thiele, K. R., Oliver, P. M., Bauer, A. M., Doughty, P., Kraus, F., Rix, M. G., Kaiser, H. 2020. Case 3824 - A special proposal to suppress certain names under the plenary powers of the Commission. *Bulletin of Zoological Nomenclature* 77:78 (title only). The full submission to the ICZN was sent out as a SPAM email to thousands of recipients, is a rambling 71 page pdf and is widely available online. The submission was REJECTED by the ICZN.

Uetz, P. 2022a. What's new? (March 2024). Post dated 14 March on "The Reptile Database" at: http://www.reptile-database.org/db-info/news.html

Uetz, P. 2022b. Post on 14 March on Facebook calling for erasure of all Russian authors scientific names and papers from the herpetological and scientific record with regards to reptiles. Posted at: https://www.facebook.com/ReptileDatabase/posts/4276023512500344

Wellington, R. W. 2015. Comment on the proposed confirmation of the availability of the generic name *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature* 72(3):222-226.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Wilson, S. and Swan, G. 2021. *A complete guide to reptiles of Australia* (Sixth Edition). Reed New Holland, Chatswood, New South Wales, Australia:688 pp.

Wüster, W., Thomson, S. A., O'Shea, M. and Kaiser, H. 2021. Confronting taxonomic vandalism in biology: conscientious community self-organization can preserve nomenclatural stability. *Biological Journal of the Linnean Society* 133, 645-670.

CONFLICT OF INTEREST - NONE.

Australasian Journal of Herpetology 72:14-24.
Published 24 June 2024.

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

Pleistocene splits in the Australian *Odatria tristis* (Schlegel, 1839) species and *Pantherosaurus rosenbergi* (Mertens, 1957) complexes. The formal identification and naming of a new species and three new subspecies.

LSIDURN:LSID:ZOOBANK.ORG:PUB:10D33621-890D-4965-A3D6-7B30B6CE1783

RAYMOND T. HOSER
LSIDURN: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 19 March 2023, Accepted 4 April 2024, Published 24 June 2024.

ABSTRACT

In a paper published in 2013, I formally identified and named, *Odatria tristis nini* (type locality East Alligator River, Northern Territory, Australia), as a subspecies of the well-known Pan-Australian varanid taxon *Odatria tristis* (Schlegel, 1839), type locality Swan River, Western Australia.

Three other names were already available for other populations of the same species (Cogger *et al.* 1983).

Pavón Vázquez *et al*. (2023) published a phylogeny of the "Variable Monitor Lizard (*Varanus tristis*)", confirming that "*Varanus punctatus orientalis* Fry, 1913" with a type locality of Eidsvold, South-east Queensland (Fry, 1913) was sufficiently divergent to warrant species-level recognition.

The same paper confirmed the validity of *Odatria tristis nini* as a valid subspecies and identified other populations sufficiently divergent to warrant subspecies-level recognition.

The paper also in effect simultaneously found that this (subspecies level recognition) was not the case for "*Varanus* (*Odatria*) *tristis centralis* Mertens, 1957" with a type locality of Hermannsburg, Northern Territory and "*Varanus occidentalis* Zinniker, 1961" with a type locality of Western Australia, with both forms apparently closely associated with the type form of *O. tristis* in terms of both molecular divergence and morphology.

Three populations flagged by Pavón Vázquez *et al*. (2023) as distinct at the subspecies level that appear to be largely restricted to specific areas and surrounded by biogeographical barriers are those from the north-west Kimberley District of Western Australia, effectively bound by flat lands or dunes on all sides, save for the ocean to the west, the Musgrave Ranges of north-west South Australia, south-west Northern Territory and just entering the far east of Western Australia, also bound by flat lands and salt lakes, or impassable dune country, as well as the distinctive population from Queensland that is west of the Great Divide and east of the Simpson Desert, and similarly bound by uninhabitable flat lands to the north and south.

As Pavón Vázquez *et al*. (2023) made it clear they had no intention of recognising any taxa within *O. tristis sensu lato* beyond their noting *O. orientalis* was a full species, the purpose of this paper is to formally name the three obvious subspecies awaiting formal description.

Were it not for evidence of introgression in each population, I would have formally named each taxon as a full species.

In addition to the preceding, the distinctive and morphologically divergent South Australian / west Victorian population of putative *Pantherosaurus rosenbergi* (Mertens, 1957), with a type locality of Monigup Pass, Stirling Range, Western Australia, long recognized as divergent at the species-level, based on the molecular data of Smith *et al*. (2007) is formally named as a new species *P. wamsleyi sp. nov.*.

Keywords: Taxonomy; nomenclature; lizard; varanid; monitor; Varanus; *Odatria*; *Pantherosaurus*; *tristis*; *orientalis*; *punctatus*; *nini*; *centralis*; *occidentalis*; *rosenbergi*; *kuringai*; Australia; Queensland; Western Australia; Northern Territory; Kimberley; Victoria; new species; *wamsleyi*; subspecies; *balanggarraorum*; *yankuntjatjaraorum*; *bidjaraorum*.

INTRODUCTION

As part of a wide-ranging audit of the Australian herpetofauna by myself spanning some decades, potentially undescribed forms within all Australian snakes and lizards have been inspected and if deemed sufficiently divergent, formally named as species or subspecies.

A small number had been "passed over" awaiting further inquiries, including the newly identified taxa subject of this paper.

Hoser (2013b) published a major review of the Australian varanids, including the formal description of species and subspecies.

One of these was *Odatria tristis nini* (type locality East Alligator River, Northern Territory, Australia), as a subspecies of the well-known Pan-Australian varanid taxon *Odatria tristis* (Schlegel, 1839), type locality Swan River, Western Australia.

That this was a taxon different to the other recognized forms listed in Cogger *et al*. (1983) seemed obvious at the time.

Three other names were already available for other populations of the same species (Cogger *et al*. 1983).

Pavón Vázquez *et al*. (2023) published a phylogeny of the "Variable Monitor Lizard (*Varanus tristis*)", confirming that "*Varanus punctatus orientalis* Fry, 1913" (Fry, 1913) with a type locality of Eidsvold, South-east Queensland was sufficiently divergent to warrant species-level recognition.

They found no introgression between this and any other populations of *O. tristis* and a divergence dating to the Pliocene.

The same paper confirmed the validity of *Odatria tristis nini* Hoser, 2013 as a valid subspecies, having diverged around the boundary of the Pliocene and Pleistocene, but based on molecular results, in effect confined this form to the top end of the Northern Territory and flagging Kimberley West Australian animals as being of a different subspecies.

They also identified other populations similarly sufficiently divergent to warrant subspecies-level recognition, although for none of these did they provide any morphological evidence or diagnostic characters.

The paper also in effect simultaneously found that this was not the case for "*Varanus* (*Odatria*) *tristis centralis* Mertens, 1957" with a type locality of Hermannsburg, Northern Territory (see Mertens 1957a, 1957b) and "*Varanus occidentalis* Zinniker, 1961" with a type locality of Western Australia (Zinniker 1961), with both forms apparently closely associated with the type form of *O. tristis* in terms of both molecular divergence and morphology.

Three populations flagged by Pavón Vázquez *et al*. (2023) in their published phylogenetic analysis as distinct at the subspecies level that appear to be largely restricted to specific areas and surrounded by biogeographical barriers are the following:

1/ Those from the north-west Kimberley District of Western Australia, effectively bound by flat relatively rock free lands or dunes on all sides, save for the ocean to the west,

2/ Those from the Musgrave Ranges of north-west South Australia, south-west Northern Territory and just entering the far east of Western Australia, also bound by flat lands and salt lakes, or impassable dune country,

3/ Also, the distinctive population from Queensland that is west of the Great Divide and east of the Simpson Desert, and similarly bound by mainly uninhabitable flat lands to the north and south.

Pavón Vázquez *et al*. (2023) made it clear they had no intention of recognising any taxa within *O. tristis sensu lato* beyond their noting *O. orientalis* was a full species (often previously identified as a subspecies of *O. tristis*).

By way of further example, they wholly ignored the existence of *O. tristis nini*, even though it was clearly identified as a distinctive divergent population in all their phylogenies and morphologically is also probably the easiest of the relevant taxa to separate as a subspecies.

Hence the purpose of this paper's preparation was to confirm the basis to formally name the three obvious subspecies awaiting formal description.

Were it not for evidence of introgression in each population, I would have intended to formally name each taxon as a full species and approached the preparation of this paper on that basis.

In terms of the putative taxon, *Pantherosaurus rosenbergi* (Mertens, 1957), with a type locality of Monigup Pass, Stirling Range, Western Australia, it has, long been recognized as a species complex *sensu* Wells and Wellington (1985).

These authors formally named the coastal New South Wales / ACT population as *P. kuringai*, notably being ahead of all other publishing herpetologists in Australia of their time in getting both species and genus assignment correct.

Outside of the publications of myself (e.g. Hoser 2013b) almost two decades after Wells and Wellington (1985) fixed up this part of Australian reptile taxonomy and nomenclature, other publishing herpetologists in Australia have to the present date still erroneously placed the relevant species in the genus *Varanus* Merrem, 1820, type species *Lacerta varia* White, 1790.

Smith *et al*. (2007) in their paper published a detailed phylogeny for the complex, confirming the species-level divergence of the East coast population, being mtDNA divergent at 8.2% or likely more than 4 MYA from the type form of *P. rosenbergi*.

The West Australian *P. rosenbergi* are readily separated from *P. kurringai* by their somewhat stockier build, blackish, versus greyish adult colouration above; semi-distinct bands on the upper surfaces of their anterior forelimbs versus spots in this part in *P. kuringai*; with the upper surfaces of the limbs being black, versus dark grey, differences in tail rings, as well as other morphological divergences.

Mention is made of all this to stress that it is an outrageous state of affairs in that a group of bullies in the form of the Wolfgang Wüster gang have been able to harass and bludgeon other publishing herpetologists to ignore the works of Wells and Wellington (1984, 1985) and others they dislike and refuse to accept what are in effect scientific facts and in this case merely statements of the obvious.

Wüster and his agents in the form of Kaiser (2012a-b, 2013, 2014a-b), Kaiser *et al.* (2013), Rhodin *et al*. (2016) and Wüster *et al.* (2021) continue to try to attack the science of herpetology in making false claims against Wells, Wellington and myself in order to present a false and distorted narrative of herpetology and taxonomy, with an ultimate position being an intent to rename the same taxa at a time and place they see fit and control to enable the gang to rewrite history (George Orwell style) and claim to have discovered species found by others (Ceraico *et al.* 2023, Hawkeswood 2021, Hoser 2007, Hoser 2009, 2012a-b, 2013a, 2015a-f, 2019a-b, Wellington 2015).

The gang of thieves have been given stern rebukes by the International Commission of Zoological Nomenclature (ICZN) no less than four times (ICZN 1991, 2001, 2021 and Ceraico *et al.* 2023).

Now as of 2024, we have the gang openly and publicly defying the ICZN and they have published a manifesto declaring a war against science, sensible scientific taxonomy and the ICZN nomenclature (Wüster *et al.* 2021).

One member of the cohort, Adam Britton has been jailed in 2023 after pleading guilty to 60 bestiality offences whereby he had anal sex with people's pet dogs, killing them and posting the videos of his depraved acts online, as well as trading child pornography (Mackay 2024).

Had he committed the crimes in New South Wales or Victoria, Australia instead of the Northern Territory, he would never have been charged with the offences. As it was, Britton was

only charged after being corruptly protected for years, because another member of the same Wüster *et al.* 2021 cohort was upset that Britton got a big government hand-out of cash ostensibly to study crocodiles, that he thought he was entitled to instead.

With the centre of distribution of *P. kuringai* including the Sydney and Canberra basins respectively, these also including Australia's largest city and Australia's political capital, Canberra being a town rapidly expanding with ever increasing numbers of environment destroying bureaucrats, the taxon has declined in numbers sharply in recent years and is already listed as "Vulnerable" in New South Wales.

That Wüster and his gang are hastening the demise and potential extinction of *P. kuringai* by asserting it is merely an eastern outlier population of putative *P. rosenbergi* is scandalous in the extreme.

There is a strong precedent for their actions with respect of other Australian reptile species facing extinction as outlined in Hoser (2019a-b).

Significantly, the molecular data of Smith *et al*. (2007) also found that the population of putative *P. rosenbergi* from the east side of the Nullarbor Plain in South Australia, extending along the southern edge of the state, including nearby offshore islands, into Western Victoria had a mitochondrial divergence from *P. kuringai* of 2.9 to 4.7 percent and in turn a divergence from *P. rosenbergi* of the nominate form of 4.1 to 5.8 percent.

This implies about a 2 MYA divergence from either population and if combined with obvious consistent morphological differences, would also make a good case for formal recognition of this form as a new species.

I note that Cogger *et al*. (1983) as well as Wells and Wellington (1984 and 1985) confirm that there are no available synonyms for the taxon.

It is trite to point out that none of these taxa can be conserved or managed if scientists and governments are unaware of their existence and/or they simply do not have names, making them effectively non-existent to scientists and legislators alike.

It is also trite to note that any forced delay in recognition of these taxa and the use of the correct ICZN names for them will potentially endanger the relevant species, although fortunately none of the ones named in this paper are deemed by anyone with knowledge of the taxa as threatened across their entire ranges at the present time.

MATERIALS AND METHODS

Publications relevant to *Odatria tristis sensu lato* were audited to see if there were any available synonyms for the populations identified above.

This included Cogger *et al*. (1983), Cogger (2014), Wells and Wellington (1984, 1985) and Hoser (2013b).

Because of the nature of the project, a review of the herpetological literature was of little help because all relevant populations of *O. tristis sensu lato* were merely identified as either *O. tristis*, or sometimes *O. orientalis*.

In spite of the fact that Hoser (2013b) was the first to correctly identify *O. orientalis* as an exclusively Queensland taxon (although erroneously as a subspecies), this has not been followed by other publishing herpetologists in Australia.

Photo sharing websites such as "inaturalist" (https://www.inaturalist.org/) and "flickr" (https://www.flickr.com/) continue to erroneously identify specimens of *O. tristis nini* as *O. tristis orientalis*, even since the publication of Pavón Vázquez *et al*. (2023) which confirmed the Hoser (2013) taxonomy and nomenclature as correct.

Specimens of the relevant populations across Australia were examined prior to the publication of Hoser (2013) and more specimens of putative *O. tristis* including *O. orientalis* have been inspected in the 9 years since then.

The basis of the relevant inquiries was to confirm consistent morphological differences allowing the relevant clades identified in the paper of Pavón Vázquez *et al*. (2023) to be identified and diagnosed as subspecies in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (ICZN 2012).

The same methodology as just explained was used with respect of *P. rosenbergi*. I should also note for the record that this is a putative taxon, I have worked with for more than 50 years and that I have extensive experience with all the relevant regional forms both in the wild and in captivity.

So in terms of differences between the relevant populations these were well known to me, even before the publications of Wells and Wellington (1985), Smith *et al*. (2007) and Hoser (2013b).

RESULTS

For each of the three relevant populations of putative *O. tristis sensu lato* consistent morphological differences between them and the other already identified taxa within *O. tristis sensu lato* were found. These are outlined in the descriptions for each that follows.

I should also flag that there may be potentially other populations that are sufficiently divergent as to ultimately warrant subspecies level recognition. These also appear to be most likely in the tropical north of the continent, such as in the southern Gulf of Carpentaria / Selwyn Ranges district.

O. orientalis from eastern Queensland and restricted to this region, is herein agreed as being a full species and is treated as such for the rest of this paper.

I should also mention that a result of this paper is an effective redefinition of *O. tristis nini* Hoser, 2013 in terms of the distribution.

It was erroneous to include the entire Kimberley district in the range for that taxon, meaning it is in effect only a top end of the NT species extending to the East Kimberley in Western Australia, but not including the north-west and far west Kimberley. That area is occupied by another easily diagnosable and divergent subspecies.

While the two forms are similar, (*O. tristis nini* and the newly named *O. tristis balanggarraorum* from the Kimberley district of Western Australia) inspection of numerous specimens from both areas they occur and in particular the north-west Kimberley District have shown consistent differences in several regards including colour of the lower parts of the head and the size and number of ocelli on the dorsal surfaces. This allowed both of them to be easily separated at the subspecies level.

The north-west Kimberley lizards also do not match the diagnosis of *O. tristis nini* as defined by Hoser (2013).

Hence the diagnosis of that taxon (*O. tristis nini*) can in effect remain unchanged and only the distribution needs to be altered.

As mentioned above, the new subspecies from the north-west Kimberley district in Western Australia is herein formally named as *O. tristis balanggarraorum subsp. nov.*.

In terms of the relevant South Australian/Victorian population of putative *O. rosenbergi*, I had been of the view for many years that it was insufficiently divergent from *O. kuringai* to be recognized as a full species and had intended at some stage to name it as a subspecies.

Delay in that regard was due to the fact that with some regularity I have travelled to western Victoria and nearby parts of South Australia over the past 2 decades and have availed myself of the opportunity to inspect further specimens of the relevant taxon. The differences between this taxon and its closest relative, *P. kurringai* from the Sydney and Canberra basins are too great on further inspection of live specimens to allow them to be treated as the same species.

This is especially the case noting that they:

1/ Are reproductively isolated by a wide zone of dry habitat occupied by competing species,

2/ That this has evidently been the case for a long time and

3/ That the molecular divergence cited by Smith *et al*. (2007) is so wide.

The morphological differences are also particularly stark noting that the two are supposedly very closely related.

With the molecular data of Smith *et al*. (2007) finding that the population of putative *P. rosenbergi* from the east side of the Nullarbor Plain in South Australia, extending along the southern edge of the state, including nearby offshore islands, into Western Victoria had a mitochondrial divergence from *P. kuringai* of 2.9 to 4.7 percent and in turn a divergence from *P. rosenbergi* of the nominate form of 4.1 to 5.8%, implying an approximate divergence time of 1.5 to 2 MYA from either other population (*O. rosenbergi* and *O. kurringai*) I effectively had no choice but to formally name the central population as a new species.

It is formally named *O. wamsleyi sp. nov*. in honour of conservation icon Dr. John Wamsley, (for details see Hoser 2014).

INFORMATION RELEVANT TO THE FORMAL DESCRIPTIONS THAT FOLLOW

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 are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling of the species or subspecies names should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (Ride *et al.* 1999 and ICZN 2012).

Unless otherwise stated explicitly, colour descriptions apply to living adult 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.

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.

Online references were checked as live and accurate for the stated content most recently on 30 March 2024.

CONSERVATION – GENERAL REMARKS

In terms of the conservation of each taxon named herein. None appear to be under any immediate threats save for the general ongoing degradation of the Australian environment and poor legislative regime as detailed in Hoser (1989, 1991, 1993 and 1996).
All have sufficiently wide ranges, including within conservation zones and / or otherwise remote regions and so appear safe at the species or subspecies level.

Harvesting for product or the pet trade is unlikely to pose any risk, even if left unregulated.

ODATRIA TRISTIS BALANGGARRAORUM SUBSP. NOV.

XXXX LSID urn:lsid:zoobank.org:act:81E4537C-F191-40FE-8AF0-12E5BBC39181

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R96235 collected from the Mitchell Plateau, Western Australia, Australia, Latitude -14.733333 S., Longitude 125.733333 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Four preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R60674, R77270, R77603 and R96238 all collected from the Mitchell Plateau, Western Australia, Australia, Latitude -14.733333 S., Longitude 125.733333 E.

2/ A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R77679 collected from Walsh point, Western Australia, Australia, Latitude -14.533333 S., Longitude 125.816667 E.

3/ A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R45054 collected from Port Warrender, Western Australia, Australia, Latitude -14.533333 S., Longitude 125.816667 E.

Diagnosis: *Odatria tristis balanggarraorum subsp. nov*. is similar in most respects to *O. tristis nini* Hoser, 2013 from the top end of the Northern Territory and East Kimberley District of Western Australia, but is separated from that taxon as follows:

O. tristis nini has a dorsum with rows of small beige ocelli on the back running laterally across the back. The interspaces are orange and form a series of irregularly shaped dorsal crossbands.

The body is also brilliantly coloured in mature adults.

By contrast, in *O. tristis balanggarraorum subsp. nov*. the ocelli are expanded in size and number, as well as being expanded to such a degree that they form a matrix across the back and without any form of obvious crossbands between them.

The ocelli themselves are a light salmon colour, as opposed to beige in *O. tristis nini* and they are basically against one another, thereby occupying the entire area of the upper surfaces. The interspaces are in the form of a thin and darker line of similar colour, but certainly no obvious crossbands are on the dorsum.

On the upper surfaces of the limbs, the darker markings are more prominent in *O. tristis balanggarraorum subsp. nov*., versus the small yellow spots being more prominent in *O. tristis nini.*

The subspecies *O. tristis nini* and *O. tristis balanggarraorum subsp. nov*. are both readily separated from *O. orientalis* by colour. *O. tristis nini* and *O. tristis balanggarraorum* are characterized by

an orange or yellow coloured head, including the underside, which is yellowish in colour. By contrast, *O. orientalis* (Fry, 1913) a taxon from eastern Queensland, generally associated with drainage regions running east of the Great Dividing Range, is characterized by either a greyish head, or if marked (as is commonly seen in juveniles) there are white light markings on the head, as opposed to yellowish in *O. tristis nini* and *O. tristis balanggarraorum.*

O. tristis (Schlegel, 1839) of the nominate form, is a taxon with a type locality of Swan River (Perth), western Australia, and is found in most parts of that state except for the Kimberley District and Musgrave Ranges, but is also found across a wide part of central Australia, extending to the south of the tropics.

O. orientalis are separated from all forms and subspecies of *O. tristis* by the following characters: It has a distinct dark post-ocular stripe, well defined because of a strong white border above and below and a reticulated dorsal pattern that extends anteriorly into the head (versus not so in *O. tristis*).

In *O. tristis tristis* (Schlegel, 1839), the head and neck are always black or dominantly blackish in colour, readily separating them from *O. tristis nini*, *O. tristis balanggarraorum subsp. nov*. and *O. tristis yankuntjatjaraorum subsp. nov*., being a newly named subspecies from the Musgrave Ranges in north-west South Australia and immediately adjacent parts of the Northern Territory and Western Australia covered by the same mountain range.

O. tristis yankuntjatjaraorum subsp. nov. from the Musgrave Ranges (North west South Australia and immediately adjacent parts of WA and NT) is separated from the other subspecies of *O. tristis* by the following unique combination of characters: Red head with a white temporal streak, sometimes faded, large

yellow ocelli on the upper body and upper surfaces of the limbs with reddish to yellow brown in the interspaces which are larger than just lines, but not so big as to have open spaces between ocelli; the ocelli also not being formed into any obvious rows; bold reddish markings on an otherwise white chin and gular pouch, a tail with yellow and black rings anteriorly and black distally.

The taxon *O. tristis bidjaraorum subsp. nov.* is the taxon found in western Queensland, generally west of the Great Dividing Range, south of the Selwyn Range and outliers, east of the Simpson Desert, and extending into north-west New South Wales to about Broken Hill in the South.

It is readily separated from all the other subspecies of *O. tristis* by the following unique combination of characters:

A black head, neck and tail, except for the anterior part of the tail which is mainly black but with semi-distinct yellow rings at the distal end. Markings on the dark throat are barely noticeable. The dorsum of the body has large yellowish ocelli, etched with black or very dark brown on the outer edge and with prominent dark in the centre of each ocelli; the interspaces are reddish, or reddish-brown, although colouration is all reddish or reddish brown below the mid-flank.

The limbs are prominently spotted with small, part formed yellow ocelli.

Within *O. tristis* (excluding *O. orientalis*), only *O. tristis bidjaraorum subsp. nov.* and *O. tristis balanggarraorum subsp. nov*. have large ocelli on the dorsum, with all other subspecies having ocelli that are either medium, small or absent.

Both *O. tristis* (all subspecies) and *O. orientalis* are separated from all other species of Australian varanid by the following unique combination of characters:

Tail scales are slightly keeled; the tail is not spinose and is more or less rounded in anterior cross-section, lacking any indication of a dorsal keel and about 1.5 to 2.3 times the length of the body (snout-vent). Scales on the top of the head are relatively smooth. Most of the tail lacks bands with only bands or similar present at the near anterior end and the tail is black or near black at the terminal end. There are very small subequal supraoculars, being sharply differentiated from the larger interoculars; males have a ventro-lateral cluster of strong spines on each side behind the vent. Nostrils are lateral and a bit closer to the tip of the snout than the eye. 105-155 midbody rows. Grows to about 80 cm in total length (derived mainly from the diagnosis of Cogger 2014).

O. tristis of the nominate subspecies is depicted in life online at:

https://www.flickr.com/photos/76932919@N06/

and

https://www.inaturalist.org/observations/16738837

and

https://www.inaturalist.org/observations/186147097

O. orientalis is depicted in life online at:

https://www.flickr.com/photos/mattsummerville/25598048752/

and

https://www.flickr.com/photos/edwardevans/53482356560/

and

https://www.inaturalist.org/observations/203322129

and

https://www.flickr.com/photos/58828131@N07/53568062777/

O. tristis nini is depicted in life online at:

https://www.flickr.com/photos/154630905@N06/38780416765/

and

https://www.flickr.com/photos/valterw/476455329/

and

https://www.inaturalist.org/observations/142434078

O. tristis balanggarraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/8441352064/

and

https://www.flickr.com/photos/reptileshots/8441351680/

and

https://www.flickr.com/photos/33102730@N02/24033014323/

O. tristis yankuntjatjaraorum subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/92444368

and

https://www.inaturalist.org/observations/199890460

and

https://www.inaturalist.org/observations/196947405

O. tristis bidjaraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/63728076@N05/6723855947/

and

https://www.inaturalist.org/observations/55873734

Distribution: *O. tristis balanggarraorum subsp. nov*. is a taxon confined to the north and west Kimberley district of Western Australia. *O. tristis nini* Hoser, 2013, is found in the tropical top end of the Northern Territory extending west to include the East Kimberley district (Ord River drainage) in Western Australia.

Conservation: In terms of habitat conservation, there is sufficient habitat in public reserves or remote areas with limited prospects of any significant human activity to secure the future of the subspecies.

The hobbyist/pet trade also poses no real threat as these lizards breed easily and any substantive demand would invariably be met mainly by captive breeding, followed by a later interest in morphs rather than the more common “wild-type forms”.

Therefore, it should be treated as being of least concern.

However the comments in Hoser (2019a-b) are relevant to this taxon.

Etymology: *O. tristis balanggarraorum subsp. nov*. (pronounced balang-garra-orum) is named in honour of the Balanggarra tribe from the north Kimberley district of Western Australia, Australia.

Compared to other native Australians, they fared relatively well at the hands of the British invaders in the 1700’s and 1800’s due to the relatively remote location they inhabit.

Most died from introduced diseases like smallpox rather than from direct killing.

ODATRIA TRISTIS YANKUNTJATARAORUM SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:E6C55E3B-89BF-4C72-BA91-BC25BC95D17A

Holotype: A preserved adult female specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R50154 collected from 2.4 km north-west of Sentinel Hill, South Australia, Australia, Latitude -26.0633 S., Longitude 132.4367 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved male specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R50152 collected from 2.4 km north-west of Sentinel Hill, South Australia, Australia, Latitude -26.0633 S., Longitude 132.4367 E.

2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R51589 collected from 36.5 km east south-east of Amata, South Australia, Australia, Latitude - 26.2558 S., Longitude 131.4933 E.

Diagnosis: *O. tristis yankuntjatjaraorum sp. nov.* appears to be confined to the Musgrave Ranges and ranges immediately to the

west in far north-west South Australia and ranges immediately adjacent in the far southwest of the Northern Territory and adjacent Western Australia.

West and north of here one finds the nominate form of *O. tristis tristis* (Schlegel, 1839). The Nullarbor to the south and Simpson Desert to the east appear to form a barrier to dispersal of the species in those directions.

O. tristis yankuntjatjaraorum subsp. nov. is separated from the other subspecies of *O. tristis* including the nominate form and the closely related taxon *O. orientalis* (Fry, 1913) from coastal and near Queensland and adjacent parts of New South Wales by the following unique combination of characters:
Red head with a white temporal streak, sometimes faded; large yellow ocelli on the upper body and upper surfaces of the limbs with reddish to yellow brown in the interspaces which are larger than just lines, but not so big as to have open spaces between ocelli; the ocelli also not being formed into any obvious rows; bold reddish markings on an otherwise white chin and gular pouch; a tail with yellow and black rings anteriorly and black distally.

O. tristis balanggarraorum subsp. nov. from the north-west Kimberley District of Western Australia is similar in most respects to *O. tristis nini* Hoser, 2013 a taxon from the top end of the Northern Territory and East Kimberley District of Western Australia, but is separated from that taxon as follows:

O. tristis nini has a dorsum with rows of small beige ocelli on the back running laterally across the back. The interspaces are orange and form a series of irregularly shaped dorsal crossbands.

The body is also brilliantly coloured in mature adults.

By contrast, in *O. tristis balanggarraorum subsp. nov*. the ocelli are expanded in size and number, but expanded to such a degree that they form a matrix across the back and without any form of obvious crossbands between them.

The ocelli themselves are a light salmon colour, as opposed to beige in *O. tristis nini* and they are basically against one another, thereby occupying the entire area of the upper surfaces. The interspaces are in the form of a thin and darker line of similar colour, but certainly no obvious crossbands are on the dorsum.

On the upper surfaces of the limbs, the darker markings are more prominent in *O. tristis balanggarraorum subsp. nov*., versus the small yellow spots being more prominent in *O. tristis nini.*

The subspecies *O. tristis nini* and *O. tristis balanggarraorum subsp. nov*. are both readily separated from *O. orientalis* by colour. *O. tristis nini* and *O. tristis balanggarraorum* are characterized by

an orange or yellow coloured head, including the underside, which is yellowish in colour. By contrast, *O. orientalis* (Fry, 1913) a taxon from eastern Queensland, generally associated with drainage regions running east of the Great Dividing Range, is characterized by either a greyish head, or if marked (as is commonly seen in juveniles) there are white light markings on the head, as opposed to yellowish in *O. tristis nini* and *O. tristis balanggarraorum.*

O. tristis (Schlegel, 1839) is a taxon with a type locality of Swan River (Perth), western Australia, and the nominate form and subspecies is found in most parts of that state except for the Kimberley District and Musgrave Ranges, but is also found across a wide part of central Australia, extending to the south of the tropics.

O. orientalis are separated from all forms and subspecies of *O. tristis* by the following characters: It has a distinct dark post-ocular stripe, well defined because of a strong white border above and below and a reticulated dorsal pattern that extends anteriorly into the head (versus not so in *O. tristis*).

In *O. tristis tristis* (Schlegel, 1839), the head and neck are always black or dominantly blackish in colour, readily separating them from *O. tristis nini*, *O. tristis balanggarraorum subsp. nov*. and *O. tristis yankuntjatjaraorum subsp. nov.*, being a newly named subspecies from the Musgrave Ranges in north-west South Australia and immediately adjacent parts of the Northern Territory and Western Australia covered by the same mountain range.

The taxon *O. tristis bidjaraorum subsp. nov.* is the taxon found in western Queensland, generally west of the Great Dividing Range, south of the Selwyn Range and outliers, east of the Simpson Desert, and extending into north-west New South Wales to about Broken Hill in the South.

It is readily separated from all the other subspecies of *O. tristis* by the following unique combination of characters:

A black head, neck and tail, except for the anterior part of the tail which is mainly black but with semi-distinct yellow rings at the distal end. Markings on the dark throat are barely noticeable. The dorsum of the body has large yellowish ocelli, etched with black or very dark brown on the outer edge and with prominent dark in the centre of each ocelli; the interspaces are reddish, or reddish-brown, although colouration is all reddish or reddish brown below the mid-flank.

The limbs are prominently spotted with small, part formed yellow ocelli.

Within *O. tristis* (excluding *O. orientalis*), only *O. tristis bidjaraorum subsp. nov.* and *O. tristis balanggarraorum subsp. nov*. have large ocelli on the dorsum, with all other subspecies having ocelli that are either medium, small or absent.

Both *O. tristis* (all subspecies) and *O. orientalis* are separated from all other species of Australian varanid by the following unique combination of characters:

Tail scales are slightly keeled; the tail is not spinose and is more or less rounded in anterior cross-section, lacking any indication of a dorsal keel and about 1.5 to 2.3 times the length of the body (snout-vent). Scales on the top of the head are relatively smooth. Most of the tail lacks bands with only bands or similar present at the near anterior end and the tail is black or near black at the terminal end. There are very small subequal supraoculars, being sharply differentiated from the larger interoculars; males have a ventro-lateral cluster of strong spines on each side behind the vent. Nostrils are lateral and a bit closer to the tip of the snout than the eye. 105-155 midbody rows. Grows to about 80 cm in total length (derived mainly from the diagnosis of Cogger 2014).

O. tristis of the nominate subspecies is depicted in life online at:

https://www.flickr.com/photos/76932919@N06/

and

https://www.inaturalist.org/observations/16738837

and

https://www.inaturalist.org/observations/186147097

O. orientalis is depicted in life online at:

https://www.flickr.com/photos/mattsummerville/25598048752/

and

https://www.flickr.com/photos/edwardevans/53482356560/

and

https://www.inaturalist.org/observations/203322129

and

https://www.flickr.com/photos/58828131@N07/53568062777/

O. tristis nini is depicted in life online at:

https://www.flickr.com/photos/154630905@N06/38780416765/

and

https://www.flickr.com/photos/valterw/476455329/

and

https://www.inaturalist.org/observations/142434078

O. tristis balanggarraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/8441352064/

and

https://www.flickr.com/photos/reptileshots/8441351680/

and

https://www.flickr.com/photos/33102730@N02/24033014323/

O. tristis yankuntjatjaraorum subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/92444368

and

https://www.inaturalist.org/observations/199890460

and

https://www.inaturalist.org/observations/196947405

O. tristis bidjaraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/63728076@N05/6723855947/

and

https://www.inaturalist.org/observations/55873734

Distribution: *O. tristis yankuntjatjaraorum sp. nov.* appears to be confined to the Musgrave Ranges and ranges immediately to the west in far north-west South Australia and ranges immediately adjacent in the far southwest of the Northern Territory, and adjacent Western Australia.West and north of here one finds the nominate form of *O. tristis tristis* (Schlegel, 1839). The Nullarbor to the south and Simpson Desert to the east appear to form a barrier to dispersal of the species in those directions.

Conservation: In terms of habitat conservation, the area this taxon occurs is so remote and far from centres of human activity that it has minimal conservation threats. No main roads traverse the area and the local human population is very, very sparse.

Due to the aridity of the area, there is no significant agriculture or grazing of animals by people to speak of.

The hobbyist/pet trade also poses no real threat as these lizards breed easily and any substantive demand would invariably be met mainly by captive breeding, followed by a later interest in morphs rather than the more common “wild-type forms”.

Therefore, it should be treated as being of least concern.

However, the comments in Hoser (2019a-b) are relevant to this taxon.

Etymology: *O. tristis yankuntjatjaraorum subsp. nov*. (pronounced yankun-tjat-jara-orum) is named in honour of the *Yankuntjatjara* tribe from the northwest part of South Australia, including the ranges this subspecies occurs.

Invaders from the British Empire had no interest in the lands of these people until after World War 2, when they needed a remote “uninhabited” desert-like area to test their newly developed nuclear weapons.

A site at Maralinga in the desert about 300 km south was selected for the above ground detonations.

The radioactive clouds blew over the Aboriginal settlements and the communities have been plagued by cancers and kids born with deformities and disabilities ever since.

ODATRIA TRISTIS BIDJARAORUM SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:C766E1C8-BFC0-477C-8D86-03D11997653B

Holotype: A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J92663 collected from Welford National Park, Queensland, Australia, Latitude -25.171667 S., Longitude 143.334722 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J29849 collected from Bullawarra Station, 35.2 km west of Thargomindah, Queensland, Australia, Latitude -27.9 S., Longitude 143.6 E.

2/ A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J8101 collected from Quilpie, Queensland, Australia, Latitude -26.616667 S., Longitude 144.266667 E.

Diagnosis: *O. tristis bidjaraorum subsp. nov*. is a taxon found in western Queensland, generally west of the Great Dividing Range, south of the Selwyn Range and outliers, east of the Simpson Desert, and extending into north-west New South Wales to about Broken Hill in the South.

It is readily separated from all the other subspecies of *O. tristis* as well as the closely related and morphologically similar species *O. orientalis* (Fry, 1913) by the following unique combination of characters:

A black head, neck and tail, except for the anterior part of the tail which is mainly black but with semi-distinct yellow rings at the distal end. Markings on the dark throat are barely noticeable. The dorsum of the body has large yellowish ocelli, etched with black or very dark brown on the outer edge and with prominent dark in the centre of each ocelli; the interspaces are reddish, or reddish-brown, although colouration is all reddish or reddish brown below the mid-flank.

The limbs are prominently spotted with small, part formed yellow ocelli.

Odatria tristis balanggarraorum subsp. nov. a taxon from the north-west Kimberley District of Western Australia. It is similar in most respects to *O. tristis nini* Hoser, 2013 from the top end of the Northern Territory and East Kimberley District of Western Australia, but is separated from that taxon as follows:

O. tristis nini has a dorsum with rows of small beige ocelli on the back running laterally across the back. The interspaces are orange and form a series of irregularly shaped dorsal crossbands.

The body is also brilliantly coloured in mature adults.

By contrast, in *O. tristis balanggarraorum subsp. nov*. the ocelli are expanded in size and number, but expanded to such a degree that they form a matrix across the back and without any form of obvious crossbands between them.

The ocelli themselves are a light salmon colour, as opposed to beige in *O. tristis nini* and they are basically against one another, thereby occupying the entire area of the upper surfaces. The interspaces are in the form of a thin and darker line of similar colour, but certainly no obvious crossbands are on the dorsum.

On the upper surfaces of the limbs, the darker markings are more prominent in *O. tristis balanggarraorum subsp. nov*., versus the small yellow spots being more prominent in *O. tristis nini.*

The subspecies *O. tristis nini* and *O. tristis balanggarraorum subsp. nov*. are both readily separated from *O. orientalis* by colour. *O. tristis nini* and *O. tristis balanggarraorum* are characterized by

an orange or yellow coloured head, including the underside, which is yellowish in colour. By contrast, *O. orientalis* (Fry, 1913) a taxon from eastern Queensland, generally associated with drainage regions running east of the Great Dividing Range, is characterized by either a greyish head, or if marked (as is commonly seen in juveniles) there are white light markings on the head, as opposed to yellowish in *O. tristis nini* and *O. tristis balanggarraorum.*

Most published books and websites as of 2024 (e.g. Cogger 2014 and Brown 2014) still treat both *O. tristis nini* and *O. tristis balanggarraorum* as *O. orientalis* and this has been known not to be the case for some years (see Hoser 2013 and Pavón Vázquez *et al*. 2023).

O. tristis (Schlegel, 1839) of the nominate form, is a taxon with a type locality of Swan River (Perth), western Australia, and is found in most parts of that state except for the Kimberley District and Musgrave Ranges, but is also found across a wide part of central Australia, extending to the south of the tropics.

O. orientalis are separated from all forms and subspecies of

O. tristis by the following characters: It has a distinct dark post-ocular stripe, well defined because of a strong white border above and below and a reticulated dorsal pattern that extends anteriorly into the head (versus not so in *O. tristis*).

In *O. tristis tristis* (Schlegel, 1839), the head and neck are always black or dominantly blackish in colour, readily separating them from *O. tristis nini*, *O. tristis balanggarraorum subsp. nov*. and *O. tristis yankuntjatjaraorum subsp. nov.*, being a newly named subspecies from the Musgrave Ranges in north-west South Australia and immediately adjacent parts of the Northern Territory and Western Australia covered by the same mountain range.

O. tristis yankuntjatjaraorum subsp. nov. from the Musgrave Ranges (North west South Australia and immediately adjacent parts of WA and NT) is separated from the other subspecies of *O. tristis* by the following unique combination of characters: Red head with a white temporal streak, sometimes faded, large yellow ocelli on the upper body and upper surfaces of the limbs with reddish to yellow brown in the interspaces which are larger than just lines, but not so big as to have open spaces between ocelli; the ocelli also not being formed into any obvious rows; bold reddish markings on an otherwise white chin and gular pouch, a tail with yellow and black rings anteriorly and black distally.

Within *O. tristis* (excluding *O. orientalis*), only *O. tristis bidjaraorum subsp. nov.* and *O. tristis balanggarraorum subsp. nov*. have large ocelli on the dorsum, with all other subspecies having ocelli that are either medium, small or absent.

Both *O. tristis* (all subspecies) and *O. orientalis* are separated from all other species of Australian varanid by the following unique combination of characters:

Tail scales are slightly keeled; the tail is not spinose and is more or less rounded in anterior cross-section, lacking any indication of a dorsal keel and about 1.5 to 2.3 times the length of the body (snout-vent). Scales on the top of the head are relatively smooth. Most of the tail lacks bands with only bands or similar present at the near anterior end and the tail is black or near black at the terminal end. There are very small subequal supraoculars, being sharply differentiated from the larger interoculars; males have a ventro-lateral cluster of strong spines on each side behind the vent. Nostrils are lateral and a bit closer to the tip of the snout than the eye. 105-155 midbody rows. Grows to about 80 cm in total length (derived mainly from the diagnosis of Cogger 2014).

O. tristis of the nominate subspecies is depicted in life online at:

https://www.flickr.com/photos/76932919@N06/

and

https://www.inaturalist.org/observations/16738837

and

https://www.inaturalist.org/observations/186147097

O. orientalis is depicted in life online at:

https://www.flickr.com/photos/mattsummerville/25598048752/

and

https://www.flickr.com/photos/edwardevans/53482356560/

and

https://www.inaturalist.org/observations/203322129

and

https://www.flickr.com/photos/58828131@N07/53568062777/

O. tristis nini is depicted in life online at:

https://www.flickr.com/photos/154630905@N06/38780416765/

and

https://www.flickr.com/photos/valterw/476455329/

and

https://www.inaturalist.org/observations/142434078

O. tristis balanggarraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/8441352064/

and

https://www.flickr.com/photos/reptileshots/8441351680/

and

https://www.flickr.com/photos/33102730@N02/24033014323/

O. tristis yankuntjatjaraorum subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/92444368

and

https://www.inaturalist.org/observations/199890460

and

https://www.inaturalist.org/observations/196947405

O. tristis bidjaraorum subsp. nov. is depicted in life online at:

https://www.flickr.com/photos/63728076@N05/6723855947/

and

https://www.inaturalist.org/observations/55873734

Distribution: *O. tristis bidjaraorum subsp. nov*. is a taxon found in western Queensland, generally west of the Great Dividing Range, south of the Selwyn Range and outliers, east of the Simpson Desert, and extending into north-west New South Wales to about Broken Hill in the South.

Conservation: In terms of habitat conservation where this taxon occurs, two centuries of British settlement of the area and their attempts at agriculture and grazing have largely failed.

In many parts of western Queensland unviable farming enterprises have shut down and abandoned the land. This means that overgrazed and degraded habitat has begun to mend and privately owned conservation groups have been able to buy up large tracts of land and convert them to “wildlife reserves”.

Hence this taxon is not under any ongoing threat of decline through any further habitat loss.

The hobbyist/pet trade also poses no real threat as these lizards breed easily and any substantive demand would invariably be met mainly by captive breeding, followed by a later interest in morphs rather than the more common “wild-type forms”.

Therefore, it should be treated as being of least concern.

However, the comments in Hoser (2019a-b) are relevant to this taxon.

Etymology: *O. tristis bidjaraorum subsp. nov*. (pronounced bid-jara-orum) is named in honour of the Bidjara tribe from south-west Queensland, Australia, being the original human inhabitants of the region.

While the British invaders simply killed these natives and drove them from their lands in an act of genocide, done in order to allow the squatters to graze sheep and cattle, probably a greater number died from introduced diseases like smallpox rather than from direct killing.

Today most of the natives that remain eke out a miserable existence scavenging in the small regional towns and living under sheets of tin on the outer edges of these towns.

That is when the local racist Queensland Police aren’t rounding up natives to bash or kill in the police cells.

PANTHEROSAURUS WAMSLEYI SP. NOV.

LSIDurn:lsid:zoobank.org:act:94F0C60C-0047-4623-B640-B51848C66B5E

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R56523 collected from the Playford Highway, at the junction of Ahlwans Road, Kangaroo Island, South Australia, Australia, Latitude -35.8083 S., Longitude 137.1 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Two preserved specimens at the South Australian

Museum, Adelaide, South Australia, Australia, specimen numbers R13832 and R13845 collected from Kangaroo Island, South Australia, Australia, Latitude -35.83 S., Longitude 137.17 E.

2/ Three preserved specimens at the National Museum of Victoria, Melbourne, Victoria, Australia, specimen numbers D53500 (male), D55455 and D55628 (female) collected from the southern edge of the Wyperfeld National Park in western Victoria, Australia, Latitude -35.88 S., Longitude 141.66 E.

Diagnosis: Until now, the three taxa, *Pantherosaurus rosenbergi* (Mertens, 1957), *P. kuringai* Wells and Wellington, 1985 and this newly described species *P. wamsleyi sp. nov.* have been treated by most publishing herpetologists as a single pan-Australian species.

With morphological divergence between the three forms and molecular divergences of at least 1.5 MYA between each population, combined with zero introgression due to wide zones of absence over an extended geological time frame treatment of the three taxa as one is simply not tenable.

P. rosenbergi, type locality of Monigup pass, Stirling Range, Western Australia is a taxon confined to the coast and near coastal region of south-west Australia in an area extending from just east of the South Australian border in the east, along the south coast of Western Australia and north to the Perth metropolitan area.

P. wamsleyi sp. nov. is the taxon found from the lower Eyre Peninsula in South Australia in the west, across nearby coastal islands to the east, including Kangaroo Island, the largest of these, into the dry zone of far south-east South Australia and nearby west Victoria north and east to the Wyperfeld National Park.

P. kuringai Wells and Wellington, 1985 is the taxon found mainly on the lower sandstone escarpments of the Sydney basin, in particular the national parks to the north and south of Sydney (e.g. Kuringai Chase, Brisbane Water National Park, Marramarra National Park, Dharug National Park, Royal National Park, Heathcote National Park, etc), but found in a region extending south of the Hunter Valley to the Victorian side of the New South Wales border near Corryong, Victoria.

The three species are separated from each other as follows:

P. rosenbergi is stocky in build. It is generally blackish in colour, with well-defined black crossbands on the dorsum, flanks and extending down the tail, the outer edges being clear and well-defined. Gular reticulations are thick and black and also well-defined on a white background.

Upper surfaces of the anterior forelimbs are well-banded. Yellow spots on the upper surfaces of the limbs are small and faded, even in most younger specimens.

Dark tail bands are thinner than or slightly thicker than the light, although widening of the lighter bands at the lower part of the tail often reverses this as well. In both *P. wamsleyi sp. nov.* and *P. kuringai* the darker tail bands are consistently considerably wider than the light ones.

In *P. rosenbergi* the tail bands are better defined anteriorly than posteriorly.

P. wamsleyi sp. nov. is also a stocky lizard. It is generally blackish in colour, with black crossbands on the dorsum, flanks and extending down the tail, the outer edges not being clear and well-defined, except in juveniles. The crossbands themselves are also heavily infused with white specking inside the outer edges. Gular markings tend towards speckling rather than the reticulations as seen in *P. rosenbergi.* Upper surfaces of the anterior forelimbs are not well-banded. Yellow spots on the upper surfaces of the limbs are of moderate size and prominent.

In *P. wamsleyi sp. nov.* the tail bands are of similar intensity along the length of the tail.

This species is also differentiated from the other two species in having heavy infusions of white or yellow speckling or spots in the darker crossbands of the tail along most of its length.

P. kuringai is of similar build to *P. rosenbergi* but is readily separated from that taxon by being a generally greyish, rather than blackish lizard. Dark crossbands are narrower than in the other two species, poorly defined and the wider and lighter interspaces consist of skin the same colour as the dark crossbands but heavily speckled white or yellow, giving the unique (among the three species) appearance of being a lizard that is greyish and fairly evenly heavily speckled whitish all over.

Yellow spots on the upper surfaces of the limbs are small to medium, widely spaced, well defined and prominent.

In *P. kuringai* the tail bands are better defined posteriorly than anteriorly.

The three preceding species are separated from all other species within the genus *Pantherosaurus* Fitzinger, 1843 as defined by Hoser (2013) including all subgenera, by having a greyish or blackish dorsal colouration, versus yellowish in all others, excluding *Aspetosaurus* Wells and Wellington, 1985 and *Aquativaranus* Hoser, 2013.

Aspetosaurus are separated from all others in the genus *Pantherosaurus* by their exceptionally heavy build; a tail that is no more than 1.2 times as long as the head and body; rugose scales on the upper side of the basal part of the tail and nostrils directed laterally.

Aquativaranus are separated from all other *Pantherosaurus* by having an elongate and slim build; their nostrils directed upwards and a very high and strong caudal keel.

P. rosenbergi is depicted in life in Brown (2014) on page 821 bottom right and second from bottom on left, Cogger (2014) on page 781 at bottom, Wilson and Swan (2021) on page 517 at top right and online at:
https://www.flickr.com/photos/139249833@N02/30613193674/
and
https://www.flickr.com/photos/zimny_anders/52445269308/
and
https://www.flickr.com/photos/jaricornelis/49951398581/
and
https://www.flickr.com/photos/54876436@N08/5094877841/
and
https://www.inaturalist.org/observations/191332199
and
https://www.inaturalist.org/observations/35666138
and
https://www.inaturalist.org/observations/96220970

P. wamsleyi sp. nov. is depicted in life in Brown (2014) on page 821 bottom left and online at:
https://www.flickr.com/photos/88708273@N03/53297418489/
and
https://www.flickr.com/photos/88708273@N03/53297042341/
and
https://www.flickr.com/photos/paulthrelfall/23972633736/
and
https://www.flickr.com/photos/gondwanareptileproductions/40610160093/
and
https://www.flickr.com/photos/96574168@N02/11845567153/
and
https://www.flickr.com/photos/mattsummerville/33116148238/
and
https://www.flickr.com/photos/jpmckenna/6871824437/
and

https://www.facebook.com/permalink.php?story_fbid=pfbid02ZwKdGMf5AZtL9stVhbi8TAp734iNtwCK1peGGm2hr64aEgDzDZmkDwYgaGseG8Awl&id=100064539106005
P. kuringai is depicted in life in Brown (2014) on page 821 second from bottom on right and page 822 at top left, in Hoser (1989) on page 115 at top right and middle right and online at:

https://www.flickr.com/photos/146479766@N08/31246116334/

and

https://www.flickr.com/photos/moloch05/46086645181/

and

https://www.flickr.com/photos/euprepiosaur/2301655542/

Distribution: *Pantherosaurus wamsleyi sp. nov.* is found from the lower Eyre Peninsula in South Australia in the west, across nearby coastal islands to the east, including Kangaroo Island, the largest of these, into the dry zone of far south-east South Australia and nearby west Victoria north and east to the Wyperfeld National Park.

Etymology: Named in honour of Dr. John Wamsley born in Ourimbah, New South Wales in 1938 and who became one of Australia's wildlife conservation icons.

He founded the hugely successful Warrawong Sanctuary in the Adelaide Hills, expanding later to form Earth Sanctuaries Limited (ESL) which was floated on the Australian Stock Exchange (ASX) in 2000.

At its peak, ESL had 11 prospective sanctuaries in 3 states accounting for 100,000 hectares.

ESL was enormously successful in rewilding and ecosystem restoration projects.

By pioneering feral-proof fencing, endangered native Australian animals were successfully re-introduced where they were locally extinct and bred in massive numbers.

His success embarrassed corrupt State Government wildlife departments hell-bent on creating rarity and extinctions for their own financial self-enrichment including via their government-owned zoos business.

ESL was therefore regulated out of existence to ensure that the business model failed and John Wamsley effectively lost his entire life's works.

For further details refer to Hoser (2014) at page 6.

It should be noted that the snake genus name *Walmsleyus* Hoser, 2014 is based on a misspelling of John Wamsley's name. As first revisor of that work (this work, this paper), I herein make it known that the spelling of that genus should not be corrected to match the spelling of his name or otherwise altered or amended and therefore it is to remain "as is".

REFERENCES CITED

Brown, D. 2014. *A guide to Australian Lizards in captivity*. Australian Birdkeeper Publications, Tweed Heads, New South Wales, Australia:949 pp.

Ceraico, L. M. P., Aescht, E., Ahyong, S. T., Ballerio, A., Bouchard, P., Bourgoin, T., Dmitriev, D., Evenhius, N., Grygier, M. J., Harvey, M. S., Kottelat, M., Kluge, N., Krell, F. T., Kojima, J., Kullander, S. O., Lucinda, P., Lyal, C. H. C., Pyle, R. L., Rheindt, F. E., Scioscia, C. L., Welter-Schultes, F., Whitmore, D., Yanega, D., Zhang, Z. Q., Zhou, H. Z., Pape, T. (being a unanimous voice of the ICZN) 2023. Renaming taxa on ethical grounds threatens nomenclatural stability and scientific communication. *Zoological Journal of the Linnean Society*, 197:283-286.

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia*. Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Fry, D. B. 1913. On a *Varanus* and a frog from Burnett River, Queensland, and a revision of the variations in *Limnodynastes dorsalis* Gray. *Records of the Australian Museum* 10:17-34.

Hawkeswood, T. J. 2021. Time to end taxonomic vandalism by Wolfgang Wuster *et al*.: The Snakeman, Raymond Hoser's publications are validly published and his names available according to the ICZN: Objective investigation finds Hoser's taxonomic works as scientific best practice and in every relevant case identifies valid entities. *Calodema* 860:1-59.

Hoser, R. T. 1989. *Australian Reptiles and Frogs*. Pierson and Co, Mosman, NSW, Australia:238 pp.

Hoser, R. T. 1991. *Endangered Animals of Australia*. Pierson Publishing, Mosman, NSW, Australia:240 pp.

Hoser, R. T. 1993. *Smuggled: The Underground Trade in Australia's Wildlife*. Apollo Books, Moss Vale, NSW, Australia:160 pp.

Hoser, R. T. 1996. *Smuggled-2:Wildlife Trafficking, Crime and Corruption in Australia*, Kotabi Publishing, Doncaster, Victoria, Australia:280 pp.

Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet. *Calodema* Supplementary Paper 1:1-9.

Hoser, R. T. 2009. Creationism and contrived science: A review of recent python systematics papers and the resolution of issues of taxonomy and nomenclature. *Australasian Journal of Herpetology* 2:1-34. (3 February).

Hoser, R. T. 2012a. Exposing a fraud! *Afronaja* Wallach, Wüster and Broadley 2009, is a junior synonym of *Spracklandus* Hoser 2009! *Australasian Journal of Herpetology* 9 (3 April 2012):1-64.

Hoser, R. T. 2012b. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology* 14:37-64.

Hoser, R. T. 2013a. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology* 18:2-79.

Hoser, R. T. 2013b. Monitor Lizards reclassified with some common sense (Squamata: Sauria: Varanidae). *Australasian Journal of Herpetology* 21:41-58.

Hoser, R. T. 2014. A long overdue taxonomic rearrangement of the New Guinea Crowned Snakes, currently referred to the genus *Aspidomorphus* Fitzinger, 1843 (Serpentes:Elapidae). *Australasian Journal of Herpetology* 23:3-9.

Hoser, R. T. 2015a. Dealing with the "truth haters" ... a summary! Introduction to Issues 25 and 26 of *Australasian Journal of Herpetology*. Including "A timeline of relevant key publishing and other events relevant to Wolfgang Wüster and his gang of thieves." and a "Synonyms list". *Australasian Journal of Herpetology* 25:3-13.

Hoser, R. T. 2015b. The Wüster gang and their proposed "Taxon Filter": How they are knowingly publishing false information, recklessly engaging in taxonomic vandalism and directly attacking the rules and stability of zoological nomenclature. *Australasian Journal of Herpetology* 25:14-38.

Hoser, R. T. 2015c. Best Practices in herpetology: Hinrich Kaiser's claims are unsubstantiated. *Australasian Journal of Herpetology* 25:39-64.

Hoser, R. T. 2015d. PRINO (Peer reviewed in name only) journals: When quality control in scientific publications fails. *Australasian Journal of Herpetology* 26:3-64.

Hoser, R. T. 2015e. Rhodin *et al.* 2015, Yet more lies, misrepresentations and falsehoods by a band of thieves intent on stealing credit for the scientific works of others. *Australasian Journal of Herpetology* 27:3-36.

Hoser, R. T, 2015f. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural

validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; comments *BZN* 71:30-38, 133-135). *Australasian Journal of Herpetology* 27:37-54.

Hoser, R. T. 2019a. 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. 2019b. 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.

International Commission of Zoological Nomenclature (ICZN) 1991. Decision of the commission. Three works by Richard W. Wells and C. Ross Wellington: proposed suppression for nomenclatural purposes. *Bulletin of Zoological Nomenclature* 48(4):337-338.

International Commission of Zoological Nomenclature (ICZN) 2001. Opinion 1970. *Bulletin of Zoological Nomenclature* 58(1):74, (30 March 2001).

International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the *International Code of Zoological Nomenclature* to expand and refine methods of publication. *Zootaxa* (PRINO) (Online) 3450:1-7.

International Commission of Zoological Nomenclature (ICZN) 2021. Opinion 2468 (Case 3601) - *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and *Australasian Journal of Herpetology* issues 1-24: confirmation of availability declined; Appendix A (Code of Ethics): not adopted as a formal criterion for ruling on Cases. *Bulletin of Zoological Nomenclature* 78 (30 April 2021):42-45.

Kaiser, H. 2012a. SPAM email sent out to numerous recipients on 5 June 2012.

Kaiser, H. 2012b. Point of view. Hate article sent as attachment with SPAM email sent out on 5 June 2012.

Kaiser, H. 2013. The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power). *Bulletin of Zoological Nomenclature* 70(4) December:293-302.

Kaiser, H. 2014a. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature*, 71(1):30-35.

Kaiser, H. 2014b. Best Practices in Herpetological Taxonomy: Errata and Addenda. *Herpetological Review*, 45(2):257-268.

Kaiser, H., Crother, B. L., Kelly, C. M. R., Luiselli, L., O'Shea, M., Ota, H., Passos, P., Schleip, W. D. and Wüster, W. 2013. Best practices: In the 21st Century, Taxonomic Decisions in Herpetology are Acceptable Only When supported by a body of Evidence and Published via Peer-Review. *Herpetological Review* 44(1):8-23.

Mackay, M. 2024. 'Sadistic' zoologist Adam Britton remains behind bars as sentencing for bestiality, child abuse material charges delayed again. News report posted on the website of the Australian Broadcasting Corporation (ABC) on 6 Feb 2024 at:

https://www.abc.net.au/news/2024-02-06/zoologist-adam-britton-bestiality-child-abuse-sentencing-delayed/103431386

Mertens, R. 1957a. Ein neuer melanistischer Waran aus dem südlichen Australien. (*V. gouldii rosenbergi, subsp. nov.*). *Zoologischer Anzeiger* 159:17-20.

Mertens, R. 1957b. Two new goannas from Australia. *Western Australian Naturalist* 5:183-185.

Pavón-Vázquez, C. J., Fitch, A. J., Doughty, P., Donnellan, S. C. and Keogh, J. S. 2023. Integrating Genomics, Collections, and Community Science to Reveal Speciation in a Variable Monitor Lizard (*Varanus tristis*). BioRxiv preprint posted online (PRINO):51 pp.

Rhodin, A. *et al*. (70 listed authors, with some later publishing that they had never read the document they allegedly co-authored) 2015. Comment on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; 71: 30-38, 133-135, 181-182, 252-253). *Bulletin of Zoological Nomenclature* 72(1)65-78.

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").

Schlegel, H. 1839. *Abbildungen neuer oder unvollständig bekannter Amphibien, nach der Natur oder dem Leben entworfen und mit einem erläuternden Texte begleitet*. Arne and Co., Düsseldorf, xiv+141 pp.

Smith, W., Scott, I. A. W. and Keogh, J. S. 2007. Molecular phylogeography of Rosenberg's goanna (Reptilia:Varanidae: *Varanus rosenbergi*) and its conservation status in New South Wales. *Systematics and Biodiversity* 5(4):361-369.

Wellington, R. W. 2015. Comment on the proposed confirmation of the availability of the generic name *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature* 72(3):222-226.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and C. R. Wellington. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Wilson, S. and Swan, G. 2021. *A complete guide to reptiles of Australia* (Sixth Edition). Reed New Holland, Chatswood, New South Wales, Australia:688 pp.

Wüster, W., Thomson, S. A., O'Shea, M., and Kaiser, H. 2021. Confronting taxonomic vandalism in biology: conscientious community self-organization can preserve nomenclatural stability. *Biological Journal of the Linnean Society* 133:645-670.

Zinniker, W. 1961. Australische Freunde. *Aquaria* (St. Gallen) 2:15-17.

CONFLICT OF INTEREST

None.

Cite this paper as:

Hoser, R. T. 2024. Pleistocene splits in the Australian *Odatria tristis* (Schlegel, 1839) species and *Pantherosaurus rosenbergi* (Mertens, 1957) complexes. The formal identification and naming of a new species and three new subspecies. *Australasian Journal of Herpetology* 72:14-24.

Australasian Journal of Herpetology 72:25-28.
Published 24 June 2024.

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

Out from the cold … a new species of Australian Jacky Dragon *Amphibolurus* Wagler, 1830 from the region near the southern border between South Australia and Victoria as well as a new subspecies from New South Wales and Victoria.

LSIDURN:LSID:ZOOBANK.ORG:PUB:E7B97230-787C-497A-8CF3-A94BD61BF065

RAYMOND T. HOSER

LSIDURN: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 11 December 2023, Accepted 4 March 2024, Published 24 June 2024.

ABSTRACT

Hoser (2015) published a major review of the genus *Amphibolurus*, naming four new species, including two in the *Amphibolurus muricatus* (White, 1790) complex.

The southern Victorian population, now known as *A. jacky* Hoser, 2015 (type locality Winchelsea, Victoria), believed to be divergent from type *A. muricatus* by 3 MYA is in turn split into two well-defined clades (Pepper *et al.* 2014).

The population from far south-west West Victoria and nearby parts of South Australia, believed to be divergent from the central southern animals by more than 2 MYA was not named by Hoser (2015) pending inspection of further specimens of those lizards.

This has now occurred and because they are consistently morphologically identifiable as distinct from the central southern Victorian ones they are formally named as a new species, namely *A. boandikorum sp. nov*. in honour of the local indigenous peoples, the Boandik tribe.

The widespread and divergent population found south of the line between Berrima, through Robertson and east to Kiama in New South Wales south to include Victoria east of the Latrobe Valley and including most of the Western slopes of New South Wales and nearby parts of north-east Victoria is also formally named as a subspecies of *A. muricatus*, being *A. muricatus absconditus subsp. nov*..

Keywords: Taxonomy; nomenclature; lizard; agamid; Jacky dragon; *Amphibolurus*; *jacky*; *muricatus*; *adelyn*; *eipperi*; *wellsi*; Victoria; South Australia; new species; *boandikorum*; new subspecies *absconditus*.

INTRODUCTION

As part of a wide-ranging audit of the Australian herpetofauna by myself spanning some decades, potentially undescribed forms within all Australian snakes and lizards have been inspected and if deemed sufficiently divergent, formally named as species or subspecies.

A small number were "passed over" awaiting further inquiries, including the newly identified taxa subject of this paper.

Hoser (2015) published a major review of the genus *Amphibolurus* Wagler, 1830, naming four new species, including two in the *Amphibolurus muricatus* (White, 1790) complex.

These were *A. jacky* Hoser, 2015 and *A. eipperi* Hoser, 2015 in the *A. muricatus* complex in addition to *A. adelyn* Hoser, 2015, being most closely related to *A. norrisi* Witten and Coventry, 1984 and *A. wellsi* Hoser, 2015 being most similar to *A. centralis* (Loveridge, 1933).

The southern Victorian population, now known as *A. jacky* Hoser, 2015 (type locality Winchelsea, Victoria), believed to be divergent from type *A. muricatus* by 3 MYA was named by Hoser (2015).

That there was a well-defined split, likely to be in excess of 2 MYA between the south-west Victorian lizards and those of the type population was known before Hoser (2015) was published (see Pepper *et al*. 2014), so to this extent that there was a divergent unnamed population in south-west Victoria is not a discovery made here.

Preceding the publication of Hoser (2015) which was a wide-ranging paper naming 18 species, some species and groups were passed over pending further inspections of specimens, including the south-west Victorian putative *A. jacky*. This non-description of the taxon at the time was not because I did not believe it was a valid species or subspecies worthy of recognition, but rather that I had trouble identifying a means to separate it from the nominate population of *A. jacky* from central southern Victoria.

A similar situation existed for specimens in north-east Victoria, which I have known for decades appear different to those from Sydney, the type locality for *A. muricatus*.

Because Pepper *et al.* (2014) indicated a lesser divergence of this population from the type form, I inspected specimens with a view to separating them at the subspecies level.

MATERIALS AND METHODS

In the ensuing 8 years, I have had the opportunity to inspect several dozen specimens of the south-west Victorian population, including specimens from the adjoining parts of far south-east South Australia to see if I could confirm consistent identifiable differences between these lizards and those from central southern Victoria.

Same applied to newly inspected material from north and east Victoria and most parts of Eastern New South Wales, including the region between Sydney and Melbourne along the coast and nearby hinterland.

RESULTS

I was able to confirm consistent identifiable differences between the lizards from south-west Victoria as well as nearby parts of South-east South Australia and those from central southern Victoria.

Therefore I have no hesitation in formally naming and describing the south-west Victorian / far south-east South Australian population of putative *A. jacky* as a new species in accordance with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (ICZN 2012).

In terms of the north-east Victorian animals, previously diagnosed by Hoser (2015) as being within putative, *A muricatus*, consistent differences between the two forms were identified allowing me to formally identify it as a new subspecies being *A. muricatus absconditus subsp. nov.*.

That taxon occurs south of a line from Berrima, through Robertson and east to Kiama in New South Wales (a line being on the east coast and nearby ranges to the west) south to include Victoria east of the eastern Latrobe Valley and including most of the Western slopes of New South Wales and nearby parts of north-east Victoria.

Significantly both newly identified taxa have ranges extending to relatively cold parts of southern Australia, which is why the title of this paper included the phrase “out from the cold”.

INFORMATION RELEVANT TO THE FORMAL DESCRIPTIONS THAT FOLLOW

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 are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling of the species or subspecies names should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (Ride *et al.* 1999 and ICZN 2012).

Unless otherwise stated explicitly, colour descriptions apply to living adult male 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.

It is worth noting here that the colouration intensity of the relevant species varies strongly with temperature, shedding cycle and diurnal / nocturnal cycles, but a normal unstressed adult dragon during daytime hours that is moderately warm but not overheating will display the colourations described herein.

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.

AMPHIBOLURUS BOANDIKORUM SP. NOV.

LSIDurn:lsid:zoobank.org:act:DFC6875E-CE0B-4247-8A58-158D64C7EBA9

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R49374 collected from Donovans, South Australia, Australia, Latitude -38.00778 S., Longitude 140.96250 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R49376 collected from Donovans, South Australia, Australia, Latitude -38.00778 S., Longitude 140.96250 E.

2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R49467 collected from Nangwarry, South Australia, Australia, Latitude -37.45444 S., Longitude 140.87528 E.

Diagnosis: The species *A. boandikorum sp. nov.* is similar in most respects to *A. jacky* Hoser, 2015 and like that species separated from all others in the *A. muricatus* (White, 1790) complex (also including *A. eipperi* Hoser, 2015), as well as *A. norrisi* Witten and Coventry, 1984 and *A. adelyn* Hoser, 2015 as defined in Hoser (2015) for *A. jacky* on pages 41 and 42.

A. boandikorum sp. nov. is separated from *A. jacky* by having three prominent thin dark stripes radiating out from the upper eye, versus the same being ill-defined or absent in *A. jacky*.

Furthermore, the nuchal spines in adult male *A. boandikorum sp. nov.* are thin, pointed and all black, versus moderate in thickness and not necessarily all black in *A. jacky*.

A. jacky and *A. boandikorum sp. nov.* are separated from the morphologically similar *A. muricatus* and *A. eipperi* Hoser, 2015, the fourth species in the complex by the dark colouration, being dark under the eye, this being a continuation of the canthal streak from above the back of the upper jawline. This dark under the eye is not seen in typical *A. muricatus* or *A. eipperi.*

A. eipperi distributed in north-east NSW and adjacent parts of southern Queensland, are readily separated from *A. muricatus*, *A. jacky* and *A. boandikorum sp. nov.* by the fact that in the males, they possess a large dark black patch behind the ear and above the leg. This patch is small in the other taxa. Males of *A. eipperi* differ from males of the other three species by their smallish to medium sized well-defined black triangles running in a pattern along the inner dorsolateral stripes on the back. Female *A. eipperi* are readily separated from the other three species by the presence of seven moderately well-defined stripes running in a dorsolateral direction, radiating from the back of the head, behind the eyes to the neck.

The forelimbs of female *A. eipperi* are characterised with well-defined dark and light crossbands and while these are sometimes seen in specimens of the other three species, in *A. eipperi* the difference is that these well-defined crossbands extend onto the toes.

Female *A. eipperi* differ from the other species in that the dark patches across the mid back are wider than the light patches. In *A. muricatus* (White, 1790), *A. jacky* and *A. boandikorum sp. nov.* the reverse is the case.

On the tail of male *A. eipperi* the lighter part of the crossbands flare significantly outwards. The flaring is only minor in *A. muricatus* and not present in *A. jacky* or *A. boandikorum sp. nov.*

Male *A. muricatus* have a large and well-defined nuchal crest. It is only of moderate size in *A. jacky* and *A. boandikorum sp. nov.*. In *A. eipperi*, the nuchal crest is small, separating it from the other two species.

The four species *Amphibolurus jacky*, *A. boandikorum sp. nov.*, *A. eipperi* and *A. muricatus* are separated from the closely related *A. norrisi* Witten and Coventry, 1984 and *A. adelyn sp. nov.* by the fact that the dark canthal stripe extends only to the nostril or to the lower eye, versus to the tip of the snout in the

other taxa.

Amphibolurus jacky, *A. boandikorum sp. nov.* and *A. muricatus* also have dark transverse markings on the snout in the internarial region, which is not seen in the other taxa.

Adult male *A. muricatus* invariably have two distinct light-coloured stripes running down either side of the back, partially broken with dark triangular incursions, the degree of intrusion being dependent on the relevant subspecies. In adult male *Amphibolurus jacky* and *A. boandikorum sp. nov.* the same striping is significantly broken tending towards the female colouration.

The closely related taxon *A. burnsi* (Wells and Wellington, 1985) a taxon from the northern interior of New South Wales and south-west Queensland is readily separated from the preceding species by the possession of an exceptionally long and prominent nuchal crest, without any black or black-tipped spines; thick heavy white bands on the forelimbs, both upper and lower as well as a strongly rounded tail, without any spines or strongly keeled scales.

The other species in the genus, namely *A. wellsi* Hoser, 2015 along with the closely related *A. centralis* (Loveridge, 1933) are readily separated from the preceding species by having mainly heterogenous dorsal and upper lateral body scales; lower lateral scales being homogenous or subequal; the lining of the mouth is pink or flesh coloured, as opposed to yellow/orange in the other species.

A. boandikorum sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205564381

and

https://www.inaturalist.org/observations/10386061

and

https://www.inaturalist.org/observations/5403575

A. jacky is depicted in life online at:
https://www.inaturalist.org/observations/197391271

and

https://www.inaturalist.org/observations/56020974

and

https://www.inaturalist.org/observations/202763835

Male *A. muricatus* is depicted in life in Hoser (1989) on page 57 bottom and a female is depicted in life in Hoser (1989) on page 58 at top.

Distribution: The species *A. boandikorum sp. nov.* appears to be confined to the general region near the South Australian, Victorian border, in a generally colder part of the region, where it is separated from other related taxa by excessively arid zones to the north, east and west and the wetter Otway Ranges to the south-east.

The more drier areas to the north appear to be occupied by the morphologically similar and presumably competing species *Calotella josephburkei* Hoser, 2023, which as a rule are not found in the same localities.

C. josephburkei is a taxon until recently treated as a population of the formerly widespread species *C. nobbi* (Witten, 1972), split several ways by Hoser (2023). That putative taxon was originally described as *Amphibolurus nobbi* Witten 1972. Some texts also place the species (and associated forms) in *Wittenagama* Wells and Wellington, 1985, *Diporiphora* Gray, 1842 or the most recently allocated *Calotella* Steindachner, 1867.

Conservation: In terms of habitat conservation, there is sufficient habitat in public reserves to secure the future of the species *A. boandikorum sp. nov.*. The hobbyist/pet trade also poses no real threat as these lizards breed easily and any substantive demand would invariably be met mainly by captive breeding.

Therefore it should be treated as being of least concern.

However the comments in Hoser (2019a-b) are relevant to this taxon.

Etymology: *A. boandikorum sp. nov*. is named in honour of the local indigenous peoples of the area this species occurs being the Boandik tribe. They had a well-established farming culture in operation at the time the King's troops invaded from England. Because of the value of the region's agricultural lands members of the tribe were either killed on sight or forced to flee before they were killed. Even in 2024, surviving descendants of the frontier wars generally eke out a miserable existence scavenging in and around urban areas. Those caught in the "wrong places" usually get arrested, put in front of cocaine addicted magistrates and judges and invariably get imprisoned, where they are used as free labour for government owned or backed corporations.

It is an Australian variant of slavery.

AMPHIBOLURUS MURICATUS ABSCONDITUS SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:94CCBDA1-5999-4A9C-9E5F-C80B36D2421C

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.64826 collected from Nadgee Nature Reserve, New South Wales, Australia, Latitude -37.45 S., Longitude 149.983 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.45786 and R.45787 both collected from Nadgee Nature Reserve, New South Wales, Australia, Latitude -37.45 S., Longitude 149.983 E.

Diagnosis: *Amphibolurus muricatus absconditus subsp. nov.* are separated from the nominate subspecies of *A. muricatus* as follows:

On adult male *A. muricatus absconditus subsp. nov.* the more-or-less continuous grey line running down either side of the the back is reduced somewhat to appear as a series of tightly spaced ovoid rectangles, joined at the outer edge, meaning they form a continuum but not in the form of obvious lines running down the back.

While this outer edge is also more-or-less straight in *A. muricatus* of the type form, *A muricatus* of the type form differs in that the inner edge is also relatively straight (slight inflections only), giving the appearance of two well-defined dorsolinear stripes.

In male *A muricatus* of the type form this line is greyish in colour, versus cream to yellowish in *A. muricatus absconditus subsp. nov.*.

To some extent this makes the colouration of adult male *A. muricatus absconditus subsp. nov.* somewhat intermediate between that of the type form of *A. muricatus* and the duo of *Amphibolurus jacky* and *A. boandikorum sp. nov.* in which the dorsolinear stripes are even further reduced.

In *Amphibolurus jacky* and *A. boandikorum sp. nov.* the width of the joined squares (taken to be from the dorsolateral line) is reduced further making the inner mid-dorsal line wider.

Preanal pores in *A. muricatus absconditus subsp. nov.* do not as a rule reach halfway along the thigh, versus usually does so in the type form of *A. muricatus.*

The nuchal crest of male *A. muricatus absconditus subsp. nov.* does not extend onto the neck, versus slightly in the nominate form of *A. muricatus*, which again is intermediate in form between the type form of *A. muricatus* and the duo of *Amphibolurus jacky* and *A. boandikorum sp. nov.*, the latter two of which have a smaller nuchal crest.

Adult female *A. muricatus absconditus subsp. nov.* have a pattern on the dorsum in which the light yellow-grey spots running down the back are reduced in size so that they do not join and are well spaced (with rare exceptions in some specimens anteriorly), versus larger spots that are joined both anteriorly and posteriorly as a rule and are otherwise very close

across their proximal edges.

The anterior part of the visible surfaces of the tail of adult female *A. muricatus absconditus subsp. nov.* are more dark than light, versus more light than dark in the nominate form of *A. muricatus.*

A. muricatus absconditus subsp. nov. has an iris that is usually yellow to yellow-grey or with a slight reddish hue. The nominate form of *A. muricatus.*has a slight orange hue in the iris.

Differences between *A. muricatus* of the type form of *A. muricatus* and *A. muricatus absconditus subsp. nov.* treated collectively as "*A. muricatus*" and all other species in the genus *Amphibolurus* Wagler, 1830 as defined by Hoser (2015) are given in the formal description of *A. boandikorum sp. nov.* in this paper, which is treated herein as an integral part of this formal description.

Male *A. muricatus* of the type form is depicted in life in Hoser (1989) on page 57 bottom and a female is depicted in life in Hoser (1989) on page 58 at top and middle.

Male *A. muricatus absconditus subsp. nov.* is depicted in life online at:
https://www.inaturalist.org/observations/65295732

Female *A. muricatus absconditus subsp. nov.* is depicted in life online at:

https://www.inaturalist.org/observations/128960019

Distribution: *A. muricatus absconditus subsp. nov.* occurs south of a line from Berrima, through Robertson and east to Kiama in New South Wales (on the coast and nearby ranges to the west) south to include Victoria east of the eastern Latrobe Valley and including most of the Western slopes of New South Wales and nearby parts of north-east Victoria.

Conservation: As for *A. boandikorum sp. nov.* in this paper.

Etymology: The name "*absconditus*" comes from the Latin word meaning hidden, which reflects that this taxon was hidden or concealed from science until now.

REFERENCES CITED

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia*. Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Gray, J. E. 1842. Description of some hitherto unrecorded species of Australian reptiles and batrachians. *Zoological Miscellany*, Treuttel Würtz and Co, London, UK 2:51-57.

Hoser, R. T. *Australian Reptiles and Frogs*. Pierson and Co, Mosman, NSW, Australia:238 pp.

Hoser, R. T. 2015 Australian agamids: Eighteen new species from the genera *Amphibolurus* Wagler, 1830, *Lophognathus* Gray, 1842, *Rankinia* Wells and Wellington, 1984, *Diporiphora* Gray, 1842, *Tympanocryptis* Peters, 1863, as well as three new genera and six new subgenera. *Australasian Journal of Herpetology* 30:37-64.

Hoser, R. T. 2019a. 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. 2019b. 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. 2023 An overdue break-up of the east Australian *Calotella* (*Wittenagama*) *nobbi* (Witten, 1972) species complex. *Australasian Journal of Herpetology* 66:5-25.

International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the *International Code of Zoological Nomenclature* to expand and refine methods of publication. *Zootaxa* (PRINO) (Online) 3450:1-7.

Loveridge, A. 1933. New agamid lizards of the genera *Amphibolurus* and *Physignathus* from Australia. *Proceedings of the New England Zoologists Club* 13:69-72.

Pepper, M., Barquero, M. D., Whiting, M. J. and Keogh, J. S. 2014. A multi-locus molecular phylogeny for Australia's iconic Jacky Dragon (Agamidae: *Amphibolurus muricatus*): Phylogeographic structure along the Great Dividing Range of south-eastern Australia. *Molecular Phylogenetics and Evolution*, 71:149-156.

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").

Steindachner, F. 1867. In: *Reise der Österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858,1859 unter den Befehlen des Commodore B. von Wüllerstorf-Urbair (Zoologie), Vol. 1*, part 3 (Reptilien p.1-98). K. Gerold's Sohn/Kaiserlich-Königl. Hof- und Staatsdruckerei, Wien, Austria [1869 on title page].

Wagler, J. G. 1830. *Natürliches System der Amphibien : mit vorangehender Classification der Säugethiere und Vögel : ein Beitrag zur vergleichenden Zoologie*. J.G. Cotta'schen, München, Germany:i-vi+1-354.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

White, J. 1790. *Journal of a voyage to new South Wales, with sixty-five plates of non descript animals, birds, lizards, serpents, curious cones of trees and other natural productions*. Debrett, London, UK:229 pp.

Witten, G. J. 1972. A new species of *Amphibolurus* from eastern Australia. *Herpetologica* 28:191-195

Witten, G. J. and Coventry, A. J. 1984. A new lizard of the genus *Amphibolurus* (Agamidae) from southern Australia. *Proceedings of the Royal Society of Victoria* 96(3):155-159.

CONFLICT OF INTEREST

None.


A. muricatus absconditus subsp. nov.

Australasian Journal of Herpetology 72:29-34.
Published 24 June 2024.

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

Before we end up with mutts! The formal diagnosis of subspecies within the Sydney basin species, *Hoplocephalus bungaroides* (Schlegel, 1837) and *Amalosia lesueurii* (Duméril and Bibron, 1836).

LSIDURN:LSID:ZOOBANK.ORG:PUB:81915CEF-3D5E-4D1E-AA2C-F450949183EB

RAYMOND T. HOSER

LSIDURN: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 1 February 2024, Accepted 2 March 2024, Published 24 June 2024.

ABSTRACT

It has long been known that populations of reptiles and frogs inhabiting the sandstone escarpments of the Sydney basin in south-east Australia vary, depending on whether they are found to the north, west or south of the flat central parts of Sydney.

Added to this is the southern extension of the sandstone region to the west of Nowra, New South Wales which is also disjunct from the rest and separated by a province of volcanic soils.

Hoser (2020) at pages 32-35 split the iconic Red-crowned Toadlet *Bufonella australis* (Gray, 1835) (sometimes formerly called *Pseudophryne australis*) into two species (north for *B. australis* and south to south-west for *B. hoserae* Hoser, 2020) based on morphological and molecular divergence in what was the first step in the formal dissection of locally variable sandstone endemics within the greater Sydney region.

This paper formally names divergent populations of the gecko species *Amalosia lesueurii* (Duméril and Bibron, 1836) and Broad-headed Snake *Hoplocephalus bungaroides* (Schlegel, 1837) as separate reproductively isolated subspecies, noting that in the case of the gecko taxa named a good argument could be raised for treating them as full species.

The previous work of Sumner *et al*. (2010) confirmed a divergence of 800,000 YBP for divergence between the two main populations of *H. bungaroides*.

The previous work of Dubey *et al*. (2012) established significant species-level divergences for the three main populations of *A. lesueurii* of between 1 and 3 MYA.

This paper sets out a morphological basis by which the various populations can be separated and simultaneously names the three relevant unnamed forms as subspecies.

It is noteworthy that this updated taxonomy for the two species is essential for the proper ongoing future management and conservation of these taxa.

Important is the need to avoid release and translocation of subspecies into areas inhabited by other divergent subspecies so that hybrid mongrels do not infect the populations.

Keywords: Taxonomy; nomenclature; snake; elapid; lizard; gecko; *Hoplocephalus*; *bungaroides*; *Amalosia*; *Celertenues*; *Marlenegecko*; *Fiacumminggecko*; *lesueurii*; *alexanderdudleyi*; *jacovae*; *phillipsi*; Sydney; Nowra; Blue Mountains; Royal National Park; new subspecies; *pugnax*; *noniter*; *beneabscondita*.

INTRODUCTION

As part of a wide-ranging audit of the Australian herpetofauna by myself spanning some decades, potentially undescribed forms within all Australian snakes and lizards have been inspected and if deemed sufficiently divergent, formally named as species or subspecies.

A small number have been "passed over" awaiting further inquiries, including the three newly identified taxa subject of this paper, noting that both genera, being the snake genus *Hoplocephalus* Wagler, 1830 and the lizard genus *Amalosia* Wells and Wellington, 1984 have both been subject of detailed taxonomic papers by myself (Hoser) in the relatively recent past (Hoser 2016 and Hoser 2017). The relevant Sydney basin taxa had been long ago flagged as containing divergent populations worthy of taxonomic recognition.

These were the papers of Sumner *et al*. (2010) who confirmed a divergence of 800,000 YBP for divergence between the two main populations of *H. bungaroides*, only one of which had an available name and the previous work of Dubey *et al*. (2012) established significant species-level divergences for the three main populations of *A. lesueurii* of between 1 and 3 MYA for which again there was only one available name.

Hoser (2020) at pages 32-35 split the iconic Red-crowned Toadlet *Bufonella australis* (Gray, 1835) (sometimes formerly called *Pseudophryne australis*) into two species (north for *B. australis* and south to south-west for *B. hoserae* Hoser, 2020) based on morphological and molecular divergence in what was the first step in the formal dissection of locally variable sandstone endemics within the greater Sydney region.

Prior to the publication of this paper, I was able to further inspect large numbers of specimens of both putative species (*Hoplocephalus bungaroides* and *Amalosia lesueurii*) from across their relevant Sydney and nearby ranges north, west and south of central Sydney, including all populations subject of the earlier papers.

The inspection concentrated on adult specimens (due to their morphological stability) and with a view to establishing consistent differences between the populations in order to be able to separate them taxonomically.

Ultimately this proved quite easy as the differences between specimens in the populations were obvious and consistent.

With that in mind, and after confirming a lack of available synonyms via relevant texts such as Cogger *et al*. (1983), Cogger (2014) and Wells and Wellington (1984 and 1985) the decision was made to publish this paper to formally name the three relevant forms as subspecies in accordance with the *International Code of Zoological Nomenclature* (Ride *et al*. 1999) as amended (ICZN 2012).

MATERIALS AND METHODS

The papers of Hoser (2016) for the genus *Hoplocephalus* and Hoser (2017) for the genus *Amalosia*, established the most up-to-date taxonomy and nomenclature for each genus.

The taxonomic vandalism of Conman Conrad Hoskin and his mate Patrick Couper in 2023 with respect of the genus *Amalosia* is not relevant here as it did not pertain to the species *A. lesueurii*.

In that paper (Hoskin and Couper 2023) they unlawfully created a number of junior synonyms for species named by Hoser (2017).

That rubbish paper is cited here as to not do so would be illegal under the Moral Rights provisions of the Australian Copyright Act 1968 as amended.

In terms of the Sydney basin taxa *Hoplocephalus bungaroides* (Schlegel, 1837) and *Amalosia lesueurii* (Duméril and Bibron, 1836) there were two divergent populations of the former identified by Sumner *et al*. (2010) with a divergence of about 800K years before present and in terms of *A. lesueurii* three populations were identified, all separated from one another from 1 to 3 MYA BP.

The *H. bungaroides* of the type form from Sydney, were found to have diverged from those west of Nowra about 800K ago.

Specimens of both were inspected to confirm consistent differences in morphology in adults. A literature sweep confirmed that there were no available names for the southern population.

In terms of *A. lesueurii* Sumner *et al*. (2010) found that the type population from central Sydney (Port Jackson) diverged from two other populations, with each diverged from each other over 1 MYA, with the most divergent population being that from the Royal National Park area, south of Port Hacking and the Kurnell Sand Dunes.

It is reasonable to infer that the Cumberland Plain, lower Botany Bay and the associated sand dunes in the Kurnell area have formed a rock-free biogeographical barrier for potentially millions of years, even though the straight-line distance between the type population at Cape Banks (their southern limit) and the Royal National Park population is a fraction under 10 km.

A literature sweep confirmed no available names for the populations found in the Royal National Park area or those from west of Nowra, further south in New South Wales.

Specimens of each population were inspected to confirm consistent differences in morphology in adults.

RESULTS

Consistent diagnosable morphological differences were found between the relevant populations of both *Hoplocephalus bungaroides* (Schlegel, 1837) and *Amalosia lesueurii* (Duméril and Bibron, 1836) and so each of the three unnamed forms are herein formally named as new subspecies in accordance with the International Code of Zoological Nomenclature (Ride *et al*. 1999) as amended (ICZN 2012).

The differences are best quantified in terms of colouration variance between the forms and are outlined in the descriptions that follow.

INFORMATION RELEVANT TO THE FORMAL DESCRIPTIONS THAT FOLLOW

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 are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling of names should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (Ride *et al.* 1999 and ICZN 2012).

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 27 January 2024, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

Unless otherwise stated explicitly, colour descriptions apply to living adult 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.

It is worth noting here that the colouration intensity of the relevant gecko species varies strongly with temperature, shedding cycle and diurnal / nocturnal cycles, but a normal unstressed adult gecko during daytime hours will display the colourations described herein.

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.

HOPLOCEPHALUS BUNGAROIDES PUGNAX SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:BBE7E5C4-BD9A-40E1-83EC-3B50D755E232

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.74285 collected from the Yalwal area, New South Wales, Australia, Latitude -35.1 S., Longitude 150.3 E by Brian Lazell and Richard Wells.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.74286 collected from the Jerrawangala National Park, New South Wales, Australia, Latitude -35.1 S., Longitude 150.3 E.

Diagnosis: The subspecies *Hoplocephalus bungaroides pugnax subsp. nov*. found generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales is readily separated from the nominate form of *H. bungaroides* (Schlegel, 1837) (type locality Port Jackson), being found around the south and west of the immediate Sydney basin by having dull, versus bright yellow spotting on the dorsum, as well as increased black between yellow spotting on the rear lower flanks. On the head of *H. bungaroides pugnax subsp. nov*. there are longitudinal lines formed by the white lines on the head, being usually in the form of a broken line or spots, versus transverse in nominate *H. bungaroides* from the Royal National Park and nearby Blue Mountains region including lesser known reserves in these areas.

H. bungaroides is separated from all other species in the genus *Hoplocephalus* Wagler, 1830 by being the only species with a black dorsum and spotted or banded with white or yellow, any cross-bands being irregular and rarely more than a scale in width (versus regular in other *Hoplocephalus* with bands and 2 or more scales in width). The sides of the ventrals are yellow or white.

Snakes in the genus *Hoplocephalus* are separated from all other Australian elapids by the following unique suite of characters: Smooth dorsal scales; 19-21 rows of scales at mid-body; obviously keeled ventrals; over 190 ventrals; frontal shield is noticeably longer than broad; internasals present; no suboculars; single anal; all single subcaudals; two or three solid maxillary teeth behind the fang (derived from Cogger 2014).

They are within the so-called "*Notechis*" group of Australian elapid snakes.

H. bungaroides of the nominate form is depicted in life in Hoser (1989) on page 159 at bottom right, and Cogger (2014) on page 901 at bottom.

Hoplocephalus bungaroides pugnax subsp. nov. is depicted in life in Swan *et al*. (2022) on page 274 at top.

Distribution: *Hoplocephalus bungaroides pugnax subsp. nov*. is found on and near sandstone escarpments generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales, where it hides under rock slabs in cooler weather and moves about more extensively along ridgelines in warmer seasons.

Conservation: The New South Wales government has done everything wrong with regards to this taxon and hastening its decline. Its ultimate survival will be in spite of actions by Australian governments and not because of it (see the relevant comments in Hoser 1989, Hoser 1995a-c, and more recently in Hoser 2019a-b).

Also important is that no translocation of specimens of one species to an area inhabited by another is done by government agencies or well-meaning albeit misguided individuals.

To do so could jeopardise hundreds of thousands of years of evolution by the relevant taxa in isolation from one another.

Etymology: "*pugnax*" is Latin for pugnacious, which in turn means willing to fight or bite; an apt description for this taxon.

AMALOSIA LESUEURII NONITER SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:FF08DEF0-BB67-4925-B92B-F47E19AEB73E

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.81182 collected from the Yalwal area, New South Wales, Australia, Latitude -34.933 S., Longitude 150.383 E., collected by Richard W. Wells and Brian Lazell.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.81183, R.81184 and R.81194 all collected from the Yalwal area, New South Wales, Australia, Latitude -34.933 S., Longitude 150.383 E., collected by Richard W. Wells and Brian Lazell.

Diagnosis: *Amalosia lesueurii noniter subsp. nov*. is a taxon found generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales (an identical range to that of *H. bungroides pugnax subsp. nov*.).

It, the nominate form of *Amalosia lesueurii* (Duméril and Bibron, 1836) (type locality Port Jackson = the foreshores of Sydney Harbour, New South Wales), found there and to the region north and west of there to the northern Blue Mountains and the newly described subspecies *A. lesueurii beneabscondita subsp. nov*. from the Royal National Park (separated from the nominate subspecies by the Kurnell Sand Dunes, being a straight-line distance of just under 10 km) are separated from one another by the following unique combinations of characters:

Amalosia lesueurii of the nominate subspecies has a dorsum that has a well-defined dark brown zig-zag line down (sharply defined on the edges) either side of the dorsum, the parts of the zig-zag lines being very straight, the inner area of the dorsum being a moderate brown-grey in colour.

The flanks are greyish with scattered whitish and blackish speckling.

A. lesueurii noniter subsp. nov. is readily separated from the other two subspecies by having a strong brownish hue down the mid-section of the dorsum, effectively forming a brownish line running down the middle of the back, in a form not seen in the other subspecies. Bounding this on either side of the back is a continuous or near continuous thin wavy line, with well-defined edges (no specks or infusions on the lines). In some specimens this line breaks when closest to the midline of the dorsum. Flanks are light grey with scattered black spots, which are mainly on the lower surfaces and anterior to the front of the hind limbs.

A. lesueurii beneabscondita subsp. nov. is readily separated from the other two subspecies by having a dorsum characterised by light mid-dorsal blotches, enlarged laterally and merged with one another, being bounded by a thick purply-brown border that is not particularly well-defined on the inner or outer edges and infused with white specking.

The flanks are dark grey, heavily overlain with numerous small to medium-sized white spots that are reasonably well defined.

Amalosia lesueurii of the nominate subspecies is depicted in life in Hoser (1989) on page 76 at top and middle and online at:
https://www.inaturalist.org/observations/179114494

and

https://www.inaturalist.org/observations/176696930

and

https://www.inaturalist.org/observations/187226581

A. lesueurii noniter subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/130607043

and

https://www.inaturalist.org/observations/56737065

and

https://www.inaturalist.org/observations/61375804

A. lesueurii beneabscondita subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/133140524

and

https://www.inaturalist.org/observations/166027975

and

https://www.inaturalist.org/observations/19188054

A. lesueurii (Duméril and Bibron, 1836) of all three subspecies has a generally greyish ground colour across most of the dorsum and flanks as opposed to brownish grey in both *A. phillipsi* Wells and Wellington, 1984 and *A. alexanderdudleyi* Hoser, 2017, being the other two most similar species in the genus *Amalosia* Wells and Wellington, 1984.

A. alexanderdudleyi and *A. lesueurii* have distinctive white patches on the upper labials which are absent in *A. phillipsi. A. phillipsi* is characterised by a dorsal pattern of large, pale, heart shaped blotches running down the middle of the back, most if not all separated from one another and prominently bounded by dark pigment. By contrast in *A. alexanderdudleyi* these mid-dorsal blotches are shrunken in size, being medium, with distinct brownish centres and all or mainly all, are joined to give a distinct vertebral zig-zag pattern. In *A. lesueurii* the dorsal blotches are small to medium and lack any brown in the centres of them.

The flanks of *A. phillipsi* are characterised by a noticeable pattern of irregular whiteish squares or whitish blotches or large spots and without dark centres. In *A. alexanderdudleyi* the flanks are characterised by white ocelli with some or most being characterised by dark blackish-grey spots of varying size in the centre of each, as in one dark spot in the centre of the relevant ocelli. In *A. lesueurii* the flanks consist of a relatively indistinct flecked appearance being composed of dark grey and light grey flecking, but without any obvious pattern.

Most of the upper surface of the head of *A. phillipsi* is covered in lighter pigment, even when including dark pigment concentrated near the centre of the dorsal surface. *A. alexanderdudleyi* has more dark pigment than light on the upper surface of the head. In *A. lesueurii* pigment on the head varies widely with locality and within locality, but usually hovers in the range of about half dark and half light pigment.

All three species are characterised as having vertebral zone characterised by pale blotches, zig-zag or similar, edged with dark brown or black running in combination more or less continuously. The tail is noticeably depressed. The species *A. jacovae* Couper, Keim and Hoskin, 2007 is most similar to *A. phillipsi* for which there has been speculation that it may be conspecific, but it is separated from the latter taxon by an absence of irregular whiteish squares or whitish blotches or large spots, being without dark centres on the flanks. The flanks of *A. jacovae* merely grade from dark grey to light and without any obvious spots or markings. The other species that were formerly placed in the genus *Amalosia*, that are all now placed in the genus *Celertenues* Hoser, 2017 are all readily separated from *Amalosia* including *A. jacovae* by having a tail that is cylindrical in cross section as opposed to being noticeably depressed.

The diagnosis for the genus *Amalosia* Wells and Wellington, 1984 within the subtribe Celertenuina Hoser, 2017 is as follows: It is a genus of the Diplodactylidae (*sensu* Han *et al*. 2004) distinguished from all genera in the tribe Fiacumminggeckoini Hoser, 2017 (these being: *Fiacumminggecko* Hoser, 2017; *Celertenues* Hoser, 2017; *Hesperoedura* Oliver, Bauer, Greenbaum, Jackman and Hobbie, 2012; *Marlenegecko* Hoser, 2017; *Nebulifera* Oliver, Bauer, Greenbaum, Jackman and Hobbie, 2012; *Oedura* Gray, 1842), by the following combination of characters:

1/ Size of less than 62 mm snout-vent,

2/ Dorsal scales are minute, granular and much smaller than the ventrals,

3/ More than one enlarged cloacal spur,

4/ Karyotype of 2n = 36,

5/ Dorsal pattern generally including at least a broken vertebral stripe or similar, and,

6/ Base of tail is strongly horizontally flattened.

Characters 1-2 and 4-5 all specifically diagnose this genus from all others within the tribe Fiacumminggeckoini, except for the recently named genus *Celertenues* Hoser, 2017 which is separated from *Amalosia* by having a tail that is either not strongly horizontally flattened or only slightly so

Distribution: *Amalosia lesueurii noniter subsp. nov*. is found on and near sandstone escarpments generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales, where it hides under rock slabs in cooler weather and otherwise very close to these in warmer weather but staying on or near the same escarpment sites.

Conservation: As for *H. bungaroides pugnax subsp. nov*. save for the fact that unlike *H. bungaroides* in general, there is effectively no pet trade or hobbyist interest in this species or subspecies.

The most serious threat may well be cross-contamination of populations with specimens of other subspecies from other areas.

Etymology: "*non iter*" is Latin for "does not travel" which refers to the strong site fidelity of adults and juveniles of this species as detailed by Dubey *et al*. (2012).

AMALOSIA LESUEURII BENEABSCONDITA SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:22C192D8-5356-4FED-A781-38DB1EA043C1

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.81235 collected from Waterfall, New South Wales, Australia, Latitude -34.133 S., Longitude 151.0 E., collected by Brian Lazell.

This government-owned facility allows access to its holdings.

Paratypes: Nine preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.15612, R.27679, R.80010, R.81215, R.81230, R.81232, R.81233, R.81236 and R.81258 all collected from Waterfall, New South Wales, Australia, Latitude -34.133 S., Longitude 151.0 E.

Diagnosis: *Amalosia lesueurii noniter subsp. nov*. is a taxon found generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales (an identical range to that of *H. bungroides pugnax subsp. nov*.).

It, the nominate form of *Amalosia lesueurii* (Duméril and Bibron, 1836) (type locality Port Jackson = the foreshores of Sydney Harbour, New South Wales), found there and to the region north and west of there to the northern Blue Mountains and the newly described subspecies *A. lesueurii beneabscondita subsp. nov*. from the Royal National Park (separated from the nominate subspecies by the Kurnell Sand Dunes, being a straight-line distance of just under 10 km) are separated from one another by the following unique combinations of characters:

Amalosia lesueurii of the nominate subspecies has a dorsum that has a well-defined dark brown zig-zag line down (sharply defined on the edges) either side of the dorsum, the parts of the zig-zag lines being very straight, the inner area of the dorsum being a moderate brown-grey in colour.

The flanks are greyish with scattered whitish and blackish speckling.

A. lesueurii noniter subsp. nov. is readily separated from the other two subspecies by having a strong brownish hue down the mid-section of the dorsum, effectively forming a brownish line

running down the middle of the back, in a form not seen in the other subspecies. Bounding this on either side of the back is a continuous or near continuous thin wavy line, with well-defined edges (no specks or infusions on the lines). In some specimens this line breaks when closest to the midline of the dorsum. Flanks are light grey with scattered black spots, which are mainly on the lower surfaces and anterior to the front of the hind limbs.

A. lesueurii beneabscondita subsp. nov. is readily separated from the other two subspecies by having a dorsum characterised by light mid-dorsal blotches, enlarged laterally and merged with one another, being bounded by a thick purply-brown border that is not particularly well-defined on the inner or outer edges and infused with white specking.

The flanks are dark grey, heavily overlain with numerous small to medium-sized white spots that are reasonably well defined.

Amalosia lesueurii of the nominate subspecies is depicted in life in Hoser (1989) on page 76 at top and middle and online at: https://www.inaturalist.org/observations/179114494

and

https://www.inaturalist.org/observations/176696930

and

https://www.inaturalist.org/observations/187226581

A. lesueurii noniter subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/130607043

and

https://www.inaturalist.org/observations/56737065

and

https://www.inaturalist.org/observations/61375804

A. lesueurii beneabscondita subsp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/133140524

and

https://www.inaturalist.org/observations/166027975

and

https://www.inaturalist.org/observations/19188054

A. lesueurii (Duméril and Bibron, 1836) of all three subspecies has a generally greyish ground colour across most of the dorsum and flanks as opposed to brownish grey in both *A. phillipsi* Wells and Wellington, 1984 and *A. alexanderdudleyi* Hoser, 2017, being the other two most similar species in the genus *Amalosia* Wells and Wellington, 1984.

A. alexanderdudleyi and *A. lesueurii* have distinctive white patches on the upper labials which are absent in *A. phillipsi*. *A. phillipsi* is characterised by a dorsal pattern of large pale heart shaped blotches running down the middle of the back, most if not all separated from one another and prominently bounded by dark pigment. By contrast in *A. alexanderdudleyi* these mid-dorsal blotches are shrunken in size, being medium, with distinct brownish centres and all or mainly joined to give a

distinct vertebral zig-zag pattern. In *A. lesueurii* the dorsal blotches are small to medium and lack any brown in the centres of them.

The flanks of *A. phillipsi* are characterised by a noticeable pattern of irregular whiteish squares or whitish blotches or large spots and without dark centres. In *A. alexanderdudleyi* the flanks are characterised by white ocelli with some or most being characterised by dark blackish-grey spots of varying size in the centre of each, as in one dark spot in the centre of the relevant ocelli. In *A. lesueurii* the flanks consist of a relatively indistinct flecked appearance being composed of dark grey and light grey flecking but without any obvious pattern.

Most of the upper surface of the head of *A. phillipsi* is covered in lighter pigment, even when including dark pigment concentrated near the centre of the dorsal surface. *A. alexanderdudleyi* has more dark pigment than light on the upper surface of the head.

In *A. lesueurii* pigment on the head varies widely with locality and within locality, but usually hovers in the range of about half dark and half light pigment.

All three species are characterised as having vertebral zone characterised by pale blotches, zig-zag or similar, edged with dark brown or black running in combination more or less continuously. The tail is noticeably depressed. The species *A. jacovae* Couper, Keim and Hoskin, 2007 is most similar to *A.*

phillipsi for which there has been speculation that it may be conspecific, but it is separated from the latter taxon by an absence of irregular whiteish squares or whitish blotches or large spots, being without dark centres on the flanks. The flanks of *A. jacovae* merely grade from dark grey to light and without any obvious spots or markings. The other species that were formerly placed in the genus *Amalosia*, that are all now placed in the genus *Celertenues* Hoser, 2017 are all readily separated from

Amalosia including *A. jacovae* by having a tail that is cylindrical in cross section as opposed to being noticeably depressed.

The diagnosis for the genus *Amalosia* Wells and Wellington, 1984 within the subtribe Celertenuina Hoser, 2017 is as follows: It is a genus of the Diplodactylidae (*sensu* Han *et al*. 2004) distinguished from all genera in the tribe Fiacumminggeckoini Hoser, 2017 (these being: *Fiacumminggecko* Hoser, 2017; *Celertenues* Hoser, 2017; *Hesperoedura* Oliver, Bauer, Greenbaum, Jackman and Hobbie, 2012; *Marlenegecko* Hoser, 2017; *Nebulifera* Oliver, Bauer, Greenbaum, Jackman and Hobbie, 2012; *Oedura* Gray, 1842), by the following combination of characters:

1/ Size of less than 62 mm snout-vent,

2/ Dorsal scales are minute, granular and much smaller than the ventrals,

3/ More than one enlarged cloacal spur,

4/ Karyotype of 2n = 36,

5/ Dorsal pattern generally including at least a broken vertebral stripe or similar, and,

6/ Base of tail is strongly horizontally flattened.

Characters 1-2 and 4-5 all specifically diagnose this genus from all others within the tribe Fiacumminggeckoini, except for the recently named genus *Celertenues* Hoser, 2017 which is separated from *Amalosia* by having a tail that is either not strongly horizontally flattened or only slightly so

Distribution: *A. lesueurii beneabscondita subsp. nov*. is a taxon from the Royal National Park, about 20 km south of the Sydney central business district, as well as nearby national parks (e.g. Heathcote State Park). It is separated from the nominate subspecies of *A. lesueurii* to the north by the Kurnell Sand Dunes, being a straight-line distance of just under 10 km.

The other newly named subspecies *Amalosia lesueurii noniter subsp. nov*. is found on and near sandstone escarpments generally south of the line between Berrima, through Robertson and east to Kiama in New South Wales and north of Ulladulla in New South Wales, where it hides under rock slabs in cooler weather and otherwise very close to these in warmer weather but staying on or near the same escarpment sites.

Conservation: As for *H. bungaroides pugnax subsp. nov*. save for the fact that unlike *H. bungaroides* in general, there is effectively no pet trade or hobbyist interest in this species or subspecies.

The most serious threat may well be cross-contamination of populations with specimens of other subspecies from other areas.

Etymology: "*bene abscondita*" is Latin for "well hidden" which refers to the fact that this taxon remained hidden and unrecognized by science for so long.

REFERENCES CITED

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia*

(Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia*. Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Couper, P., Keim, L. D. and Hoskin, C. J. 2007. A new velvet Gecko (Gekkonidae: *Oedura*) from south-east Queensland, Australia. *Zootaxa* (PRINO) (online) 1587:27-41.

Dubey, S., Croak, B., Pike, D., Webb, J. and Shine, R. 2012. Phylogeography and dispersal in the velvet gecko (*Oedura lesueurii*), and potential implications for conservation of an endangered snake (*Hoplocephalus bungaroides*). *BMC Evolutionary Biology* 12:67 (online) (10 pages).

Duméril, A. M. C. and Bibron, G. 1836. *Erpetologie Générale ou Histoire Naturelle Complete des Reptiles. Vol. 3.* Libr. Encyclopédique Roret, Paris, France:528 pp.

Gray, J. E. 1835. Untitled. *Proceedings of the Zoological Society of London* 1835:57.

Gray, J. E. 1842. Description of some hitherto unrecorded species of Australian reptiles and batrachians. *Zoological Miscellany* Treuttel, Würtz and Co, London, UK:2:51-57.

Han, D., Zhou, K. and Bauer, A. M. 2004. Phylogenetic relationships among gekkotan lizards inferred from C-mos nuclear DNA sequences and a new classification of the Gekkota. *Biological Journal of the Linnean Society*, 83(3):353-368.

Hoser, R. T. *Australian Reptiles and Frogs*. Pierson and Co, Mosman, NSW, Australia:238 pp.

Hoser, R. T. 1995a. The Australian broad-headed snake (*Hoplocephalus bungaroides*). *Reptilian* 3 (10):15-27.

Hoser, R. T. 1995b. *Hoplocephalus bungaroides*, the broad-headed snake in captivity. *Litteratura Serpentium* 15(3):59-62.

Hoser, R. T. 1995c. The Australian broad-headed snake *Hoplocephalus bungaroides* in the wild. *Litteratura Serpentium* 15(4):92-99.

Hoser, R. T. 2016. Two new subspecies of *Hoplocephalus* Wagler, 1830 from eastern Australia (Serpentes: Elapidae). *Australasian Journal of Herpetology* 33:23-24.

Hoser, R. T. 2017. A further break-up of the Australian gecko genus *Oedura* Gray, 1842 *sensu lato* as currently recognized, from four to seven genera, with two new subgenera defined, description of fourteen new species, four new subspecies and formalizing of one tribe and five subtribes. *Australasian Journal of Herpetology* 34:3-35.

Hoser, R. T. 2019a. 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. 2019b. 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. 2020. 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

Hoskin, C. J. and Couper, P. J. 2023. Revision of zigzag geckos (Diplodactylidae: *Amalosia*) in eastern Australia, with description of five new species. *Zootaxa* (PRINO) (Online) 5343(4):301-337.

International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the *International Code of Zoological Nomenclature* to expand and refine methods of publication. *Zootaxa* (PRINO) (Online) 3450:1-7.

Oliver, P. M., Bauer, A. M., Greenbaum, E., Jackman, T. and Hobbie, T. 2012. Molecular phylogenetics of the arboreal Australian gecko genus *Oedura* Gray 1842 (Gekkota: Diplodactylidae): Another plesiomorphic grade? *Molecular Phylogenetics and Evolution* 63(2):255-264.

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").

Schlegel, H. 1837. *Essai sur la physionomie des serpens. Partie Descriptive*. La Haye (J. Kips, J. H. Z. *et* W. P. van Stockum):606 S.+xvi.

Sumner, J., Webb, J. K., Shine, R. and Keogh, J. S. 2010. Molecular and morphological assessment of Australia's most endangered snake, *Hoplocephalus bungaroides* reveals two evolutionary significant units for conservation. Conservation Genetics 11:747-758.

Swan, G., Sadlier, R. and Shea, G. 2022. *A field guide to reptiles of New South Wales*. Reed/New Holland, Wahroonga, New South Wales, Australia:336 pp.

Wagler, J. G. 1830. *Natürliches System der Amphibien : mit vorangehender Classification der Säugethiere und Vögel : ein Beitrag zur vergleichenden Zoologie*. J. G. Cotta'schen, München, Germany:i-vi+1-354.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

CONFLICT OF INTEREST

None.

Cite this paper as:

Hoser, R. T. 2024. Before we end up with mutts! The formal diagnosis of subspecies within the Sydney basin species, *Hoplocephalus bungaroides* (Schlegel, 1837) and *Amalosia lesueurii* (Duméril and Bibron, 1836). *Australasian Journal of Herpetology* 72:29-34.

Australasian Journal of Herpetology 72:35-39.
Published 24 June 2024.

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

Two new subspecies of Mountain Dragon, *Rankinia boylani* Wells and Wellington, 1984 from New South Wales, Australia.

LSIDURN:LSID:ZOOBANK.ORG:PUB:B8C07B02-EF8E-4288-80E5-D0FCDBA54CAD

RAYMOND T. HOSER
LSIDURN: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 25 April 2024, Accepted 30 April 2024, Published 24 June 2024.

ABSTRACT

Two geographically isolated populations within the *Rankinia boylani* Wells and Wellington, 1984 species group, from New South Wales are formally named as new subspecies.

One occurs near Orange on the western slopes of central New South Wales and the other in the near coastal ranges of the lower north coast of New South Wales, north of the Hunter Valley.

Keywords: Taxonomy; nomenclature; Lizards; Agamids; Mountain Dragons; Australia; New South Wales, ACT, *Rankinia*; *diemensis*; *hoserae*; *boylani*; *neildaviei*; *jameswhybrowi; fergussonae*; *martinekae*; new subspecies; *elonmuski*; *babeti*.

INTRODUCTION

The genus *Rankinia* was created by Wells and Wellington (1984), type species being *Grammatophora muricata diemensis* Gray, 1841.

Most recently the genus has been treated as monotypic by most publishing authors for the species *Grammatophora muricata diemensis* Gray, 1841, based on a specimen from Tasmania and now known as *Rankinia diemensis* (Gray, 1841).

Cogger (2014) treated *Rankinia diemensis* (Gray, 1841) better-known as the Mountain Dragon as being monotypic for the genus and occurring in a range from Tasmania, through Victoria and north to central eastern New South Wales.

These lizards are found in sandy areas, heaths and the like, often at high altitude. Their distribution appears to be patchy, probably due to habitat requirements as well as the influence of morphologically similar competing species within the genera *Amphibolurus* Wagler, 1830 and *Tympanocryptis* Peters, 1863, which share much of the same broad distribution.

Wells and Wellington (1984) formally named the population from the Sydney basin as *R. boylani*, reaffirmed by Wells and Wellington (1985).

However, the use of this name to identify the relevant taxon has not had general acceptance or use by publishing Australian herpetologists anywhere. This is in spite of clear and obvious morphological differences and a disjunct population from *R. diemensis*.

The basis of this non-acceptance of the validity of the taxon *R. boylani* has more to do with personality politics as practiced by a group known as the Wüster gang, who force their views on others using unethical and unlawful means as detailed by Hoser (2009, 2012a, 2012b, 2013, 2015a-f, 2019a, 2019b), ICZN (2013) and sources cited therein.

Hoser (2007) published an appeal to herpetologists to ignore the Wüster gang and to stop the general suppression of the Wells and Wellington works as it was hampering wildlife conservation.

This in turn led to the Wüster gang adding myself (Hoser) to the target list of herpetologists whose works they sought to use improper means to suppress and force others to do likewise (Kaiser 2012a, 2012b, 2013, 2014a, 2014b and Kaiser *et al*. 2013).

The relevant response to the false claims and pseudoscience of the Wüster Gang (AKA Kaiser *et al*.) are dealt with in Hoser (2015a-f), Hoser (2019a-b), ICZN (2021), Hawkeswood (2021) and sources cited therein.

Ng *et al*. (2013) published a molecular phylogeny showing six well defined species within what had until then been treated as *R. diemensis*.

However, they chose not to recognize any bar *R. diemensis* (in line with Cogger *et al*. 1983) as for Ng *et al.* (2013) to do so, would have necessitated them recognizing the most divergent lineage being *R. boylani* and to do that was against the forced edicts of the Wüster gang.

There is little doubt that Ng *et al*. (2013) did not want to become a target of the illegal harassment by the Wüster gang, including false complaints made to law enforcement authorities to generate illegal raids on them and their families, telephone death threats at odd times of the day and night and other unlawful forms of attack.

Refusing to be bullied by the unlawful and unscientific demands of the Wüster gang, Hoser (2015g) formally described all identified lineages as full species, including four for the first time. These newly named species were *R. hoserae*, *R. neildaviei* and *R. jameswhybrowi* from Victoria and *R. fergussonae* from mid-western New South Wales. Hoser (2015g) restricted *R. diemensis* to Tasmania and nearby islands and recognized *R. boylani* as the form from the Sydney basin.

The populations previously treated as *R. diemensis* in the region between Sydney and the Victorian border were effectively ignored by Ng *et al*. (2013). Hoser (2015g) did similar, but had managed to ascertain that the specimens from the uplands along the coast south of Sydney in New South Wales were clearly affiliated with *R. boylani*, whereas those from the Australian Capital Territory and south through the Snowy Mountains were most closely affiliated with *R. hoserae* (in particular) and *R. jameswhybrowi.*

More recent inspection of further specimens from the Brindabella Ranges at the northern extremity of the range of animals that are morphologically similar to the Victorian species indicated that they were sufficiently different to warrant separate recognition as a unique taxonomic entity.

The same population is physically cut off from *Rankinia* to the north, south and east and is also reproductively isolated. Based on the geological history of the area and intervening areas of both unsuitable habitat and competing species, it was reasonable to infer that this isolation is ancient, meaning that the Brindabella Ranges population has evolved in isolation from the rest and will continue to do so.

Therefore Hoser (2019c) had no hesitation in recognizing it as a taxonomic entity in accordance with the rules as set out in the *International code of Zoological Nomenclature* (Ride *et al*. 1999).

In the absence of comparative DNA material from the relevant population, Hoser (2019c) chose to conservatively name that taxon as a subspecies of *R. hoserae.*

Should a detailed molecular analysis of this population be done at some stage in the future, there is a strong likelihood that the taxon formally named as *R. hoserae martinekae* Hoser, 2019 may have to be elevated to the status of full species.

Two other populations of *Rankinia* have attracted the interest of myself for some years.

These are the distinctive form common in the Mount Canobolas State Conservation Area near Orange in the western slopes of central New South Wales as well as the distinctive specimens known from elevated near coastal heaths north of the Hunter Valley in mid-north New South Wales.

It had been hoped to inspect further specimens in ensuing years but this has not transpired.

Rather than allowing either form to become extinct through general lack of interest, each are formally named herein as subspecies of *R. boylani* in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

RANKINIA BOYLANI ELONMUSKI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:A6675B89-DBF2-4CD1-AD5E-1A3369B85FBF

Holotype: A live specimen depicted in the image at: https://www.inaturalist.org/observations/9629052

collected from Canobolas, New South Wales, 2800, Australia that was photographed on Dec 27, 2017 at 9:54 AM AEDT and last checked as being online as accounted for herein on 20 April 2024.

Diagnosis: *Rankinia boylani elonmuski subsp. nov.* known only from the type locality, is similar in most respects to nominate *Rankinia boylani* as diagnosed below, but with the following obvious differences.
Both males and females lack the strongly contrasting dorsal patterns seen in *R. boylani*, although they are otherwise similar in colour pattern.
In female *R. boylani elonmuski subsp. nov.* the dorsal spines on either side of the mid dorsal line are large and closely spaced and not angled backwards, without smaller spines in between.
In the nominate form of *R. boylani* the spines are well spaced, separated by areas of somewhat raised skin, the spines being angled slightly backwards.

Rankinia boylani babeti subsp. nov., a taxon from the elevated heaths in the near coastal ranges north of the Hunter Valley, is similar in most respects to nominate *Rankinia boylani* as diagnosed below, but with the following obvious differences.

Spines on the back are relatively blunt edged, as opposed to pointed, while those on the flank are pointed. Nuchal crest spines are small and very pointed and more noticeable than in the nominate form of *R. boylani* and *R. boylani elonmuski subsp. nov.*.

Rankinia hoserae martinekae Hoser, 2019 is similar in most respects to nominate *R. hoserae* Hoser, 2015, which it would be identified as using the description of that taxon in Hoser (2015g).

Typical *R. hoserae hoserae* in life is depicted in Robertson and Coventry (2019) at page 215, top left and online at: https://www.flickr.com/photos/snakecatchers/53418085949/.

The two subspecies (*R. hoserae martinekae* and *R. hoserae hoserae*) are however separated by the following characters (in living adults): six light semi-circles on each side of the body with their bases running off the dorso-lateral lines in *R. hoserae martinekae* versus seven in *R. hoserae hoserae*; strong orangeish red on the upper lateral surfaces versus greyish in *R. hoserae hoserae*; dark patches on the upper surface of the anterior tail are ill-defined versus well defined in *R. hoserae hoserae.* Male *R. hoserae martinekae* have prominent spines on the lower flanks of the body, versus present but not prominent in *R. hoserae hoserae*, both taxa otherwise being relatively spinose members of *Rankinia* in terms of the upper body.
Within the genus *Rankinia*, each of the six morphologically similar species as identified by Hoser (2015g) are identified and separated from one another as follows:

Rankinia hoserae Hoser, 2015 is the taxon found around Anglesea on the central Victorian coast and the highlands of central Victoria in scattered locations including Kinglake National Park and Wombat State Forest. It is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the hind legs have no obvious banding; exceptionally large spines on the upper body and in particular between the rear legs; some of the scale spines on the rear of the hind legs are either white or yellowish in colour; scales forming the nuchal crest are small, distinct and apart.

Rankinia jameswhybrowi Hoser, 2015 is the species found in the hills just east of Lake Eildon, Victoria and in the ranges to the north of there. It is separated from the other five species of *Rankinia* Wells and Wellington, 1984 by the following characters: the lighter dorso-linear blotches above the lateral flanks are of even curvature when viewed from above and noticeably elongate in shape and to an extent not seen in any of the other species; the tail is strongly banded, versus indistinctly banded in the other species; the nuchal crest is so poorly developed as to appear absent.

Rankinia diemensis (Gray, 1841), herein restricted to Tasmania and Bass Strait Islands, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the lateral spines running on each side from the base of the tail are smaller than the lateral spines along the sides of the body; the lighter dorso-linear blotches above the lateral flanks are of even curvature when viewed from above; there are distinct white-tipped spines on the posterior lateral edge of the back legs; the spines of the nuchal crest are distinctive in that they are easily noticed.

Rankinia boylani Wells and Wellington, 1984, herein restricted to NSW in the vicinity of the Sydney basin, including the Blue Mountains, to as far west as Mount Victoria (the type locality), but presumed to include most other specimens of *Rankinia* from New South Wales north of Goulburn, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the lateral spines running on each side from the base of the tail are considerably larger than the lateral spines along the sides of the body; the lighter dorso-linear blotches above the lateral flanks are not of even curvature when viewed from above,

these being larger at the posterior edge; there are no distinct white-tipped spines on the posterior lateral edge of the back legs; the spines of the nuchal crest are not distinctive in that they are easily not noticed.

Rankinia neildaviei Hoser, 2015 herein confined to the Grampians in south-western Victoria, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the dorsal spines on the anterior part of the tail are large; there are no distinct white-tipped spines on the posterior lateral edge of the back legs; the lighter dorso-linear blotches above the lateral flanks are all or mostly of even curvature when viewed from above; the banding on the hind limbs is distinct (as opposed to obvious banding that is indistinct in some other species in the genus, including *R. diemensis* and *R. boylani*).

Rankinia fergussonae Hoser, 2015 from Goonoo National Park, NSW is defined and separated from the other five species in the genus *Rankinia* Wells and Wellington, 1984 by the following: It is similar in most respects to *R. boylani,* from which it is differentiated by its more prominent nuchal crest scales (prominent versus very hard to see) and the presence of a well-developed white line along the lower lateral flank of the body on either side, which is indistinct in *R. boylani* and usually not white in colour, but light greyish instead or if whitish in *R. boylani*, is invariably broken.

The genus *Rankinia* Wells and Wellington, 1984, is separated from all other Australian agamids by the following suite of characters:

Body is without very large conical spines or a spiny nuchal hump; no large skin frill around the neck; tail is not compressed and with a lateral keel, it does not have a strongly differentiated dorsal keel; a vertebral series of enlarged scales present or absent on the back; if present, three or more femoral pores present on each side; femoral pores present; a single row of spinose scales on sides of the base of the tail; lower edge of supralabials straight or at most slightly curved, forming a more or less straight or even edge to the upper lip; no row of enlarged scales from below eye to above ear; dorsal scales of body heterogeneous, but with either distinctive vertebral and paravertebral rows of enlarged, keeled or spinose scales and with a poorly developed nuchal crest (that varies in development between species), no dorsal crest and sometimes a distinct vertebral ridge; tympanum distinct; enlarged spinose scales along each side of the base of the tail.

Distribution: Currently *R. boylani elonmuski subsp. nov.* is known only from the Mount Canobolas State Conservation Area near Orange in New South Wales, Australia.

The fact that this taxon is known only from a single site makes this a potentially vulnerable taxon. One hopes that the dysfunctional government-owned enterprise Taronga Zoo does not monopolize this taxon and "manage" it to extinction in the same way Australian government-owned zoos have done for other threatened species such as the Tasmanian Tiger *Thylacinus cynocephalus* (Harris, 1808).

Etymology: Named in honour of Elon Musk, multi billionaire owner of X (formerly twitter) for his courageous stand in calling out the fascism of the Australian government in 2024, when they tried to censor the internet globally and allow only their own narrative to be peddled online in the wake of a police protected thug attacking a priest in Sydney's west and the video footage of the assault being posted on various "social media" platforms.

RANKINIA BOYLANI BABETI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:4E02156E-606C-4FFF-A741-6B1EB8892EF6

Holotype: A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number R.107179 collected from the Camping Area at the north end of the Werrikimbe National Park, north-east of Yarrowitch, New South Wales, Australia, Latitude -31.15 S., Longitude 152.233 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number R.141495 collected from Bull Gully, near the junction of Bull Gully and Bull Ridge Roads in the Stewarts Brook State Forest, New South Wales, Australia, Latitude -31.95666 S., Longitude 151.37693 E.

Diagnosis: *Rankinia boylani babeti subsp. nov.*, a taxon from the elevated heaths in the near coastal ranges north of the Hunter Valley, is similar in most respects to nominate *Rankinia boylani* as diagnosed below, but with the following obvious differences.

Spines on the back are relatively blunt edged, as opposed to pointed, while those on the flank are pointed. Nuchal crest spines are small and very pointed and more noticeable than in the nominate form of *R. boylani* and *R. boylani elonmuski subsp. nov.*.

Rankinia boylani elonmuski subsp. nov. known only from the type locality, is similar in most respects to nominate *Rankinia boylani* as diagnosed below, but with the following obvious differences. Both males and females lack the strongly contrasting dorsal patterns seen in *R. boylani*, although they are otherwise similar in colour pattern.
In female *R. boylani elonmuski subsp. nov.* the dorsal spines on either side of the mid dorsal line are large and closely spaced and not angled backwards, without smaller spines in between. In the nominate form of *R. boylani* the spines are well spaced, separated by areas of somewhat raised skin, the spines being angled slightly backwards.

Rankinia hoserae martinekae Hoser, 2019 is similar in most respects to nominate *R. hoserae* Hoser, 2015, which it would be identified as using the description of that taxon in Hoser (2015g).

Typical *R. hoserae hoserae* in life is depicted in Robertson and Coventry (2019) at page 215, top left and online at: https://www.flickr.com/photos/snakecatchers/53418085949/.

The two subspecies (*R. hoserae martinekae* and *R. hoserae hoserae*) are however separated by the following characters (in living adults): six light semi-circles on each side of the body with their bases running off the dorso-lateral lines in *R. hoserae martinekae*, versus seven in *R. hoserae hoserae*; strong orangeish red on the upper lateral surfaces versus greyish in *R. hoserae hoserae*; dark patches on the upper surface of the anterior tail are ill-defined versus well defined in *R. hoserae hoserae.* Male *R. hoserae martinekae* have prominent spines on the lower flanks of the body, versus present but not prominent in *R. hoserae hoserae*, both taxa otherwise being relatively spinose members of *Rankinia* in terms of the upper body.
Within the genus *Rankinia*, each of the six morphologically similar species as identified by Hoser (2015g) are identified and separated from one another as follows:

Rankinia hoserae Hoser, 2015 is the taxon found around Anglesea on the central Victorian coast and the highlands of central Victoria in scattered locations including Kinglake National Park and Wombat State Forest. It is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the hind legs have no obvious banding; exceptionally large spines on the upper body and in particular between the rear legs; some of the scale spines on the rear of the hind legs are either white or yellowish in colour; scales forming the nuchal crest are small, distinct and apart.

Rankinia jameswhybrowi Hoser, 2015 is the species found in the hills just east of Lake Eildon, Victoria and in the ranges to the north of there. It is separated from the other five species of *Rankinia* Wells and Wellington, 1984 by the following characters: the lighter dorso-linear blotches above the lateral flanks are of even curvature when viewed from above and noticeably elongate in shape and to an extent not seen in any of the other species; the tail is strongly banded, versus indistinctly banded in the other species; the nuchal crest is so poorly developed as to appear

absent.

Rankinia diemensis (Gray, 1841), herein restricted to Tasmania and Bass Strait Islands, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the lateral spines running on each side from the base of the tail are smaller than the lateral spines along the sides of the body; the lighter dorso-linear blotches above the lateral flanks are of even curvature when viewed from above; there are distinct white-tipped spines on the posterior lateral edge of the back legs; the spines of the nuchal crest are distinctive in that they are easily noticed.

Rankinia boylani Wells and Wellington, 1984, herein restricted to NSW in the vicinity of the Sydney basin, including the Blue Mountains, as far west at Mount Victoria (the type locality), but presumed to include most other specimens of *Rankinia* from New South Wales north of Goulburn, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the lateral spines running on each side from the base of the tail are considerably larger than the lateral spines along the sides of the body; the lighter dorso-linear blotches above the lateral flanks are not of even curvature when viewed from above, these being larger at the posterior edge; there are no distinct white-tipped spines on the posterior lateral edge of the back legs; the spines of the nuchal crest are not distinctive in that they are easily not noticed.

Rankinia neildaviei Hoser, 2015 herein confined to the Grampians in south-western Victoria, is separated from the other five species in *Rankinia* Wells and Wellington, 1984 by the following characters: the dorsal spines on the anterior part of the tail are large; there are no distinct white-tipped spines on the posterior lateral edge of the back legs; the lighter dorso-linear blotches above the lateral flanks are all or mostly of even curvature when viewed from above; the banding on the hind limbs is distinct (as opposed to obvious banding that is indistinct in some other species in the genus, including *R. diemensis* and *R. boylani*).

Rankinia fergussonae Hoser, 2015 from Goonoo National Park, NSW is defined and separated from the other five species in the genus *Rankinia* Wells and Wellington, 1984 by the following: It is similar in most respects to *R. boylani,* from which it is differentiated by its more prominent nuchal crest scales (prominent versus very hard to see) and the presence of a well-developed white line along the lower lateral flank of the body on either side, which is indistinct in *R. boylani* and usually not white in colour, but light greyish instead or if whitish in *R. boylani*, is invariably broken.

The genus *Rankinia* Wells and Wellington, 1984, is separated from all other Australian agamids by the following suite of characters:

Body is without very large conical spines or a spiny nuchal hump; no large skin frill around the neck; tail is not compressed and with a lateral keel, it does not have a strongly differentiated dorsal keel; a vertebral series of enlarged scales present or absent on the back; if present, three or more femoral pores present on each side; femoral pores present; a single row of spinose scales on sides of the base of the tail; lower edge of supralabials straight or at most slightly curved, forming a more or less straight or even edge to the upper lip; no row of enlarged scales from below eye to above ear; dorsal scales of body heterogeneous, but with either distinctive vertebral and paravertebral rows of enlarged, keeled or spinose scales and with a poorly developed nuchal crest (that varies in development between species), no dorsal crest and sometimes a distinct vertebral ridge; tympanum distinct; enlarged spinose scales along each side of the base of the tail.

Distribution: Currently *R. boylani babeti subsp. nov.* is known only from the heaths in the near coastal high country north of the Hunter Valley in New South Wales north to an area between Kempsey and Armidale.

The locations this taxon occurs in are limited in area making this a potentially vulnerable taxon.

Etymology: Named in honour of Australian Senator, Ralph Emmanuel Didier "Deej" Babet, a Palmer United Party Senator who bravely went against the corrupt fascist Australian government narrative and spoke out publicly in favour of Elon Musk, multi billionaire owner of "X" (formerly twitter) supporting his courageous stand in calling out the fascism of the Australian government in 2024. That was when they tried to censor the internet globally and allow only their own narrative to be peddled online in the wake of a police protected thug attacking a priest in Sydney's west and the video footage of the assault being posted on various "social media" platforms.

REFERENCES CITED

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia.* Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet. *Calodema* Supplementary Paper 1:1-9.

Gray, J. E. 1841. Description of some new species and four new genera of reptiles from Western Australia, discovered by John Gould, Esq. *Annals and magazine of natural history; zoology, botany, and geology* (1)7:86-91.

Hawkeswood, T. J. 2021. Time to end taxonomic vandalism by Wolfgang Wuster *et al*.: The Snakeman, Raymond Hoser's publications are validly published and his names available according to the ICZN: Objective investigation finds Hoser's taxonomic works as scientific best practice and in every relevant case identifies valid entities. *Calodema* 860:1-59.

Hoser, R. T. 2009. Creationism and contrived science: A review of recent python systematics papers and the resolution of issues of taxonomy and nomenclature. *Australasian Journal of Herpetology* 2:1-34. (3 February).

Hoser, R. T. 2012a. Exposing a fraud! *Afronaja* Wallach, Wüster and Broadley 2009, is a junior synonym of *Spracklandus* Hoser 2009! *Australasian Journal of Herpetology* 9 (3 April 2012):1-64.

Hoser, R. T. 2012b. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology* 14:37-64.

Hoser, R. T. 2013. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology* 18:2-79.

Hoser, R. T. 2015a. Dealing with the "truth haters" ... a summary! Introduction to Issues 25 and 26 of *Australasian Journal of Herpetology*. Including "A timeline of relevant key publishing and other events relevant to Wolfgang Wüster and his gang of thieves." and a "Synonyms list". *Australasian Journal of Herpetology* 25:3-13.

Hoser, R. T. 2015b. The Wüster gang and their proposed "Taxon Filter": How they are knowingly publishing false information, recklessly engaging in taxonomic vandalism and directly attacking the rules and stability of zoological nomenclature. *Australasian Journal of Herpetology* 25:14-38.

Hoser, R. T. 2015c. Best Practices in herpetology: Hinrich Kaiser's claims are unsubstantiated. *Australasian Journal of Herpetology* 25.

Hoser, R. T, 2015d. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; comments *BZN* 71:30-38, 133-135). *Australasian Journal of Herpetology* 25:39-52.

Hoser, R. T. 2015e. PRINO (Peer reviewed in name only) journals: When quality control in scientific publications fails. *Australasian Journal of Herpetology* 26:3-64.

Hoser, R. T. 2015f. Rhodin *et al.* 2015, Yet more lies, misrepresentations and falsehoods by a band of thieves intent on stealing credit for the scientific works of others. *Australasian Journal of Herpetology* 27:3-36.

Hoser, R. T. 2015g. Australian agamids: Eighteen new species from the genera *Amphibolurus* Wagler, 1830, *Lophognathus* Gray, 1842, *Rankinia* Wells and Wellington, 1984, *Diporiphora* Gray, 1842, *Tympanocryptis* Peters, 1863, as well as three new genera and six new subgenera. *Australasian Journal of Herpetology* 30:37-64.

Hoser, R. T. 2019a. 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. 2019b. 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. 2019c. A new subspecies of Mountain Dragon, *Rankinia hoserae* Hoser, 2015 from the Brindabella Ranges of south-east Australia. *Australasian Journal of Herpetology* 41:62-64.

ICZN 2013. Case 3601. *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature* 70(4):234-237.

International Commission of Zoological Nomenclature (ICZN) 2021. Opinion 2468 (Case 3601) - *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and *Australasian Journal of Herpetology* issues 1-24: confirmation of availability declined; Appendix A (Code of Ethics): not adopted as a formal criterion for ruling on Cases. *Bulletin of Zoological Nomenclature* 78 (30 April 2021):42-45.

Kaiser, H. 2012a. SPAM email sent out to numerous recipients on 5 June 2012.

Kaiser, H. 2012b. Point of view. Hate article sent as attachment with SPAM email sent out on 5 June 2012.

Kaiser, H. 2013. The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power). *Bulletin of Zoological Nomenclature* 70(4) December 2013:293-302.

Kaiser, H. 2014a. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature*, 71(1):30-35.

Kaiser H. 2014b. Best Practices in Herpetological Taxonomy: Errata and Addenda. *Herpetological Review*, 45(2):257-268.

Kaiser, H., Crother, B. L., Kelly, C. M. R., Luiselli, L., O'Shea, M., Ota, H., Passos, P., Schleip, W. D. and Wüster, W. 2013. Best practices: In the 21st Century, Taxonomic Decisions in Herpetology are Acceptable Only When supported by a body of Evidence and Published via Peer-Review. *Herpetological Review* 44(1):8-23.

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").

Robertson, P. and Coventry, A. J. 2019. *Reptiles of Victoria: A field guide to identification and ecology*. CSIRO, Australia:323 pp.

Ng, J., Clemann, N., Chapple, S. N. J. and Melville, J. 2013. Phylogeographic evidence links the threatened 'Grampians' Mountain Dragon (*Rankinia diemensis* Grampians) with Tasmanian populations: conservation implications in south-eastern Australia. *Conservation Genetics* April 2014, 15(2):363-373. (Published online on 7 Nov 2013).

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and C. R. Wellington. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

CONFLICT OF INTEREST

None.

Cite this paper as:

Hoser, R. T. 2024. Two new sub-species of Mountain Dragon, *Rankinia boylani* Wells and Wellington, 1984 from New South Wales, Australia. *Australasian Journal of Herpetology* 72:35-39.

Australasian Journal of Herpetology 72:40-42.
Published 24 June 2024.

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

A new subspecies of *Hesperoedura reticulata* (Bustard, 1969) from south-central Western Australia.

LSIDURN:LSID:ZOOBANK.ORG:PUB:30A5613A-EAFD-4B7D-8D00-52448E05D656

RAYMOND T. HOSER

LSIDurn: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 16 March 2023, Accepted 9 August 2023, Published 24 June 2024.

ABSTRACT

Until early 2023 the gecko species *Hesperoedura reticulata* (Bustard, 1969), endemic to southern parts of Western Australia, has been treated as monotypic by all authors.

This included Hoser (2017), being the most recent systematic analysis of the Australian gecko genus *Oedura* Gray, 1842 *sensu lato* as recognized at the time.

Prior to the publication of that paper in 2017, specimens of the taxon were inspected and significant west-east differences were noted. What was unsure at the time was whether or not the population variations were clinal and with the holotype being from an area roughly between the two main population groups, the question arose as to from which grouping it was best placed.

Since 2017, more specimens of putative *H. reticulata* including some from the type locality have been inspected and it has been possible to ascertain the following facts.

1/ The type form is that from the western part of the species range.

2/ Those from most of the putative species range, including from generally east of the type locality are morphologically divergent and warrant recognition at the taxonomic level.

While they are almost certainly full species level divergent, there is no molecular evidence available.

Therefore, they are conservatively formally named as a new subspecies *H. reticulata wongi subsp. nov*. in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

The Wongi tribe are the original native inhabitants of the region, who had most of their land and possessions taken from them before the majority were exterminated in the name of the British Royal Family.

Keywords: Taxonomy; nomenclature; Australia; Western Australia; velvet gecko; *Hesperoedura*; *reticulata*; *wongi.*

INTRODUCTION

It has been common knowledge among herpetologists in Australia that until recently, much of the gecko biodiversity awaited formal cataloguing and naming.

Hoser (2017) formally named 14 new species and four new subspecies within the greater *Oedura* Gray, *sensu lato*, this sort of number of new taxa being in line with similar systematic break ups among other main Australian gecko groups.

See for example Hoser (2016), with the gecko family Carphodactylidae reviewed, including the formal descriptions of 9 new species and four new subspecies; Hoser (2022), with 11 new species and 4 new subspecies within the genus *Heteronotia* Wermuth, 1965 *sensu lato* and Hoser (2023) with 23 new species and 4 new subspecies within the genus *Diplodactylus* Gray, 1827 *sensu lato*.

In each of the latter two papers the number of recognized species in each genus was effectively doubled.

When Hoser (2017) was being prepared, numerous specimens of *Hesperoedura reticulata* (Bustard, 1969), a species endemic to southern parts of Western Australia, were inspected.

At all times prior to 2017, all publishing herpetologists had treated the putative taxon as monotypic.

No one had ever considered the possibility of taxonomic recognition of either species or subspecies beyond the single monotypic form.

However, in the process of preparing Hoser (2017) all putative species, including *H. reticulata* were scrutinized for the potential of so-called “cryptic” or hidden taxa.

Specimens of putative *H. reticulata* were inspected and

significant west-east differences were noted. What was unsure at the time in 2017 and prior to then, was whether or not the population variations were clinal and with the holotype being from an area roughly between the two main population groups, from which grouping it was best placed.

Since 2017, more specimens of putative *H. reticulata* including some from the type locality have been inspected and it has been possible to ascertain the following facts.

1/ The type form is that from the western part of the species range, it being from the eastern extremity of this range.

2/ Those from most of the putative species range, including from generally east of the type locality are morphologically divergent and warrant recognition at the taxonomic level.

This variation does not appear to be clinal.

Furthermore, the closest points known between the type of the (nominate) western form and the hitherto unnamed eastern form is well over 100 km in a straight line, indicating, long-term separation of populations as befits the obvious morphological divergence.

While the two groupings are almost certainly full species level divergent, there is no molecular evidence available at the present time and ongoing commitments render it unlikely either myself or anyone else I know, will be getting usable molecular samples in the near future.

Therefore, the eastern population of putative *H. reticulata* is conservatively formally named as a new subspecies *H. reticulata wongi subsp. nov*. in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

The Wongi tribe are the original native inhabitants of the region, who had most of their land and possessions taken from them before the majority were exterminated in the name of the British Royal Family.

The scientific nomen "*wongi*" is deliberate as use of the alternative name "*wongiorum*", as may perhaps properly be the case in terms of name formation, may risk the name being a homonym and so therefore the shortened version "wongi" is used in this case.

MATERIALS AND METHODS

Specimens were inspected from across the putative range for the putative species *H. reticulata*, including specimens from the type locality, that being 9 miles north of Kelanning, Western Australia, Australia, Latitude 33.22 S., Longitude 117.2 E and the holotype itself depicted online at:
https://museum.wa.gov.au/catalogues-beta/digitised-types/herpetology/oedura-reticulata

The location is most easily located (approximately) by drawing a straight line north from Albany in the south and Bunbury to the west and it is at the transect.

Consistent differences were noted and readily matched with the relevant subspecies.

These were either of the type form from coastal west Australia, generally west of North Tarin Rock Reserve, Latitude -32.983333 S., Longitude 118.233333 E, just east of Kelanning and in an area bounded by here and just north of Kellerberrin, WA in the north-east (Latitude -31.366667 S., Longitude 117.633333 E.), Woodanilling in the south (Latitude -33.566667 S., Longitude 117.533333 E.), and the Indian Ocean in the west.

The newly named form occurs in the rest of the known range of putative *H. reticulata* and include an area generally bound by Holt Rock, WA, (Latitude -32.683333 S., Longitude 119.45 E.) in the southwest, Zanthus, WA (Latitude -31.033333 S., Longitude 123.6 E.) in the east, Mount Gibson, WA (Latitude -29.55 S., Longitude 119.15 E.) in the north and Buntine Nature Reserve. WA. (Latitude-29.983333 S., Longitude 116.6) in the north-west.

Relevant literature was consulted to see if consistent differences across the range of the putative species *H. reticulata* had been previously noted, but none had been.

Publications relevant to the taxonomic decision to recognize the relevant subspecies of putative *H. reticulata* included Bustard (1969), Han *et al*. (2004), How and Kitchener (1983), Hoser (2017), Oliver *et al*. (2012), Ride *et al*. (1999), Wells and Wellington (1984, 1985) and sources cited therein.

RESULTS

Sufficient consistent differences between specimens between east and west populations, allowed me to be able to formally name the new subspecies of putative *H. reticulata* as is done in this paper below.
Furthermore inspection of live and preserved specimens enabled me to ascertain the distributions of each form with a high degree of certainty as is laid out in this paper.

In summary, the type (western) form has generally less distinct markings on the dorsum and the blotches on the dorsum are somewhat merged, versus somewhat separated circles or blotches in the eastern form.

The known distributions of each subspecies based on material seen is also laid out in the formal description below.

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 are 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 as administered by the International Commission of Zoological Nomenclature (ICZN) including for the reason already noted above.

This includes if Latinisation is wrong, apparent spelling mistakes and so on.

Any online citations within this paper, including copied emails and the like, are not as a rule cited in the references part of this paper and have the same most recent viewing and checking date of 30 July 2023 (at which time they were still online as cited).

Unless otherwise stated explicitly, colour and other descriptions apply to living adult male specimens of generally good health, as seen by day and not under any form of stress by means such as excessive cool, heat, dehydration, excessive ageing, abnormal skin or reaction to chemical or other input.

While numerous texts and references were consulted prior to publication of this paper, the criteria used to separate the relevant subspecies has already been spelt out and/or is done so within the formal description and does not rely on material within publications not explicitly cited herein.

HESPEROEDURA RETICULATA WONGI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:01646866-294E-41DF-8C5A-10D673F77749
Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R91508 collected from 4 km east of Zanthus, Western Australia, Australia, Latitude -31.033333 S., Longitude 123.6 E.; the specimen was caught about 2 metres up a Mallee Tree.

This government-owned facility allows access to its holdings.

Paratypes: Five preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.179801, R.179802, R.179803, R.179804 and R.179805 all collected from 16 km south-east of Coolgardie, along the Coolgardie-Esperance Highway at an abandoned homestead, Western Australia, Australia, Latitude -31.01263 S., Longitude 121.28224 E.

Diagnosis: Until now *Hesperoedura reticulata wongi subsp. nov*. has been treated simply as nominate *H. reticulata.*

However, it is consistently morphologically divergent,

geographically disjunct and so is formally named herein as a new subspecies.

The two subspecies are separated as follows:

H. reticulata wongi subsp. nov. has a body which has a dorsum including semi-detached or fully separated semi-distinct irregular-shaped blotches along the midline, these generally being partially split or paired and bounded by dark blackish in colour in parts, especially along the upper flank boundary.

On the upper surface of the nominate form of *H. reticulata* the dorsal blotches are joined to form a continuum and are even less distinct and obvious than seen in *H. reticulata wongi subsp. nov*. giving the dorsum a more peppered grey appearance.

The outer edges of the blotches are bound by dark peppering, rather than bold dark edges. This is likewise at the anterior end of the upper parts of the (original) tail.

The separation of the dorsal blotches is still prominent at the rear end of the body in *H. reticulata wongi subsp. nov*. versus not so in *H. reticulata*.

The genus *Hesperoedura* as diagnosed by Oliver *et al.* 2012, being the sum total of the two subspecies described above is the same as for the monotypic subtribe *Hesperoedurina* Hoser, 2017 as formally named in that paper.

Hesperoedura is diagnosed and defined as follows:

Hesperoedura is a monotypic genus within the Diplodactylidae (*sensu* Han *et al*. 2004) and is distinguished from all related genera within Fiacumminggeckoini Hoser, 2017 by the combination

of;

1/ Minute granular dorsal scales much smaller than the ventrals,

2/ A dorsal pattern consisting of a broad brown pale edged vertebral stripe,

3/ Up to 70 mm snout vent length,

4/ A single cloacal spur, and,

5/ A long, slender and only slightly horizontally flattened tail.

Characters 1-2 specifically separate this subtribe from Fiacumminggeckoina Hoser, 2017, characters 3-4 separate this subtribe from Celertenuina Hoser, 2017, and characters 3-5 separate this genus from the genus *Nebulifera* Oliver, Bauer, Greenbaum, Jackman and Hobbie, 2012, which is monotypic (at the recognized species-level) within the subtribe Nebuliferina Hoser, 2017.

Hesperoedura reticulata wongi subsp. nov. in life is depicted in Storr, Smith and Johnstone (1990) on plate 14 at bottom left and in life online at:

https://www.inaturalist.org/observations/146517026

and

https://www.flickr.com/photos/136643623@N03/49312995128/

and

https://www.inaturalist.org/observations/146517025

The nominate form of *H reticulata* is depicted in life online at:

https://www.flickr.com/photos/stephenmahony/9056415149/

and

https://www.flickr.com/photos/reptileshots/10725693873/

and

https://www.flickr.com/photos/124699310@N06/24033571541/

and

https://www.flickr.com/photos/171250498@N08/52911883869/

Distribution: *Hesperoedura reticulata wongi subsp. nov*. occurs in an area generally bound by Holt Rock, WA, (Latitude -32.683333 S., Longitude 119.45 E.) in the southwest, Zanthus, WA (Latitude -31.033333 S., Longitude 123.6 E.) in the east, Mount Gibson, WA (Latitude -29.55 S., Longitude 119.15 E.) in the north and Buntine Nature Reserve. WA. (Latitude-29.983333 S., Longitude 116.6) in the north-west.

Nominate *H reticulata* is found from coastal west Australia, generally west of North Tarin Rock Reserve, Latitude -32.983333 S., Longitude 118.233333 E, just east of Kelanning and in an area bounded by here and just north of Kellerberrin, WA in the north-east (Latitude -31.366667 S., Longitude 117.633333 E.), Woodanilling in the south (Latitude -33.566667 S., Longitude 117.533333 E.), and the Indian Ocean in the west.

Etymology: *H. reticulata wongi subsp. nov.* is named in honour of the Wongi tribe of original Australian inhabitants.

The Wongi tribe are the original native inhabitants of the region in Western Australia, from where this subspecies occurs. They had most of their land and possessions taken from them before the majority were exterminated in the name of the British Royal Family during the 1800's.

The scientific nomen "*wongi*" is deliberate as use of the alternative name "*wongiorum*", as may perhaps properly be the case in terms Latinisation, may risk the name being a homonym and so therefore the shortened version "*wongi*" is used in this case and should not be changed by a first reviser.

REFERENCES CITED

Bustard, H. R. 1969. *Oedura reticulata*, a new velvet gecko from south-west Western Australia. *Western Australian Naturalist* 11:82-85.

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition). CSIRO Publishing, Melbourne, Australia:xxx+1033 pp.

Gray, J. E. 1827. A synopsis of the genera of Saurian reptiles, in which some new genera are indicated, and the others reviewed by actual examination. *The Philosophical Magazine*, Series 2, Volume 2, 1827 - Issue 7:54-58.

Gray, J. E. 1842. Description of some hitherto unrecorded species of Australian reptiles and batrachians. *The Zoological Miscellany*: to be continued occasionally: 51-57.

Han, D., Zhou, K. and Bauer, A. M., 2004. Phylogenetic relationships among gekkotan lizards inferred from C-mos nuclear DNA sequences and a new classification of the Gekkota. *Biological Journal of the Linnaean Society* 83:353-368.

How, R. A. and Kitchener, D. J. 1983. The Biology of the Gecko *Oedura reticulata* Bustard, in a Small Habitat Isolate in the Western Australian Wheatbelt. *Australian Wildlife Research* 10:543-556.

Hoser, R. T. 2016. Carphodactylidae reviewed: Four new genera, four new subgenera, nine new species and four new subspecies within the Australian gecko family (Squamata: Sauria). *Australasian Journal of Herpetology* 32:3-25.

Hoser, R. T. 2017. A further break-up of the Australian gecko genus *Oedura* Gray, 1842 *sensu lato* as currently recognized, from four to seven genera, with two new subgenera defined, description of fourteen new species, four new subspecies and formalising of one tribe and five subtribes. *Australasian Journal of Herpetology* 34:3-35.

Hoser, R. T. 2022. Eleven new species of Australian gecko within the genus *Heteronotia* Wermuth, 1965. *Australasian Journal of Herpetology* 55:3-48.

Hoser, R. T. 2023. Species diversity seriously under-estimated! 23 new species and 4 new subspecies within the Australian Gecko genus *Diplodactylus* Gray, 1827. *Australasian Journal of Herpetology* 55:3-48.

Oliver, P. M., Bauer, A. M., Greenbaum, E., Jackman, T. and Hobbie, T. 2012. Molecular phylogenetics of the arboreal Australian gecko genus *Oedura* Gray 1842 (Gekkota: Diplodactylidae): Another plesiomorphic grade? *Molecular Phylogenetics and Evolution* 63(2):255-264.

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.

Storr, G. M., Smith, L. A. and Johnstone, R. E. 1990. *Lizards of Western Australia 3. Geckos and Pygopods*. Western Australian Museum, Perth, Western Australia, Australia:141 pp.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Wermuth, H. 1965. Liste der rezenten Amphibien und Reptilien; Gekkonidae, Pygopodidae, Xantusiidae. *Das Tierreich* 80:i-xxii,1-246

CONFLICTS OF INTEREST - NONE.

Australasian Journal of Herpetology 72:43-46.
Published 24 June 2024.

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

Atraserpens, a new genus of Australian small-eyed snakes from Eastern Australia as well as a new subspecies of the Northern Small-eyed Snake *Cryptophis pallidiceps* (Günther, 1858) from north-west Western Australia (Serpentes: Elapidae).

LSIDURN:LSID:ZOOBANK.ORG:PUB:46F67AC3-3974-4FF3-AE8F-2376C82B8F58

RAYMOND T. HOSER

LSIDURN: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 2 April 2024, Accepted 28 April 2024, Published 24 June 2024.

ABSTRACT

The east Australian black coloured Small Eyed Snakes, being blackish or steel grey both dorsally and laterally, have long been recognized as being significantly different from all other species within putative *Cryptophis* Worrell, 1961 (type species *Hoplocephalus pallidiceps* Günther, 1858).

They all range through various shades of brown on the dorsum and/or with lighter on the flanks.

This paper recognizes this divergence that is estimated at more than 10 MYA based on previous molecular studies and the biogeographic reality of extant distributions, by recognizing these species within the newly erected genus *Atraserpens gen. nov.* (type species *Cryptophis edwardsi* Hoser, 2012).

The morphologically and geographically divergent population of the northern Small-eyed Snake *Cryptophis pallidiceps* (Günther, 1858) from the north-west Kimberley district of Western Australia, Australia is formally named as a subspecies of *C. pallidiceps* with a type locality of Port Essington in the Northern Territory (NT) Australia.

The newly identified subspecies is separated from the nominate form by having relatively narrow rectangular post oculars, being higher than wide, versus more-or-less square in the nominate form from the NT., especially for the lower one. In the newly identified subspecies the light venter colouration goes higher up the flanks. The red line on lower flank is well defined in the anterior of the NT animals and not in the newly identified subspecies.

These differences are consistent among the over 20 specimens of NT and 10 of north Kimberley specimens seen. There is also a sizeable distributional break between this newly named population and others to the east.

Keywords: Taxonomy; nomenclature; snakes; elapids; *Cryptophis*; *nigrescens*; *edwardsi*; *assimilis*; *minor*; *pallidiceps*; Northern Territory; Western Australia; new genus; *Atraserpens*; new subspecies; *mosyakini.*

INTRODUCTION

As part of a wide-ranging audit of the Australian herpetofauna by myself spanning some decades, potentially undescribed forms within all Australian snakes have been inspected and if deemed sufficiently divergent, formally named as species or subspecies.

Wells and Wellington (1984 and 1985) and in some (herein uncited) papers later, managed to settle most of the genus-level taxonomy in a robust arrangement that has survived scrutiny in the face of more recent molecular studies (e.g. Pyron *et al*. 2013).

I did manage to assign improperly placed species into a small number of more newly erected and mainly small genera, most notably including the Australian Tree Snakes in the genus *Charlespiersonserpens* Hoser, 2012, some genera of small Australian elapids and some blind snakes placed into newly erected genera.

At the species level, I have managed to formally name dozens of hitherto unnamed forms of Australian snakes in the decades between 1998 and 2024, including Blindsnakes and both small and large elapids.
The full inventory of my taxonomic names for Australian snakes to the current date can be found on Zoobank by doing a search under the name “Hoser”.

In terms of the genus *Cryptophis* Worrell, 1961 and associated genera, the most important relevant papers were Hoser (2012) and Hoser (2023) in which new forms were formally identified

and named.

Not dealt with in those papers was the genus-level treatment of the so-called Black Small Eyed Snakes from Eastern Australia versus the non-black ones from northern Australia, including the allied taxa within putative genera *Unechis* Worrell, 1961 and *Rhinoplocephalus* Müller, 1885 *sensu* Hoser, 2012, which I note is a different arrangement to Cogger *et al.* (1983) or Cogger (2014).

A reassessment of the three recognized species of Black Small-eyed Snakes from eastern Australia, including the single named subspecies in addition to the three other nominate forms, has found them to be sufficiently morphologically divergent from the rest of *Cryptophis* and in particular the type form to warrant being placed in a separate genus.

This is especially when the other related group *Rhinoplocephalus* is added to the analysis.

In fact with the type species of *Cryptophis* being more similar in most respect to species within *Unechis* than to the so-called Black Small Eyed Snakes AKA the "*Hoplocephalus nigrescens* Günther, 1862" complex of species it only made sense to engage in a thorough assessment to see if it was prudent to erect a new genus for these species.

I note here that in an error of transcription Hoser (2012) erroneously listed "*Hoplocephalus nigrescens* Günther, 1862" as the type species for the genus *Cryptophis* Worrell, 1961, when it was in fact *Hoplocephalus pallidiceps* Günther, 1858.

Not subject of the two earlier Hoser papers was the so-called Northern Small-eyed Snake, *Cryptophis pallidiceps* (Günther, 1858), type for the genus, being a species found in the so-called top end region of Australia from the northern Territory to the Kimberley district.

I was aware of apparent differences in specimens between the region of the north-east Kimberley district of Western Australia versus those from the more eastern parts of the range of the putative species.

However, I had not seen many specimens from this area (the north Kimberley) and so wanted to inspect further specimens or photographs to confirm that the differences were sufficiently consistent to warrant taxonomic action.

In 2023, I was fortunate enough to inspect further specimens from both Western Australia and the Northern Territory and found the originally identified differences to remain consistent and so have decided to formally name the isolated north-west Kimberley population as a new subspecies, *C. pallidiceps mosyakini subsp. nov.*.

MATERIALS AND METHODS

In terms of the genus-level split involving the so-called Black Small Eyed Snakes from Eastern Australia from the other species in *Cryptophis*, it was not necessary for me to revisit the morphology of the relevant snake taxa as this is well known and established for the component species and I regularly inspect specimens of relevant taxa.

The exercise engaged upon was rather one to assess the literature and in particular molecular studies, combined with distributional data for the relevant species groups to establish a timeline of likely divergence for the relevant groups.

If I could confidently estimate in excess of 10 MYA, then a genus-level split was indicated based on a desire to see consistency in genus level splits in Australian snakes.

A range of 5-10 MYA would result in a decision to split at subgenus level only.

In terms of the species *Cryptophis pallidiceps* (Günther, 1858) with a type locality of Port Essington in the Northern Territory (NT) Australia, distributional data was sourced mainly from the published records available at the "Atlas of Living Australia" (https://www.ala.org.au/) and "Inaturalist" (https://www.inaturalist.org/), as well as other online sources such as "Flickr" (https://www.flickr.com/) to confirm a distributional gap separating the north-west Kimberley population of the putative species from all other populations including the nominate population.

As already mentioned, specimens from the entire range of the putative species were inspected to confirm consistent differences in the north-west Kimberley population, before making the determination to describe the population as a new species or subspecies.

RESULTS

In summary, it was determined that it was proper to erect a new genus for the Black Small Eyed Snakes from eastern Australia and to formally describe the north-west Kimberley population of *C. pallidiceps* as a new subspecies.

In terms of the Black Small Eyed Snakes from eastern Australia, it appears that the centre of origin for the group is in the region of south-east Queensland and northern New South Wales.

That it is not a southern group is shown by absence from Tasmania and south-west Victoria (e.g. the Otways), implying that the south-east Victorian populations arrived there at a time after the volcanic eruptions separated the Otways from the eastern areas and that they could not migrate to this area of suitable habitat.

Molecular studies and geological studies as cited by Hoser (2022) confirmed that the Otways were cut off from the hilly forests to the east about 3-5 MYA.

The Black Small Eyed Snakes are distributed more-or-less continuously from Victoria to south-east Queensland along the coast and near ranges and then become patchy as one heads into the tropics, petering out on Cape York. While the present distribution implies a continuous one in colder periods in the recent geological past, the absence from the top of Cape York or New Guinea implies a more southern centre of origin.

In terms of the other species taxon within *Cryptophis*, it is restricted to north-west Australia only and with no direct contact with any of the species within the morphologically similar *Unechis* or *Cryptophis* and appears to be well-separated by the Carpentaria fold, being a barrier of considerable antiquity.

The antiquity of the Black Small Eyed Snakes lineage is exemplified by an extensive distribution along the east coast of Australia (extending from south Victoria to far north Queensland) and quite divergent species within the group, including the very large taxon "*Cryptophis edwardsi* Hoser, 2012" which according to Hoser (2012) exceeds 90 cm, or as Cogger (2014) claims, 1.2 metres maximum, versus the diminutive southern Victorian snakes that are mature at about 45 cm in length.

All however are distinctively black all over or otherwise steely grey.

Lee *et al.* (2015) found the morphologically similar genus *Rhinoplocephalus* Müller, 1885 confined to far south-west Australia to have diverged from the Black Small Eyed Snakes about 15 MYA.

In line with *U. boschmai* (Brongersma and Knaap-van Meeuwen, 1961), *Rhinoplocephalus* species has a nasal that does not contact the preocular indicating that this is probably the primitive form for the group.

This in turn implies that the other species in the above genera in which the nasal contacts the preocular form a natural more recently diverged group, which may necessitate transfer of some Queensland species to *Cryptophis* if the molecular results indicate them being closer to *C. pallidiceps* than to *U. boschmai*.

However because the often (widely) sympatric Black Small-eyed Snakes are so obviously divergent from the other species within *Unechis* it is not tenable for them to be in the same genus. With the putative genera *Unechis* and *Rhinoplocephalus* containing morphologically similar assemblages in each and yet *Cryptophis* as presently defined not doing so, a split seems obvious.

This is especially so based on a likely divergence of the Black Small-eyed snakes from the others being in the likely vicinity of 10-12 MYA based on the divergence between these snakes and *Rhinoplocephalus* being about 15 MYA and the similar level of morphological convergence between the relevant groups.

Even if 10-12 MYA is an over-estimation, I note that Lee *et al.* (2015) found *Notechis* Boulenger, 1896 and *Tropidechis* Günther, 1863 to have diverged just 6 MYA and yet no one in Australia has merged these genera as a result of the findings of Lee *et al*. (2015).

There is it seems no obvious way that the Black Small Eyed snakes diverged from the NT *Cryptophis* less than 6 MYA.

Therefore, the only logical outcome of this analysis is to erect a new genus for the Black Small Eyed Snakes from Eastern Australia.

In passing I note that the genus name *Alecto* Jan, 1863 proposed for his species *Alecto permixta* (a synonym of *Hoplocephalus nigrescens*) is unavailable as it is preoccupied by *Alecto* Leach, 1815 (Echinodermata).

INFORMATION RELEVANT TO THE FORMAL DESCRIPTIONS THAT FOLLOW

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 are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling of names should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (Ride *et al.* 1999 and ICZN 2012).

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 30 March 2024, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

Unless otherwise stated explicitly, colour descriptions apply to living adult 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.

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.

ATRASERPENS GEN. NOV.

LSIDurn:lsid:zoobank.org:act:7C9BD1D0-17E2-4B08-A1DB-4E08889D7682

Type species: *Cryptophis edwardsi* Hoser, 2012.

Diagnosis: Species in this genus are separated from all other morphologically similar elapid snakes in Australia by the following unique combination of characters:

Small to medium in size (usually less than 60 cm total length, rarely larger but sometimes to a metre in one species, *A. edwardsi* Hoser, 2012 from south-east Queensland), characterized by a uniform dark steel-grey to black dorsal colour without any form of mid-dorsal stripe or colour intensity or head markings, save for occasional darkening of the head sometimes seen in younger specimens (and no brownish tinge dorsally). The scales are glossy and smooth with 15 dorsal mid-body scale rows, frontal is longer than broad, more than one and half times as broad as the supraocular; supranasals present, single anal, undivided subcaudals and two to five small solid maxillary teeth following the fang. The species within this genus are separated from all other genera by the following suite of characters (included with those just listed), Nasal contacts the preocular, the body is more-or-less uniformly steel-grey or black above, 160-210 ventrals, belly often with darkish flecks on the subcaudals and notably an absence of a defined yellow, orange or red line on the lower flank (as seen in the species remaining in *Cryptophis* Worrell, 1961).

Conservation: No known or foreseeable threats to any species in the genus other than localized extinctions where urbanisation or industrial scale agriculture occurs.

Distribution: Eastern Australia along the coast and near ranges and slopes, mainly but not exclusively on the east draining side of the central divide, from south-east, east, north and north-west of Melbourne, Victoria, along the coast and ranges through north-east Victoria, New South Wales and Queensland, through the wet tropics to Cape York, except for the northern end.

Etymology: Taken from Latin the new genus name "*Atraserpens*" means Black Snake, in reflection of the usual dorsal colour of specimens.

Content: *Atraserpens edwardsi* (Hoser, 2012) (type species); *A. assimilis* (Macleay, 1885); *A. nigrescens* (Günther, 1862) (including the subspecies *A. nigrescens minor* (Hoser, 2013)).

CRYPTOPHIS PALLIDICEPS MOSYAKINI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:7DE557F0-262F-4FDA-A0FF-0DE5DA0938D0

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number: WAM R44271 collected from the Mitchell Plateau, Western Australia, Australia, Latitude -14.75 S., Longitude 125.75 E. This government-owned facility allows access to its holdings.

Paratypes: Five preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers: WAM R171649 (a male) collected from Wargul Wargul Island, Western Australia, Australia, Latitude -13.937778 S., Longitude 126.175833 E., WAM R173902 (a female) collected from Theda Station, Western Australia, Australia, Latitude -14.473889 S., Longitude 126.3 E., WAM R173843 collected from Theda Station Homestead Latitude -14.786389 S., Longitude 126.4975 E., WAM R28221 collected from the King Edward River, Western Australia, Australia, Latitude -14.95 S., Longitude 126.116667 E., WAM R119846 collected from Theda Station, Western Australia, Australia, Latitude -14.816667 S., Longitude 126.716667 E.

Diagnosis: The subspecies *Cryptophis pallidiceps mosyakini subsp. nov*. from the north-west Kimberley district of Western Australia is readily separated from the nominate form of *Cryptophis pallidiceps* (Günther, 1858) with a type locality of Port Essington, Northern Territory, Australia and occupying a distribution encompassing the top end of the Northern Territory, west to include the Ord basin in the east Kimberley district of Western Australia by the following unique suite of characters:

The newly identified subspecies is separated from the nominate form by having relatively narrow rectangular post oculars, being higher than wide (versus more-or-less square in the nominate form from the NT), especially for the lower one. In the newly identified subspecies, the light venter colouration goes higher up the flanks. The red line on lower flank is well defined in the anterior of the nominate subspecies and not in the newly identified subspecies.

These differences are consistent among the over 20 specimens of NT and 10 of north Kimberley specimens seen by this author. There is also a sizeable distributional break between this newly named population and others to the east.

Both subspecies of *Cryptophis pallidiceps*, are now the entirety of the genus *Cryptophis* Worrell, 1961 as defined by Hoser (2012) and this paper based on the removal of black coloured east Australian species into the new genus *Atraserpens gen. nov.*.

The two subspecies are separated from species within *Atraserpens gen. nov.* by having a dark brownish dorsum rather than a steely grey or black dorsum. They are further separated

from *Atraserpens gen. nov.* by the possession of a relatively distinct light, yellowish, or pink, orange, or reddish band on the lower anterior flank, separate to the lighter pale venter below.

The two genera *Cryptophis* and *Atraserpens gen. nov.* are separated from all other Australian elapids in the diagnosis of Hoser (2012) on page 5 under the diagnosis for "*Cryptophis*".

The two genera are separated from all other Australian elapids as follows:

They are of small to medium in size, characterized by a uniform dorsal colour without any form of mid-dorsal stripe or colour intensity or head markings, save for occasional darkening of the head sometimes seen in younger specimens. The scales are glossy and smooth with 15 dorsal mid-body scale rows, frontal is longer than broad, more than one and half times as broad as the supraocular; supranasals present, nasal contacts the preocular, single anal, undivided subcaudals, and two to five small solid maxillary teeth following the fang. The species within these genera are further separated from the other morphologically similar genera of Australian elapids by the following suite of characters (included with those just listed), the body is more-or-less uniformly black or dark brown above, 160-210 ventrals, belly often with darkish flecks on the subcaudals.

Distribution: The subspecies *Cryptophis pallidiceps mosyakini subsp. nov*. is known only from the north-west Kimberley district of Western Australia, Australia, generally in the vicinity of the collection localities for the holotype and paratypes.

Conservation: No known or foreseeable threats to this subspecies other than extremely localized extinctions where urbanisation or industrial scale agriculture or open-cut mining occurs.

Etymology: *Cryptophis pallidiceps mosyakini subsp. nov*. is named in honour of Sergei Leonidovich Mosyakin (born 30 November 1963) who is a Ukrainian botanist. He courageously published a rebuttal of an attempt by Wolfgang Wüster and his mate Kevin R. Thiele, creator of a fake science group called "Taxonomy Australia" to engage in a wholesale taxonomic vandalism in botany and zoology leading to their cohort overwriting thousands of scientific names with their own monstrous creations.

These creations include yet more patronyms, including some named after racist sex offenders who kidnapped young black boys for anal sex (Don Broadley of Rhodesia, William Branch of South Africa and Van Wallach of the USA).

The "Taxonomy Australia" cohort also included monsters like Adam Britton of Darwin who in 2023 pled guilty in the NT Supreme Court to about 37 charges of bestiality involving anal sex of people's pet dogs, which he then killed, before posting this material on the "dark web" as videos for public download, under cover of corrupt police protection for more than a decade (Mackay, 2024).

See also Mosyakin (2023) and sources cited therein for details of Mosyakin's works.

REFERENCES CITED

Boulenger, G. A. 1896. *Catalogue of the snakes in the British Museum, Volume 3*. Taylor and Francis, London, UK:xiv+727 pp.

Brongersma, L. D. and Knaap van Meeuwen, M. S. 1964. On a new species of *Denisonia* (Reptilia, Serpentes) from New Guinea. *Zoologische Mededelingen* 39:550-554.

Cogger, H. G. 2014. *Reptiles and Amphibians of Australia* (Seventh edition), CSIRO. Sydney, Australia:1064 pp.

Cogger, H. G., Cameron, E. E. and Cogger, H. M. 1983. *Zoological Catalogue of Australia (1) Amphibia and Reptilia*. Australian Government Publishing Service, Canberra, ACT, Australia:319 pp.

Günther, A. 1858. Catalogue of Colubrine snakes of the British Museum. London, UK:I-XVI+1-281.

Günther. A. 1863. Third account of new species of snakes in the collection of the British Museum. *Annals and magazine of natural history; zoology, botany, and geology* (3)12:348-365.

Hoser, R. T. 2012 Some new small-eyed snakes from Australia and New Guinea (Serpentes:Elapidae). *Australasian Journal of Herpetology* 13: 3-7.

Hoser, R. T. 2022 Hiding in plain sight. A previously unrecognized biogeographical barrier in Australia formed by an event of biblical proportions. Five new species of skink lizard from south-west Victoria, three more closely related species from New South Wales and another from South Australia. *Australasian Journal of Herpetology* 56: 3-21.

Hoser, R. T. 2023. Six new snakes from southern Australia (Squamata: Serpentes: Elapidae). Australasian *Journal of Herpetology* 63:23-33.

International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the *International Code of Zoological Nomenclature* to expand and refine methods of publication. *Zootaxa* (PRINO) (Online) 3450:1-7.

Jan, G. 1863. *Elenco Sistematico degli Ofidi descriti e disegnati per l'Iconografia Generale*. Milano, A. Lombardi:vii+143 pp.

Lee, M. S. Y., Sanders, K. L., King, B. and Palci, A. 2016. Diversification rates and phenotypic evolution in venomous snakes (Elapidae). *Royal Society Open Science* 3: 150277 (11 pages) (online).

Leach, W. E. 1915. *Zoological Miscellany, II*:156 pages including index.

Mackay, M. 2024. 'Sadistic' zoologist Adam Britton remains behind bars as sentencing for bestiality, child abuse material charges delayed again. Australian Broadcasting Corporation (ABC) News Online, Posted Tue 6 Feb 2024 at 3:12pm at:

https://www.abc.net.au/news/2024-02-06/zoologist-adam-britton-bestiality-child-abuse-sentencing-delayed/103431386

Müller, F. 1885. Vierter Nachtrag zum Katalog der herpetologischen Sammlung des Basler Museums. *Verhandlungen der Naturforschenden Gesellschaft in Basel* 7:668-717.

Mosyakin, S. L. 2023. Eponyms in biological nomenclature and the Slippery Slope and Pandora's Box arguments. *Ukrainian Botanical Journal*, 80(5):381-385.

Pyron, R. A., Burbrink, F. T. and Weins, J. J. 2013. A phylogeny and revised classification of Squamata, including 4161 species of lizards and snakes. *BMC Evol. Biol.* 13, 93 (54 pages). Published online at: http://www.biomedcentral.com/1471-2148/13/93

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").

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and C. R. Wellington. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Worrell, E. 1961. Herpetological Name Changes. *Western Australian Naturalist* 8:18-27.

CONFLICT OF INTEREST

None.

Australasian Journal of Herpetology 72:47-63.
Published 24 June 2024.

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

Taxonomic vandalism by Wolfgang Wüster and his gang of thieves. Yet more illegally coined names by the rule breakers for species and genera previously named according to the rules of the *International Code of Zoological Nomenclature*.

LSIDURN:LSID:ZOOBANK.ORG:PUB:C34193DB-0F3A-4AB8-BCF2-8E90FB53C856

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 1 June 2024, Accepted 14 June 2024, Published 24 June 2024

ABSTRACT

Hoser (2012a-b, 2013, 2015a-f, 2017 and 2019a-b) detailed illegal actions by notorious Welsh conman and criminal Wolfgang Wüster and his gang of thieves with respect to their campaign to undermine the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), as well as their attempts to usurp the authority of the International Commission of Zoological Nomenclature (ICZN).

Their business model was not unlike that of the terrorist groups calling themselves "Islamic State", "ISIS" or "Hamas" in that nothing was outside of their domain in terms of acts they would do to further their aim.

Hoser (2015a) published a list of 31 names illegally coined by the Wüster gang with the express intent of illegally overwriting valid ICZN compliant names previously published.

The gang's intent was to steal the intellectual property of others. Hoser (2017) added another ten illegally coined names, most published in papers that not only breached the *International Code of Zoological Nomenclature* but also violated copyright law as well. Invariably the later authors were stealing work from the earlier ones and not properly citing it.
This paper extends this list to include dozens more illegally renamed biological entities within herpetology to give a total of over 100 in 2024!

One sees from the authorship of the relevant papers illegally overwriting ICZN compliant names that it is in fact a small minority of people within herpetology who lack ethics and steal works of others. One also sees a systematic behaviour by members of the Wüster gang to simply systematically lift material from the papers of others (notably this author, Raymond Hoser), and to improperly market it as a "new discovery" and "original research" in their later papers to scam research grants worth millions of dollars from governments. They refuse to cite the material they have stolen from and in doing so breach copyright law.

On 30 April 2021, the ICZN published a formal ruling that all names published in *Australasian Journal of Herpetology* are valid and available according to the rules of the *International Code of Zoological Nomenclature*, therefore having priority over those relevant names coined by the Wüster gang (ICZN 2021).

In defiance of the ruling, Wüster *et al.* (2021) have published a diatribe calling for the wholesale destruction of the International Code of Zoological Nomenclature and the ICZN itself.
The ICZN in Ceriaco *et al*. (2023) have unanimously resisted the demands of Wüster *et al.* (2021) and associated publications.

Keywords: Taxonomy; nomenclature; *International Code of Zoological Nomenclature*; ICZN; herpetology; Wolfgang Wüster; Taxonomic Vandalism; Broadley; Kaiser; Melville; terrorist; correct names; *Adelynhosergecko sloppi*; *Dasypeltis saeizadi*; *Carlia mysteria*; *Gehyra bulliardi*; *Lophognathus wellingtoni*; *Tamilnaducalotes*; *Skrijelus*; *Ophiomorus macconchiei*; *Melvillesaurea*; *Tympanocryptis lineata*; *Tympanocryptis telecom*; illegal names; *Lepidodactylus pollostos*; *Carlia isostriacantha*; *Dasypeltis arabica*; *Gehyra capensis*; *Lophognathus horneri*; *Microauris*; *Monilesaurus*; *Ophiomorus kardesi*; *Suta gaikhorstorum*; *Tropicagama*; *Tympanocryptis osbornei.*

INTRODUCTION

Hoser (2015a-f) detailed illegal actions by Welsh conman and crime boss Wolfgang Wüster and his gang of thieves with respect to their unlawful campaign to undermine the *International Code of Zoological Nomenclature* as well as their attempts to usurp the authority of the International Commission of Zoological Nomenclature (ICZN). See also Kaiser (2012a, 2012b, 2013), Kaiser *et al.* (2013) and other rants by the gang of thieves as cited in Hoser (2015a-f).

Their business model was not unlike that of the terrorist groups calling themselves "Islamic State", "ISIS" or "Hamas" in that nothing was outside of their domain in terms of acts they would do to further their aim.

The gang ruthlessly stalk social media sites like "Facebook" and "Twitter", trolling and attacking anyone who dares speak out against their acts of Taxonomic Vandalism or more recently defined (by themselves) as "Taxonomic Terrorism".

Hoser (2015a) published a list of 31 names illegally coined by the Wüster gang with the express intent of illegally overwriting valid ICZN compliant names previously published.

The gang's acts are nothing more than a blatant attempt to unlawfully steal the intellectual property of genuine law-abiding scientists who have put many years of hard work into their papers and findings.

Even after the publication of Hoser (2015a-f) and condemnation by people within their gang, the leaders of the group, namely Wolfgang Wüster, Scott Thomson, Mark O'Shea, Hinrich Kaiser and Wulf Schleip have continued to act outside of the law and the rules of the ICZN.

They have continued to get others to do so and regularly "author shop" for authors or co-authors for their "papers" that engage in acts of scientific fraud and theft.

The gang continue to use websites and so-called scientific journals (invariably only seen online and not in hard copy) that they despotically control to push their illegally coined names on others, falsely alleging that theirs are peer reviewed, legal and ICZN code complaint, which they are not.

Wolfgang Wüster and his gang also suppress use of the correct legal ICZN complaint names by others and aggressively encourage others to similarly steal the works of others.

Wolfgang Wüster and other group leaders, continually allege their mob are "scientists" but there is rarely anything they do that could be remotely described as "scientific" in any accepted sense of the word or the "scientific method".

They would be better described as "anti-scientists".

ONGOING CREATION AND MARKETING OF ILLEGAL NAMES

Wüster and others in the gang have hijacked websites like Peter Uetz's "The Reptile Database" to further their nefarious agenda, by removing legitimate ICZN names and replacing them with those coined illegally by their gang.

"The Reptile Database" website is marketed to other herpetologists as a "go to" taxonomic and nomenclatural resource and with clever use of Search Engine Optimisation (SEO) "The Reptile Database" often comes at top of search results on "Google" and "Bing" for relevant queries, thereby encouraging others to adopt the (often incorrect) nomenclature used.

In the case of "The Reptile Database", the site claims to be a "complete" database of available names for taxa, synonyms, relevant papers and the like and to most importantly give the correct and widely accepted ICZN nomen for each relevant species.

These claims are outright lies!

Without exception "The Reptile Database" uses the illegal Wüster gang names in favour of the correct nomens and worse still Uetz's site most of the time does not even have use of the correct names, or references to the relevant papers.

This means that uninformed users of "The Reptile Database" are being made to overlook correct and relevant papers before they in turn publish papers of a taxonomic nature and at times inadvertently renaming taxa.

This appears to be why a number of synonym names have been coined in recent times, including for example the name *Tribolonotus parkeri* Rittmeyer and Austin, 2017, which was a junior synonym of *Pediporus* (*Feretribolonotus*) *greeri* Hoser, 2016.

Alternatively, Uetz's "The Reptile Database" lists Hoser names in wrong places as synonyms, so they are literally "lost" in the system, makes false claims about the relevant papers, or in the absence of citation of Hoser papers, cites Kaiser *et al.* (2013) without citation of the Hoser name, paper or book (e.g. Hoser 1989, 1991), making it some sort of Nazi-style rewrite of the historical record.

In line with standard Wüster gang tactics, the Uetz site regularly makes false and highly libellous statements of fact against Hoser papers or names, without providing a reference or link to the original Hoser publication (the source) so that the false claims can be independently checked.

In the case of the genus *Stegonotus* Duméril, Bibron and Duméril, 1854, three species properly named by Hoser in 2012, all backed by both molecular and morphological evidence, are effectively ignored by Uetz's site. No doubt due at least in part to this, three major reclassifications of the genus have appeared in print since (Ruane *et al*. 2017, Kaiser *et al*. 2018, 2019) and all failed to note or cite the 2012 Hoser paper, with both author groups incorrectly renaming at least one taxon earlier named by Hoser (2012).

In 2019, Uetz's site dealt with this not insignificant problem by listing the species *Stegonotus adelynhoserae* Hoser, 2012, as a synonym of *Stegonotus diehli* Lindholm, 1905, which it never was.

Significantly, Uetz's site uses the paper of Ruane *et al.* 2017, to provide a diagnosis of the allegedly new species *Stegonotus melanolabiatus* Ruane *et al.* 2017 as listed on his website as of early 2019.

This is significant as the diagnosis has in effect been lifted and stolen from Hoser (2012) and Ruane *et al.* 2017 provided yet more molecular data to confirm the validity of the species *Stegonotus adelynhoserae* Hoser, 2012, which is of course the correct nomen and senior synonym.

In breach of scientific ethics and copyright law, both Uetz and Ruane *et al.* 2017 have copied and lifted material directly from Hoser (2012) without citation or attribution.

Under the direction of his master in crime Wolfgang Wüster, Peter Uetz regularly erases scientific names and authors from his "The reptile database" and recently removed over 1000 Russian names and papers from his database in protest at the Ukranian war.

He called the taxonomic and nomenclatural chaos he created "*collateral damage*" (Uetz 2022a-b).
More recently in March 2024, it was suggested Uetz was intending to remove all names and publications of, or honouring Jewish scientists on his database, being a few thousand more entries, this time in protest of the Israeli Defence Forces (IDF) bombing kidnappers hiding in hospitals, schools and Mosques in the Gaza Strip.

To get a general idea of the kind of people who are in the Wolfgang Wüster gang of thieves, see Mackay (2024) who details the unlawful actions of gang member Adam Britton.

Among other things, Britton in 2023 pled guilty in the Supreme Court of Darwin, Australia to raping people's pet dogs and after anal intercourse with the animals, posting the videos on the internet. He was also dealing in child pornography.

Another member of the Wüster cohort was found by a judge in Australia to have raped and bashed women and children more than 1,000 times, plotting to kill people and so on, but his name has been suppressed by a later judge on application for a suppression order by the same person.

Another member of the cohort, Jamie Benbow, has been convicted of large-scale drug trafficking, committed wildlife crime and after a stint in jail is now back on the streets and out at large creating more yet more damage.

Two other members of the gang, Don Broadley and Bill Branch procured little black African boys in Zimbabwe for anal sex for years.

David John Williams, another Wüster gang member, now with a well-paid gig at the "United Nations" has a sordid past including being convicted and fined $7500 for egregious acts of wildlife trafficking and animal abuse in the Cairns Magistrate's Court (see also Hoser, 1993, 1994, 1996, 1999a-b).

Another gang member and professional con-man Seth Pywell was convicted of shooting an aboriginal, which is rare in Australia.

The act of shooting an aboriginal is not uncommon in Australia.

It is being convicted of shooting one that is.

Then there are the other law-breakers in the gang like Con Man Conrad Hoskin, Jodie Rowley, Grant Webster, Scott Thomson, Arthur Georges, Graham Reynolds, Wulf Schleip, James Nankivell, Paul Oliver and Jane Melville, who spend too much of their time reading papers of others in order to rename species and then breach copyright laws by trying to claim to have made the "discovery" themselves.

Fortunately, the reckless unscientific and illegal actions of the Wolfgang Wüster gang will not stop the progress of science, even if takes longer to get the results of genuine research out to the wider scientific community.

Since Hoser (2015a) published a list of 31 illegally coined names in herpetology, the gang has continued to unlawfully create nomenclatural instability as part of their campaign to destroy the rules of zoological nomenclature that have been in operation for centuries (Rhodin *et al.* 2015).

Hoser (2017) published a list of ten more illegally created names and this paper extends that list further to make a total of well over 90 biological entities the gang of thieves have illegally coined names for.

Many of the names accounted for in the table have been dealt with in earlier papers of Hoser as cited in either Hoser (2017) or Hoser (2015a-f) and sources cited therein.

Hoser (2019a, 2019b) details taxonomic vandalism by Jane Melville in terms of names illegally coined by herself and there is no need to repeat this here.

In terms of the remaining names coined post Hoser (2017), all fit within the same general ambit. All either cite Kaiser *et al*. (2013) as a basis to ignore previously published names, even though that rant was formally rejected by the ICZN in 2021 (ICZN 2021), or alternatively, the authors have simply ignored relevant earlier publications and named entities on the apparent alleged basis that they were unnamed.

The split between each excuse or reason for illegally renaming species or genera is roughly 50:50 and in itself is not critically important.

Up until 2023, most name thieves used Kaiser *et al*. (2013) as a kind of "veto card" giving them the excuse required to engage in an act of name theft.

Conman Conrad Hoskin did this to rename a gecko previously named by Hoser and then had the Australian Broadcasting Corporation (ABC) run "news" reports about the amazing "discovery" of the species by Hoskin.

I (Raymond Hoser) contacted the ABC asking them to withdraw their story and the female journalist cited Kaiser et al. (2013) as her basis not to.

The ABC were sued for copyright and had no hope of winning the case based on relevant preliminary court rulings.

They then "settled" the matter which involved a series of actions including deleting the fake news story claiming Hoskin had discovered the gecko, paying myself money for damages and publishing apologies.

As a result of this court case outcome the Wolfgang Wüster gang's most recent strategy is not to cite Kaiser *at al*. (2013) as by doing so, immediately places them outside of the Mortal Rights Sections of the Copyright laws.

Likewise for later versions of the same general doctrine in the form of Rhodin *et al*. (2015) or Wüster *et al.* (2021).

This means that the gang's defence for overwriting the older names is simply "I was unaware of it".

The defence while theoretically plausible has other issues however.

Wüster *et al.* (2021) was shopped by Wüster to others to sign on as co-authors in order to give the "paper" more "weight".

So in the end, it listed a cohort of over 400 people as coauthors or signatories.

These were in essence anyone who fancied the idea of stealing name authority from someone else in the future.

Stupidly, signatories of Wüster *et al.* (2021) have since signing that paper (which claimed knowledge of all pre 2021 names, or about 2,000 Hoser names alone) continued to rename species and genera, but by not citing the earlier work/s in any way at all, even by way of oblique references to Kaiser *et al*. (2013) or similar diatribes.

Because the authors knew about the earlier names (evidenced by their co-authorship of Wüster *et al*. 2021) and have chosen not to cite them, in breach of the ICZN Code, these authors have fallen foul of the Moral Rights parts of the Australian Copyright Act 1968 (and equivalents under the Berne Convention), by failing to cite the earlier author/s.

With six years to file claims for breaches of copyright, several members of the Wüster gang are at risk of being sued under the Copyright Act and more could be at some time in the future.

One of these law-breakers is Glenn Shea, who to the present date has engaged in large scale taxonomic vandalism since 1987, which is when he first unsuccessfully petitioned the ICZN to erase the works of Wells and Wellington (1984, 1985) from the scientific record.

A detailed account of Shea's various acts of taxonomic vandalism and malpractice can be found in Hoser (2023) and sources cited therein.

What is most important in terms of this paper, is that the relevant coined names should not be used as they have been named in breach of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), or at least are not available to be used on the basis of the rule of priority within the ICZN code and current taxonomy.

Also important is that in most, if not all relevant cases, the authors have claimed to have published in peer reviewed scientific journals. However, if any of the relevant publications were in fact properly peer reviewed in any accepted sense of the word, both reviewers and editors would have stopped the relevant papers seeing the light of day as they clearly contained serious errors, not the least being that they were renaming entities that already carried valid names.

PRINO or "peer reviewed in name only" is the best term to use when describing these journals. The PRINO tag is reinforced when almost without exception these same journals refuse to retract or correct their erroneous material after they are advised of it and provided with the relevant supporting material.

In terms of the list of *nomen furtum* names and the correct ones, this paper presents in the bibliography/references below, a complete list of relevant papers to all the over 100 relevant names to enable others to verify the legitimacy of the original names and the corresponding illegitimacy of the others on the basis of seniority of the correct names.

Some papers also dealing with the illegal renaming of relevant taxa with further detail include Wells and Wellington (1999) and Hoser (1999c, 2007).

Older illegally created synonyms by members of the Wüster gang predating Kaiser *et al*. (2013) are also included in this list. It should be noted that the key players in this gang of thieves are the same people who tried similar stunts with regards to the papers of Wells and Wellington (1984, 1985) and continue to do so with respect of the works of Wells in the post 2000 period, as cited in Kaiser *et al*. (2013).

The abstract keywords lists some recently illegally coined names and the correct senior synonyms. There are many others not listed in the abstract keywords, simply for reasons of space.

One sees from the authorship of the relevant papers illegally overwriting ICZN compliant names that it is in fact a small minority of people within herpetology who lack ethics and steal works of others. One also sees a systematic behaviour by members of the Wüster gang to simply lift material from the papers of others (notably this author, Raymond Hoser), and to reuse it as "new" in their later papers. They refuse to cite the material they have used and in doing so also breach copyright law.

The despicable acts of theft performed by this group of pseudo-scientists are done in the PRINO (peer reviewed in name only) journals that they control. This allows them to get their substandard material past any normal checks and balances.

In one case, a recently published "paper" Troncoso-Palacios *et al*. (2019), published by the Wüster gang, got past peer review at the PRINO journal *Zookeys*, even after three peer reviewers there recommended refusal of the paper in terms of publication. This astonishing fact emerged in a thread on the ICZN list server when the paper was posted as a holotype example of the taxonomic and nomenclatural anarchy that the Wüster gang was creating by their non-stop citation and use of "Kaiser *et al*."

In this case the next victim of one of their evidence-free nomenclatural attacks was Chilean herpetologist Diego Demangel Miranda.

Wulf Schleip committed a similar act in his 2014 paper falsely claiming that the species *Leiopython hoserae* Hoser, 2000 was not named in accordance with the *International Code of Zoological Nomenclature*. "Dr. Glenn Shea" was ostensibly a peer reviewer for the paper and he recommended against publication (as was patently obvious) and yet Schleip managed to get it published by his mates at *Journal of Herpetology.*

Kaiser *et al.* (2013) has in effect become a mantra to dispense with the rules of science or ethics, while pretending that by citing Kaiser *et al,* one owns the realms of both peer review and science, (without any basis) and so a veneer of respectability for an act of theft is maintained.

Kaiser *et al.* as the Wüster gang are in effect akin to Adolf Hitler claiming ownership of good welfare for Jews!
Their claims do not match their actions!

The process also shifts blame for the act of theft onto the victim, whose work is being stolen in breach of the rules of the *International Code of Zoological Nomenclature* and copyright law.

While peer review is not a requirement of availability for names in terms of the *International Code of Zoological Nomenclature*, it is agreed by all people (publicly at least) that it is desirable of all taxonomic and nomenclatural works prior to publication.

This means that an absence of peer review in the Wüster gang's papers, does not in itself invalidate their names. Most are therefore in fact technically "available" under the rules of the ICZN, even in the absence of peer review, and their unavailability is therefore dictated by the fact they are junior synonyms and nothing more.

LEGAL CONSIDERATIONS INVOLVING TAXONOMIC VANDALISM AS SOUGHT BY KAISER *ET AL*. (2013) AND THEIR CALL FOR NON-CITATION OF EARLIER WORKS.

In passing it should be mentioned that any authors that are government employees or funded by government in any way who engage in acts of taxonomic vandalism are also putting themselves and their government in breach of the CITES Treaty, which has been ratified by most nations including Australia, The European Union, UK and the USA.

CITES in turn is regulated by the *International Code of Zoological Nomenclature* as stated explicitly in its constitution and also their website.
The IUCN, which also counts many governments as members, including that of Australia, also regulates names via their formal recognition of the *International Code of Zoological Nomenclature* and again this means that names coined outside of the code via citation of Kaiser *et al*. (2013) or any similar doctrine is again illegal if done by an employee of a member state / country government.

Furthermore government employees who lift material from an earlier paper and engage in acts of taxonomic vandalism, especially if not citing the original work (as done in 2018 and 2019 by Melville *et al.*) are in breach of CITES, the rules of the IUCN, copyright and the Berne Convention for the Protection of Literary and Artistic Works (1886) as amended to which most countries, including those of Western Europe, North America and Australia are signatories to.

The doctrine of Kaiser *et al.* (2013) and later versions, like Rhodin *et al.* (2015) and Wüster *et al.* (2021) also explicitly breaches the Convention on International Biodiversity, which most countries, including Australia, are signatories to.

In Australia, taxonomic vandalism is expressly forbidden by copyright law and is legally actionable.

Moral rights are enforced through the Commonwealth Copyright Amendment (Moral Rights) Act 2000. Under the Act, moral rights are awarded to authors of film, literary, dramatic or artistic works. Moral rights generally relate to the status of authorship and protecting that status for the legitimate author. For example, under the Act, such creators have the moral right to have things they have authored or created properly attributed to them. They also have the right to ensure that their works are cited, if and when used and not falsely attributed to others or appropriated by a later author.

A person using Kaiser *et al.* (2013) or similar directive as a basis to pretend an earlier relevant work does not exist and to steal from it in any way, including name authority for a previously named taxon is in breach of Section 195AD of the Commonwealth Copyright Amendment (Moral Rights) Act 2000.

False claims by Kaiser *et al*. (2013) as repeated in Australia, including as downloaded in Australia, such as that papers by Raymond Hoser are "unscientific", "breach the rules of the ICZN", when clearly they do not and other derogatory claims designed to damage the reputation of the author (Hoser) are highly illegal under Section 195AJ of the Commonwealth Copyright Amendment (Moral Rights) Act 2000 and legally actionable under Section 195AZA of the Act.

Penalties for acts of taxonomic vandalism and non-citation of original works under Section 195AZA of the Commonwealth Copyright Amendment (Moral Rights) Act 2000 in Australia, include:

(a) an injunction (subject to any terms that the court thinks fit);

(b) damages for loss resulting from the infringement;

(c) a declaration that a moral right of the author has been infringed;

(d) an order that the defendant make a public apology for the infringement;

(e) an order that any false attribution of authorship, or derogatory treatment, of the work be removed or reversed.

MAJORITY USE OF NAMES

As mentioned previously, Wolfgang Wüster and his gang of thieves have claimed to represent the majority of herpetologists and zoologists. This has in effect been a justification of their illegal actions.

They say that if everyone does it and everyone agrees with it, it must be right, as the theory goes.

Firstly it needs to be made clear that the majority view is not necessarily right, or desirable.

Science has never worked that way!

This simple fact confirms that nothing about Wolfgang Wüster has ever been scientific.

300 years ago, evolution was regarded as "fringe" theory, wacko and delusional.

Science has now provided good evidence for it, including the means by which it occurs.
But significantly in terms of the Wüster claims with respect of his side being the majority, he is wrong there as well and that is in spite of his despotic attempts to restrict the flow of relevant information to third parties.

As of 2021, Hawkeswood (2021), showed the correct ICZN names of Hoser being used three times more than those of the Wüster gang.
The numbers were in the vicinity of more than 1.5K for Hoser and less than a third of that for the Wüster gang's non ICZN names.

The Wüster gang numbers also include a huge number of rubbish "papers" in the online PRINO journals they control, which in effect had no aim beyond to publish use of their gang's illegally coined names.

Hawkeswood (2021) also corrected another series of lies concerning the scientific basis of the Hoser names, code compliance and the like, finding comprehensively in favour of Hoser.

All names proposed by Hoser (myself) were shown to have been done so on a firm scientific basis.

While Hawkeswood (2021) found against the Wüster gang's claims and that the Hoser names were ICZN Code compliant, this finding was in effect redundant, as the ICZN had published their effectively unanimous ruling in favour of Hoser about 5 weeks earlier.

That is a MAJORITY of SCIENTISTS from the peak scientific body, as in the ICZN found in favour of Hoser, not Wüster.

Wüster is therefore a very noisy minority in both herpetology and science more widely.

Wüster is nothing more than a liar and a thief!

WHO ARE THE TAXONOMIC VANDALS?

This is question that must be addressed here.

Taxonomic vandalism is defined herein (and most other places along the same lines) as being the deliberate act of naming a taxon (usually species or genus) that already has a valid name (in accordance with the *International Code of Zoological Nomenclature*) and then knowingly promoting the new name in favour of the correct senior synonym.

While I, Raymond Hoser am regularly accused of this despicable act by the Wüster gang, especially in places like Facebook, by members of the Wüster gang, including their countless fake ID accounts, Wikipedia which they despotically control and elsewhere that their grubby tentacles spread, the scoreboard speaks for itself.

Not one such case of Taxonomic Vandalism by myself is actually on the public record!

To the contrary however, this paper shows over 100 cases of Taxonomic Vandalism by Wolfgang Wüster and his gang of thieves, or recklessly caused by them.

Significantly, the war cry against the *International Code of Zoological Nomenclature*, best known as Kaiser *et al*. (2013), Rhodin *et al*. (2015) and Wüster *et al*. (2021) is being used in almost all cases to justify this nomenclatural and taxonomic anarchy being foisted on the global community of zoologists by this renegade bunch of thieves.

Mark O'Shea in particular, has regularly posted on Facebook that the "Hoser" name must be eradicated and erased from herpetology and has aggressively told people to rename anything with the name Hoser in it.

To that extent his gang has followed his orders with no less than ten species or genera named after members of the Hoser family being illegally renamed by this gang. These include *Shireenhosersaurea* Hoser, 2013, *Maxhoserus* Hoser, 2012, *Leiopython hoserae* Hoser, 2000, *Macrochelys maxhoseri* Hoser, 2013, *Ronhoserus* Hoser, 2012, *Katrinahosertyphlops* Hoser, 2012, *Boulengerina jackyhoserae* Hoser, 2013, *Stegonotus adelynhoserae* Hoser, 2012, *Lenhosertyphlops* Hoser, 2012 and *Crocodylus adelynhoserae* (Hoser, 2012).

In summary what needs to be done to stop this ongoing threat to science created by the Wolfgang Wuster gang is the following:

1/ The list of incorrect and correct names published herein should be circulated as widely as possible.

2/ Wolfgang Wüster and his gang of thieves must be publicly condemned for being what they are … liars and lawbreaking thieves!

3/ The ICZN's ruling of 2021 against Wolfgang Wüster gang needs to upheld by all. Without strict compliance with the *International Code of Zoological Nomenclature*, in particular the rules of homonymy and priority, there is no stability of names (Hoser 2015a-f).

4/ The ICZN should institute an expanded Zoobank system for registration of names and to include some form of verifiable peer review for names proposed, should the ICZN expand its remit to include the realms of taxonomy.

The ICZN should also put all vandalised names on their "Protected names list".

REFERENCES CITED VIA RELEVANT TABLE AND OTHERS RELATING TO THE SAME NAMES OR OTHRWISE CITED IN THIS PAPER.

Afonso-Silva, A. C., Santos, N., Ogilvie, H. A. and Moritz, C. 2017. Validation and description of two new north-western Australian Rainbow skinks with multispecies coalescent methods and morphology. *PeerJ* 5:e3724:26 pp.

Aksornneam, A., Rujirawan, A., Yodthong, Sung, Y. and Aowphol, A. 2024. A new species of krait of the genus *Bungarus* (Squamata: Elapidae) from Ratchaburi Province, western Thailand. *Zoosystematics and Evolution* 100 (1):141-154.

Baig, K. J., Wagner, P., Ananjeva, N. B. and Böhme, W. 2012. A morphology-based taxonomic revision of *Laudakia* Gray, 1845 (Squamata: Agamidae). *Vertebrate Zoology* 62(2):213-260.

Bates, M. F., Michael, F., Tolley, K. A., Edwards, S., Davids, Z., Da Silva, J. M. and Branch, W. R. 2013. A molecular phylogeny of the African plated lizards, genus *Gerrhosaurus* Wiegmann, 1828 (Squamata: Gerrhosauridae), with the description of two new genera. *Zootaxa* (PRINO) (online) 3900(5):465-493.

Bates, M. F. and Broadley, D. G. 2018. A revision of the egg-eating snakes of the genus *Dasypeltis* Wagler (Squamata: Colubridae: Colubrinae) in north-eastern Africa and south-western Arabia, with descriptions of three new species. *Indago* 34(1):1-95.

Blanck, T., Gaillard, D., Protiva, T., Wheatley, M., Shi, H., Liu, L., Ray, P. C. and Anders, B.. 2023 A taxonomic hide and seek: Phylogenetic and phylogeographic relationships in the southeast

Asian Box Turtle, *Cuora amboinensis* (Riche in Daudin, 1801). *Russian Journal of Herpetology* 30 (6 Supplement): 1-52.

Bucklitsch, Y., Böhme, W. and Koch, A. 2016. Scale Morphology and Micro-Structure of Monitor Lizards (Squamata: Varanidae: *Varanus spp.*) and their Allies: Implications for Systematics, Ecology, and Conservation. *Zootaxa* (PRINO) (Online) 4153(1):1-192.

Cann, J. 1998. *Freshwater Turtles of Australia*. Beaumont Publishing, Singapore:292 pp.

Cann, J., McCord, W. and Joseph-Ouni, M. 2003. Emmott's short-neck turtle, *Emydura macquarii emmotti ssp. nov*. pp. 60-61 in McCord, W., Cann, J. and Joseph-Ouni, M. (Ed.) A taxonomic assessment of *Emydura* (Testudines: Chelidae) with descriptions of new subspecies from Queensland, Australia. *Reptilia*, 27:59-63.

Ceraico, L. M. P., Aescht, E., Ahyong, S. T., Ballerio, A., Bouchard, P., Bourgoin, T., Dmitriev, D., Evenhius, N., Grygier, M. J., Harvey, M. S., Kottelat, M., Kluge, N., Krell, F. T., Kojima, J., Kullander, S. O., Lucinda, P., Lyal, C. H. C., Pyle, R. L., Rheindt, F. E., Scioscia, C. L., Welter-Schultes, F., Whitmore, D., Yanega, D., Zhang, Z. Q., Zhou, H. Z. and Pape, T. (being a unanimous voice of the ICZN) 2023. Renaming taxa on ethical grounds threatens nomenclatural stability and scientific communication. *Zoological Journal of the Linnean Society* 197:283-286.

Chen, Z, -N., Shi, S. -C., Vogel, G., Ding, L. and Shi, J. -S. 2021. Multiple lines of evidence reveal a new species of Krait (Squamata, Elapidae, *Bungarus*) from Southwestern China and Northern Myanmar. *ZooKeys* 1025: 35-71.

Commonwealth of Australia (Government) 2000. *Commonwealth Copyright Amendment* (*Moral Rights*) *Act 2000*. 39 pp.

Cooper, S. J., Travouillon, K. K., Helgen, K. M., Saint, K., Russell, R. and Winter, J. 2023. Reassessment of the subspecific status of the Australian Wet Tropics yellow-bellied glider, *Petaurus australis. Australian Mammalogy* (PRINO) (Online) 4592):220-236.

Das, S., Greenbaum, E., Meiri, S., Bauer, A. M., Burbrink, F. T., Raxworthy, C. J., Weinell, J. L., Brown, R. M., Brecko, J., Pauwels, O. S. G., Rabibisoa, N., Raselimanana, A. P. and Merilä, J. 2023. Ultraconserved elements-based phylogenomic systematics of the snake superfamily Elapoidea, with the description of a new Afro-Asian family. *Molecular Phylogenetics and Evolution* March:180:107700. (PRINO) (Online):11 pp.

Das, S., Greenbaum, E., Brecko, J., Pauwels, O. S. G., Ruane, S., Pirro, S. and Merilä, J. 2024. Phylogenomics of *Psammodynastes* and *Buhoma* (Elapoidea: Serpentes), with the description of a new Asian snake family. *Scientific Reports* volume 14, Article number: 9489 (PRINO) (Online):14 pp.

Demangel Miranda, D. 2016. *Reptiles en Chile*. Fauna Nativa Ediciones, Santiago, Chile:619 pp.

Denzer, W., Manthey, U., Mahlow, K. and Böhme, W. 2015. The systematic status of *Gonocephalus robinsonii* Boulenger, 1908 (Squamata: Agamidae: Draconinae). *Zootaxa* (PRINO) (Online) 4039(1):129-144.

Denzer, W., Manthey, U., Wagner, P. and Böhme, W. 2016. A critical review of Hoser's writings on Draconinae, Amphibolurinae, *Laudakia* and Uromastycinae (Squamata: Agamidae). *Bonn Zoological Bulletin* 64(2):117-138.

Donnellan, S. C., Catullo, R. A., Rowley, J. J. L., Doughty, P., Price, L., Hines, H. and Richards, S. J. 2023. Revision of *Litoria rothii* (Anura: Pelodryadidae) from northern Australia. *Zootaxa (*PRINO) (Online) 5352(1):75-108.

Dubois, A., Ohler, A. and Pyron, R. A. 2021. New concepts and methods for phylogenetic taxonomy and nomenclature in zoology, exemplified by a new ranked cladonomy of recent amphibians (Lissamphibia). *Megataxa* (PRINO) (Online) 005 (1): 001-738.

Erens, J., Miralles, A., Glaw, F., Chatrou, L. W. and Vences, M. 2016. Extended molecular phylogenetics and revised systematics of Malagasy scincine lizards. *Molecular Phylogenetics and Evolution* 107:466-472.

Esquerré, D., Donnellan, S. C., Brennan, I. G., Lemmon, A. R., Lemmon, E. M., Zaher, H., Grazziotin, F. G. and Scott Keogh, J. 2020. Phylogenomics, biogeography and morphometrics reveal rapid phenotypic evolution in pythons after crossing Wallace's line. *Systematic Biology*, online prepress (downloaded from "www.researchgate.com" on 7 May 2020).

Figuero, A., McKelvy, A. D., Grismer, L. L., Bell, C. D. and Lailvaux, S. P. 2016. A Species-Level Phylogeny of Extant Snakes with Description of a New Colubrid Subfamily and Genus. *PLOS One* (online), 7 December. Online at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0161070

Grismer, L. L., Wood, P. L., Grismer, J. L., Quah, E. S. H., Thy, N., Phimmachak, S., Sivongxay, N., Seateun, S., Stuart, B. L., Siler, C. B., Mulcahy, D. G., Anamza, T. and Brown, R. M. 2019. Geographic structure of genetic variation in the Parachute Gecko *Ptychozoon lionotum* Annandale, 1905 across Indochina and Sundaland with descriptions of three new species. *Zootaxa* (PRINO) (Online) (July) 4638(2):151-198.

Hartmann, L., Mecke, S., Kieckbusch, M., Mader, F. and Kaiser, H. 2016. A new species of bent-toed gecko, genus *Cyrtodactylus* Gray, 1827 (Reptilia: Squamata: Gekkonidae), from Jawa Timur Province, Java, Indonesia, with taxonomic remarks on *C. fumosus* (Müller, 1895). *Zootaxa* (PRINO) (Online) 4067(5): 552-568.

Hawkeswood, T. J. 2021. Time to end taxonomic vandalism by Wolfgang Wuster *et al*.: The Snakeman,

Raymond Hoser's publications are validly published and his names available according to the ICZN: Objective investigation finds Hoser's taxonomic works as scientific best practice and in every relevant case identifies valid entities. *Calodema*, 860:1-51 (pdf copy posted online at: https://www.smuggled.com/Hawkeswood-Hoser-Paper-10-7-2021-1.pdf).

Hedges, S. B., Marion, A. B., Lipp, K. M., Marin, J. and Vidal, N. 2014. A taxonomic framework for typhlopid snakes from the Caribbean and other regions (Reptilia, Squamata). *Caribbean Herpetology* 49:1-61.

Hoser, R. T. 1989. *Australian Reptiles and Frogs*. Pierson and Co., Mosman, NSW, Australia:238 pp.

Hoser, R. T. 1991. *Endangered Animals of Australia*. Pierson Publishing, Mosman, NSW, Australia:240 pp.

Hoser, R. T. 1993. *Smuggled: The Underground Trade in Australia's Wildlife*. Apollo Books, Moss Vale, NSW, Australia:160 pp.

Hoser, R. T. 1994. *The Hoser Files: The fight against entrenched official corruption*. Kotabi Publishing, Doncaster, Victoria, Australia:324 pp.

Hoser, R. T. 1996. *Smuggled-2:Wildlife Trafficking, Crime and Corruption in Australia*, Kotabi Publishing, Doncaster, Victoria, Australia:280 pp.

Hoser, R. T. 1998. Death Adders (Genus *Acanthophis*): An overview, including descriptions of Five new species and One subspecies. *Monitor - Journal of the Victorian Herpetological Society* 9(2):20-41.

Hoser, R. T. 1999a. *Victoria Police Corruption: The book that the Victoria Police don't want you to read*. Kotabi Publishing, Doncaster, Victoria, Australia:732 pp.

Hoser, R. T. 1999b. *Victoria Police Corruption-2: Including what the media didn't tell you.* Kotabi Publishing, Doncaster, Victoria, Australia:732 pp.

Hoser, R. T. 1999c. Herpetology in Australia - Some Comments. *Monitor: Journal of the Victorian Herpetological Society Incorporated* 10(2/3):113-118.

Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet. *Calodema* Supplementary Paper 1:1-9.

Hoser, R. T. 2000. A Revision of the Australasian pythons. *Ophidia Review* 1:1-27.

Hoser, R. T. 2003. Five new Australian Pythons. *Newsletter of the Macarthur Herpetological Society* Issue 40, August 2003:4-9.

Hoser, R. T. 2004. A reclassification of the Pythoninae including the description of two new genera, two new species and nine new subspecies. *Crocodilian: Journal of the Victorian Association of Amateur Herpetologists* 4(3):31-37 and 4(4):21-40.

Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet. *Calodema* Supplementary Paper 1:1-9.

Hoser, R. T. 2009a. Creationism and contrived science: a review of recent python systematics papers and the resolution of issues of taxonomy and nomenclature. *Australasian Journal of Herpetology* 2:1-34.

Hoser, R. T. 2009b. A reclassification of the True Cobras; species formerly referred to the genera *Naja, Boulengerina* and *Paranaja. Australasian Journal of Herpetology* 7:1-15.

Hoser, R. T. 2012a. Exposing a fraud! *Afronaja* Wallach, Wuster and Broadley is a junior synonym of *Spracklandus* Hoser, 2009. *Australasian Journal of Herpetology* 9:1-64.

Hoser, R. T. 2012b. A new genus of Jumping Pitviper from Middle America (Serpentes: Viperidae). *Australasian Journal of herpetology* 10:33-34. Published 8 April 2012.

Hoser, R. T. 2012c. Three new species of *Stegonotus* from New Guinea (Serpentes: Colubridae). *Australasian Journal of Herpetology* 12:18-22.

Hoser, R. T. 2012d. Divisions of the Asian colubrid snake genera *Xenochrophis*, *Dendrelaphis* and *Boiga* (Serpentes: Colubridae). *Australasian Journal of Herpetology* 12:65-76.

Hoser, R. T. 2012e. A review of the taxonomy of the living Crocodiles including the description of three new tribes, a new genus, and two new species. *Australasian Journal of Herpetology* 14:9-16.

Hoser, R. T. 2012f. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology* 14:37-64.

Hoser, R. T. 2012g. A review of the extant scolecophidians ("blindsnakes") including the formal naming and diagnosis of new tribes, genera, subgenera, species and subspecies for divergent taxa. *Australasian Journal of Herpetology* 15:1-64.

Hoser, R. T. 2013a. Tidying up the taxonomy of the extant Booidea, including the erection and naming of two new families, the description of *Acrantophis sloppi sp. nov*., a new species of Ground Boa from Madagascar and *Candoia aspera iansimpsoni, subsp. nov*., a new subspecies of Boa from Papua New Guinea. *Australasian Journal of Herpetology* 16:3-8.

Hoser, R. T. 2013b. An updated taxonomy of the living Alligator Snapping Turtles (*Macrochelys* Gray, 1856), with descriptions of a new tribe, new species and new subspecies. *Australasian Journal of Herpetology* 16:53-63.

Hoser, R. T. 2013c. Stopping the shuffle between families: Six new Colubroid snake families named. *Australasian Journal of Herpetology* 17:3-21.

Hoser, R. T. 2013d. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology* 18:2-79.

Hoser, R. T. 2013e. *Chrismaxwellus*: A new genus of Colubrid snake from south-west Africa. *Australasian Journal of Herpetology* 20:26-29.

Hoser, R. T. 2013f. A revised taxonomy for the Lizard Families Gerrhosauridae and Cordylidae. *Australasian Journal of Herpetology* 21:3-32.

Hoser, R. T. 2013g. Monitor lizards reclassified with some common sense (Squamata: Sauria: Varanidae). *Australasian Journal of Herpetology* 21:41-58.

Hoser, R. T. 2013h. A new egg-eating snake from the southern Arabian Peninsula (Squamata: Serpentes: Colubridae:Colubrinae:Boigini). *Australasian Journal of Herpetology* 21:59-63.

Hoser, R. T. 2013i. Case 3601: *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature* 70(4):234-237.

Hoser, R. T. 2014a. A logical new taxonomy for the Asian subfamily Draconinae based on obvious phylogenetic relationships and morphology of species (Squamata: Sauria: Agamidae: Draconinae). *Australasian Journal of Herpetology* 22:9-59.

Hoser, R. T. 2014b. A taxonomic revision of the Giant Long-necked Terrapin, *Chelodina expansa* Gray, 1857 species complex and related matters of taxonomy and nomenclature. *Australasian Journal of Herpetology* 24:3-11.

Hoser, R. T. 2015a. Dealing with the "truth haters" ... a summary! Introduction to Issues 25 and 26 of *Australasian Journal of Herpetology*. Including "A timeline of relevant key publishing and other events relevant to Wolfgang Wüster and his gang of thieves." and a "Synonyms list". *Australasian Journal of Herpetology* 25:3-13.

Hoser, R. T. 2015b. The Wüster gang and their proposed "Taxon Filter": How they are knowingly publishing false information, recklessly engaging in taxonomic vandalism and directly attacking the rules and stability of zoological nomenclature. *Australasian Journal of Herpetology* 25:14-38.

Hoser, R. T. 2015c. Best Practices in herpetology: Hinrich Kaiser's claims are unsubstantiated. *Australasian Journal of Herpetology* 25:39-64.

Hoser, R. T. 2015d. PRINO (Peer reviewed in name only) journals: When quality control in scientific publications fails. *Australasian Journal of Herpetology* 26:3-64.

Hoser, R. T. 2015e. Rhodin *et al.* 2015, Yet more lies, misrepresentations and falsehoods by a band of thieves intent on stealing credit for the scientific works of others. *Australasian Journal of Herpetology* 27:3-36.

Hoser, R. T, 2015f. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; comments *BZN* 71:30-38, 133-135). *Australasian Journal of Herpetology* 27:37-54.

Hoser, R. T. 2015g. A revision of the genus level taxonomy of the Acontinae and Scincinae, with the creation of new genera, subgenera, tribes and subtribes. *Australasian Journal of Herpetology* 28:1-64 and 29:65-128.

Hoser, R. T. 2015h. A new taxonomy for the *Vipera latastei* species complex (Serpentes: Viperidae). *Australasian Journal of Herpetology* 30:28-36.

Hoser, R. T. 2015i. Australian agamids: Eighteen new species from the genera *Amphibolurus* Wagler, 1830, *Lophognathus* Gray, 1842, *Rankinia* Wells and Wellington, 1984, *Diporiphora* Gray, 1842, *Tympanocryptis* Peters, 1863, as well as three new genera and six new subgenera. *Australasian Journal of Herpetology* 30:37-64.

Hoser, R. T. 2016a. *Acanthophis lancasteri* Wells and Wellington, 1985 gets hit with a dose of Crypto! … this is not the last word on Death Adder taxonomy and nomenclature. *Australasian Journal of Herpetology* 31:3-11.

Hoser, R. T. 2016b. Carphodactylidae reviewed: Four new genera, four new subgenera, nine new species and four new

subspecies within the Australian gecko family (Squamata: Sauria). *Australasian Journal of Herpetology* 32:3-25.

Hoser, R. T. 2016c. A re-evaluation of the Crocodile Skinks, genus *Tribolonotus* Duméril and Bibron, 1839 *sensu lato* including the division of the genus into three, description of three new species, a new subspecies and the placement of all within a new tribe. *Australasian Journal of Herpetology*, 32:33-39.

Hoser, R. T. 2016d. A new subspecies of *Daraninagama robinsonii* (Boulenger, 1908) from the Cameron Highlands, Malaysia (Squamata: Sauria: Agamidae) and a critical review of a critical review. *Australasian Journal of Herpetology* 32:53-60.

Hoser, R. T. 2016e. A previously unrecognized species of sea snake (Squamata: Serpentes: Elapidae: Hydrophiinae). *Australasian Journal of Herpetology* 33:25-33.

Hoser, R. T. 2016f. Not a monotypic genus! *Aplopeltura boa* (Boie, 1828) divided! *Australasian Journal of Herpetology* 33: 42-51.

Hoser, R. T. 2017a. Taxonomic vandalism by Wolfgang Wüster and his gang of thieves continues. New names unlawfully coined by the rule-breakers for species and genera previously named according to the rules of the *International Code of Zoological Nomenclature*. *Australasian Journal of Herpetology* 35:57-63.

Hoser, R. T. 2017b. A further break-up of the Australian gecko genus *Oedura* Gray, 1842 *sensu lato* as currently recognized, from four to seven genera, with two new subgenera defined, description of fourteen new species, four new subspecies and formalising of one tribe and five subtribes. *Australasian Journal of Herpetology* 34:3-35.

Hoser, R. T. 2018a. A sensible breakup of the genus *Bungarus* Daudin, 1803 *sensu lato* and the description of a new species. *Australasian Journal of Herpetology* 36:11-20.

Hoser, R. T. 2018b. *Feresuta* a new genus of West Australian snake and the formal description of a new species in the same genus. *Australasian Journal of Herpetology* 37:20-23.

Hoser, R. T. 2018c. Six new species of Dwarf Goanna, *Worrellisaurus* Wells and Wellington, 1984 from Australia. *Australasian Journal of Herpetology* 37:24-37.

Hoser, R. T. 2018d. A divided *Gehyra* makes sense! Assigning available and new names to recognize all major species groups within *Gehyra* Gray, 1834 *sensu lato* (Squamata: Gekkonidae) and the formal description of nine new species. *Australasian Journal of Herpetology* 37:48-64.

Hoser, R. T. 2018e. A significant improvement to the taxonomy of the gecko genus *Gekko* Laurenti, 1768 *sensu lato* to better reflect morphological diversity and ancient divergence within the group. *Australasian Journal of Herpetology* 38 (August):6-18.

Hoser, R. T. 2018f. A revised taxonomy of the gecko genus *Ptychozoon* Kuhl and Van Hasselt, 1822, including the formal erection of two new genera to accommodate the most divergent taxa and description of ten new species. *Australasian Journal of Herpetology* 38 (August):19-31.

Hoser, R. T. 2018g. A revised taxonomy of the gecko genera *Lepidodactylus* Fitzinger, 1843, *Luperosaurus* Gray, 1845 and *Pseudogekko* Taylor, 1922 including the formal erection of new genera and subgenera to accommodate the most divergent taxa and description of 26 new species. *Australasian Journal of Herpetology* 38 (August):32-64.

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. 2019. Six new genera of skinks associated with *Lipinia* Gray, 1845 based on morphological and evolutionary divergence as well as twenty-seven previously undiagnosed species within the same assemblage. *Australasian Journal of Herpetology* 41:29-61.

Hoser, R. T. 2020a. A new subspecies of Yellow-bellied Glider (Marsupialia: Petauridae) from far north Queensland, Australia. *Australasian Journal of Herpetology* 42:38-41.

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. A long overdue refinement of the taxonomy of the Mallee Dragon Complex *Ctenophorus* (*Phthanodon*) *fordi* (Storr, 1965) *sensu lato* with the formal descriptions of four new subspecies. *Australasian Journal of Herpetology* 43:41-49.

Hoser, R. T. 2020d. For the first time ever! An overdue review and reclassification of 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. 2020e. Before they get wiped out! Formal descriptions of 15 new species of Monitor Lizard in the *Euprepiosaurus* (AKA *Varanus*) *indicus* (Daudin, 1802) and the *Shireenhosersaurea* (AKA *Varanus*) *prasinus* (Schlegel, 1839) species groups. *Australasian Journal of Herpetology* 47:3-31.

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. 2021. Audit finds dozens of unnamed turtle taxa. A body of evidence results in newly named genera, subgenera, species and subspecies based on historical and morphological divergence. *Australasian Journal of Herpetology* 52-53:1-128.

Hoser, R. T. 2023 A logical further dismemberment of the skink genus *Sphenomorphus* Fitzinger, 1843 (Squamata: Sauria: Scincomorpha) including the formal descriptions of new genera and species. *Australasian Journal of Herpetology* 65: 5-50.

Hoskin, C. 2019. Description of three new velvet geckos (Diplodactylidae: *Oedura*) from inland eastern Australia, and redescription of *Oedura monilis* De Vis. *Zootoxic* (PRINO) (Online) 4683(3):242-270.

Hoskin, C. and Couper, P. 2023. Revision of zigzag geckos (Diplodactylidae: *Amalosia*) in eastern Australia, with description of five new species. *Zootaxa* (PRINO) (Online) 5343(4):301-337.

Hutchinson, M. N. and Edwards, D. 2023. Sand Dragons: Species of the *Ctenophorus maculatus* Complex (Squamata: Agamidae) of Australia's Southern and Western Interior. *Journal of Herpetology*, 57(2):176-196.

Hutchinson, M. N., Donnellan, S. C., Baverstock, P. R., Krieg, M., Simms, S. and Burgin, S. 1990. Immunological relationships and generic revision of the Australian lizards assigned to the genus *Leiolopisma* (Scincidae: Lygosominae). *Australian Journal of Zoology* 38(5):535-554.

International Commission on Zoological Nomenclature 2021. Opinion 2468 (Case 3601) – *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and *Australasian Journal of Herpetology* issues 1-24: confirmation of availability declined; Appendix A (Code of Ethics): not adopted as a formal criterion for ruling

on Cases. *Bulletin of Zoological Nomenclature* 78 (30 April 2021):42-45.

Hutchinson, M. N., Couper, P., Amey, A., and Wilmer, J. W. 2021. Diversity and Systematics of Limbless Skinks (*Anomalopus*) from Eastern Australia and the Skeletal Changes that Accompany the Substrate Swimming Body Form. *Journal of Herpetology* 55(4):361-384.

Kaiser, C. M., Kaiser, H. and O'Shea, M. 2018. The taxonomic history of Indo-Papuan groundsnakes, genus *Stegonotus* Duméril *et al*., 1854 (Colubridae), with some taxonomic revisions and the designation of a neotype for *S. parvus* (Meyer, 1874). *Zootaxa* (PRINO) (Online) 4512(1):001-073.

Kaiser, C. M., O'Shea, M. and Kaiser, H. 2019. Corrigenda and Addenda to the Article "The taxonomic history of Indo-Papuan groundsnakes, genus *Stegonotus* Duméril *et al*., 1854 (Colubridae), with some taxonomic revisions and the designation of a neotype for *S. parvus* (Meyer, 1874)" by Kaiser *et al*. (2018). *Zootaxa* (PRINO) (Online) 4615 (2):392-394.

Kaiser, H. 2012a. SPAM email sent out to numerous recipients on 5 June 2012.

Kaiser, H. 2012b. Point of view. Hate article sent as attachment with SPAM email sent out on 5 June 2012.

Kaiser, H. 2013. The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power). *Bulletin of Zoological Nomenclature* 70(4) December 2013:293-302.

Kaiser, H., Crother, B. L., Kelly, C. M. R., Luiselli, L., O'Shea, M., Ota, H., Passos, P., Schleip, W. D. and Wüster, W. 2013. Best practices: In the 21st Century, Taxonomic Decisions in Herpetology are Acceptable Only When supported by a body of Evidence and Published via Peer-Review. *Herpetological Review* (Not peer Reviewed) 44(1):8-23.

Karkkainen, D. T., Richards, S. J., Kraus, F., Tjaturadi, B., Krey, L. and Oliver, P. M. 2020 A new species of small *Lepidodactylus* (Squamata: Gekkonidae) from Salawati Island, Indonesia. *Israel Journal of Ecology and Evolution* 66(3-4):180-189.

Kealley, L., Doughty, P., Pepper, M., Scott Keogh, J., Hillyer, M. and Huey, J. 2018. Conspicuously concealed: revision of the arid clade of the *Gehyra variegata* (Gekkonidae) group in Western Australia using an integrative molecular and morphological approach, with the description of five cryptic species. *PeerJ* 6:e5334 (PRINO) (Online).

Kornilios, P., Kumlutaş, Y., Lymberakis, P. and Ilgaz, Ç. 2018. Cryptic diversity and molecular systematics of the Aegean *Ophiomorus* skinks (Reptilia: Squamata), with the description of a new species. *J. Zool. Syst. Evol. Res*. 00:1-18.

Kraus, F. 2019. New species of *Lepidodactylus* (Squamata: Gekkonidae) from New Guinea and adjacent islands. *Zootaxa* (PRINO) (Online) 4651(2):305-329.

Kraus, F. and Oliver, P. 2020. A new species of *Lepidodactylus* (Squamata: Gekkonidae) from the mountains of north-eastern Papua New Guinea: older than the hills. *Zootaxa* (PRINO) (Online) 4718(4):549-561.

Latreille, P. A. 1807. *Recueil d'observations de zoologie et d'anatomie compar : faites dans l'ocn atlantique, dans l'intieur du nouveau continent et dans la mer du sud pendant les anns 1799, 1800, 1801, 1802 et 1803*. Paris, France.

Mackay, M. 2024. 'Sadistic' zoologist Adam Britton remains behind bars as sentencing for bestiality, child abuse material charges delayed again. News report posted on the website of the Australian Broadcasting Corporation (ABC) on 6 Feb 2024 at:

https://www.abc.net.au/news/2024-02-06/zoologist-adam-britton-bestiality-child-abuse-sentencing-delayed/103431386

Maddock S. T., Ellis, R. J., Doughty, P., Smith, L. A. and Wüster, W. 2015. A new species of death adder (*Acanthophis*: Serpentes: Elapidae) from north-western Australia. *Zootaxa* (PRINO) (Online) 4007(3):301-326.

Mahony, M. J., Penman, T., Bertozzi, T., Lemckert, F. L., Bilney, R. and Donnellan, S. C. 2021. Taxonomic revision of south-eastern Australian giant burrowing frogs (Anura: Limnodynastidae: *Heleioporus* (Gray). *Zootaxa* (PRINO) (Online) 5016:451-489.

Mahony, M. J., Bertozzi, T., Guzinski, J., Hines, H. B. and Donnellan, S. C. 2022. A new species of barred frog, Mixophyes (Anura: Myobatrachidae) from south-eastern Australia identified by molecular genetic analyses. *Zootaxa* (PRINO) (Online) 5297(3):301-336.

Martinez-Frying, F., Freitas, I., Veil-Anton, G., Lucchini, N., Fahd, S., Larbes, S., Folders, J. M., Santos, X., and Brito, J. C. 2021. Integrative taxonomy reveals two species and intraspecific differentiation in the *Vipera latastei-monticola* complex. *Journal of Zoological Systematics and Evolutionary Research*, 00:1-29.

Maryan, B., Brennan, I. G., Hutchinson, M. N. and Geidens, L. S. 2020. What's under the hood? Phylogeny and taxonomy of the snake genera *Parasuta* Worrell and *Suta* Worrell (Squamata: Elapidae), with a description of a new species from the Pilbara, Western Australia. *Zootoxic* (PRINO) (Online) 4778(1):1-47.

Melville, J., Ritchie, E. G., Chapple, S. N. J., Glor, R. E. and Schulte, J. A. 2018. Diversity in Australia's tropical savannas: An integrative taxonomic revision of agamid lizards from the genera *Amphibolurus* and *Lophognathus* (Lacertilia: Agamidae). *Memoirs of Museum Victoria* 77:41-61.

Melville, J., Chaplin, K., Hutchinson, M., Sumner, J., Gruber, B., MacDonald, A.J. and Sarre, S. D. 2019. Taxonomy and conservation of grassland earless dragons: new species and an assessment of the first possible extinction of a reptile on mainland Australia. *R. Soc. open sci*. 6:190233. (24 pp. and supplements) http://dx.doi.org/10.1098/rsos.190233.

Melville, J., Smith Date, K. L., Horner, P. and Doughty, P. 2019. Taxonomic revision of dragon lizards in the genus *Diporiphora* (Reptilia: Agamidae) from the Australian monsoonal tropics. *Memoirs of Museum Victoria* 78:23-55.

Melville, J., Chaplin, K., Hipsley, C. A., Sarre, S. D., Sumner, J. and Hutchinson, M. 2019. Integrating phylogeography and high-resolution X-ray CT reveals five new cryptic species and multiple hybrid zones among Australian earless dragons. *Royal Society open science* 6:191166 (Online).

McCord, W. P. and Thomson, S. A. 2002. A new species of *Chelodina* (Testudines: Pleurodira: Chelidae) from Northern Australia. *Journal of Herpetology* 36(2):255-267.

Murray, C. M., Russo, P., Zorrilla, A. and McMahan, C. D. 2019. Divergent Morphology among Populations of the New Guinea Crocodile, *Crocodylus novaeguineae* (Schmidt, 1928): Diagnosis of an Independent Lineage and Description of a New Species. *Copeia*, 107(3):517-523.

Nankivell, J. H., Goiran, C., Hourston, M., Shine, R., Rasmussen, A. R., Thomson, V. A. and Sanders, K. L. 2020. A new species of turtle-headed sea Snake (*Emydocephalus*: Elapidae) endemic to Western Australia. *Zootaxa* (PRINO) (Online) 107(3):517-523.

Oliver, P. M. and McDonald, P. J. 2016. Young relicts and old relicts: a novel palaeoendemic vertebrate from the Australian Central Uplands. *Royal Society open science* 3:160018.

Oliver, P. M., Prasetya, A. M., Tedeschi, L. G., Fenker, J., Ellis, R. J., Doughty, P. and Moritz, C. 2020. Crypsis and convergence: integrative taxonomic revision of the *Gehyra australis* group (Squamata: Gekkonidae) from northern Australia. *PeerJ* (PRINO) (Online) 8:e7971:56 pp.

Oliver, P. M., Jolly, C. J., Skipworth, P. L., Tedeschi, L. G. and Gillespie, G. R. 2020. A new velvet gecko (Oedura: Diplodactylidae) from Groote Eylandt, Northern Territory. *Zootaxa* (PRINO) (Online) 4779(3):438-450.

Oliver, P. M., Donnellan, S. C. and Gunn, B. F. 2022. Plio-Pleistocene vicariance across arid Australia in the 'Spiny Knob-

tailed Geckos' (*Nephrurus asper* group), with the description of a new species from western Queensland. *Australian Journal of Zoology* 69(6):216-228.

Pal, S., Vijayakumar, S. P., Shanker, K., Jayarajan, A. and Deepak, V. 2018. A systematic revision of *Calotes* Cuvier, 1817 (Squamata: Agamidae) from the Western Ghats adds two genera and reveals two new species. *Zootaxa* (PRINO) (Online) 4482(3):401-450.

Parkin, T., Donnellan, S. C., Parkin, B., Shea, G. M. and Rowley, J. L. 2023. Phylogeography, hybrid zones and contemporary species boundaries in the south-eastern Australian smooth frogs (Anura: Myobatrachidae: *Geocrinia*). *Molecular Phylogentics and Evolution*. (PRINO) (Online) 2023 Sep 26:107934.

Pavón-Vázqueza, C. J., Esquirre, D., Fitch, A. J., Maryan, B., Doughty, P. Donnellan, S. C. and Scott Keogh, J. 2022. Between a rock and a dry place: phylogenomics, biogeography, and systematics of ridge-tailed monitors (Squamata: Varanidae: *Varanus acanthurus* complex). *Molecular Phylogenetics and Evolution* (PRINO) (Online only) 14 May 2022.

Poyarkov, N. A., Nguyen, T. V., Pawangkhanant, P., Yushchenko, P. V., Brakels, P., Nguyen, L. H., Nguyen, H. N., Suwannapoom, C. Orlov, N. and Vogel, G. 2022. An integrative taxonomic revision of

slug-eating snakes (Squamata: Pareidae: Pareineae) reveals unprecedented diversity in Indochina. *Peer J* (Online) (PRINO) 10:e12713.

Prashtag, P. and Gemel, R. 2022. A new subspecies of the Asiatic softshell turtle Amyda ornata (Gray, 1861) from its northern distribution range. *Herpetozoa* (Online) (PRINO) 35: 81-93.

Pyron, R. A. and Wallach, V. 2014. Systematics of the blindsnakes (Serpentes: Scolecophidia: Typhlopoidea) based on molecular and morphological evidence. *Zootaxa* (PRINO) (Online) 3829:1-81.

Pyron, R. A., Reynolds, R. G. and Burbrink, F. T. 2014. A Taxonomic Revision of Boas (Serpentes: Boidae). *Zootaxa* (PRINO) (Online) 3846(2):249-260.

Reynolds, R. G., Niemiller, M. L. and Revella, L. J. 2013a. Toward a Tree-of-Life for the boas and pythons: Multilocus species-level phylogeny with unprecedented taxon sampling. *Molecular Phylogenetics and Evolution,* Uncorrected proof uploaded on 6 December 2013 to http://

www.sciencedirect.com/science/article/pii/

S1055790313004284

Reynolds, R. G., Niemiller, M. L. and Revella, L. J. 2013b. Toward a Tree-of-Life for the boas and pythons: Multilocus species-level phylogeny with unprecedented taxon sampling. *Molecular Phylogenetics and Evolution*, Uncorrected proof uploaded on 6 December 2013 to http://

www.venomdoc.com/downloads/MPE_pythons.pdf

Rhodin, A. *et al*. (70 listed authors, with some later publishing that they had never read the document they allegedly co-authored) 2015. Comment on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; 71: 30-38, 133-135, 181-182, 252-253). *Bulletin of Zoological Nomenclature* 72(1)65-78.

Ride, W. D. L. (*ed*.) *et al.* (on behalf of the International Commission on Zoological Nomenclature) 1999. *International code of Zoological Nomenclature* (Fourth edition). The Natural History Museum - Cromwell Road, London SW7 5BD, UK (also commonly cited as "The Rules", "Zoological Rules" or "ICZN 1999").

Rittmeyer, E. N. and Austin, C. C. 2017. Two New Species of Crocodile Skinks (Squamata: Scincidae: *Tribolonotus*) from the Solomon Archipelago. *Zootaxa* (PRINO) (Online) 4268(1):71-87.

Rivas, J. A., De La Quintana, P., Mancuso, M., Pacheco, L. F., Rivas, G. A., Mariotto, S., Salazar-Valenzuela, D., Baihua, M.T., Baihua, P., Burghardt, G.M., Vonk, F. J., Hernandez, E., García-Pérez, J. E., Fry, B. G. and Corey-Rivas, S. 2024.Disentangling the Anacondas: Revealing a New Green Species and Rethinking Yellows. *Diversity* 16(2): Article number 127.

Riyanto, A., Grismer, L. L. and Wood, P. L. Jr. 2015. The fourth Bent-toed Gecko of the genus *Cyrtodactylus* (Squamata: Gekkonidae) from Java, Indonesia. *Zootaxa* (PRINO) (Online) 4059(2):351-363.

Rowley, J. J., Mahony, M. J., Hines, H. B., Myers, S., Price, L. C., Shea, G. M. and Donnellan, S. C. 2021. Two new frog species from the *Litoria rubella* species group from eastern Australia. *Zootaxa* (PRINO) Online 5071 (1):1-41.

Ruane, S., Richards, S. J., McVay, J. D., Tjaturadi, B., Krey, K. and Austin, C. C. 2017. Cryptic and non-cryptic diversity in New Guinea ground snakes of the genus *Stegonotus* Duméril, Bibron and Duméril, 1854: a description of four new species (Squamata: Colubridae), *Journal of Natural History* online 29 pp.

Sadlier, R. A. 1990. A new species of scincid lizard from western Arnhem Land, Northern Territory. *The Beagle* 7(2)1990:29-33.

Sadlier, R. A., Colgan, D. J., Beatson, C. A. and Cogger. H. G. 2019. *Ctenophorus spinodomus sp. nov*., a new species of dragon lizard (Squamata: Agamidae) from *Triodia* Mallee habitat of southeast Australia. *Records of the Australian Museum* 71:199-215.

Schleip, W. D. 2008. Revision of the genus *Leiopython* Hubecht (sic) 1879 (Serpentes: Pythonidae) with the redescription of taxa recently described by Hoser (2000) and the description of new species. *Journal of Herpetology* 42(4):645-667.

Schleip, W. D. 2014. Two New Species of *Leiopython* Hubecht (sic), 1879 (Pythonidae: Serpentes): Non-Compliance with the *International Code of Zoological Nomenclature* Leads to Unavailable Names in Zoological Nomenclature. *Journal of Herpetology* 48:2:272-290.

Shea, G. M. 1987. Comment on the proposed suppression for nomenclatural purposes of three works by Richard W. Wells and C. Ross Wellington (Case 2531, see BZN 44, 116-121). *Bulletin of Zoological Nomenclature* 44(4):257-261.

Shea, G. M., Thomson, S. and Georges, A. 2020. The identity of *Chelodina oblonga* Gray 1841 (Testudines: Chelidae) reassessed. *Zootaxa* (PRINO) (Online) 4779(3):419-437.

Sidharthan, C., Roy, P. and Karanth, K.P. 2024. Molecular data reveals a new genus of blindsnakes within Asiatyphlopinae from India. *Journal of genetics* (PRINO) (Online) 103(3).

Silva, A. C. A., Santos, N., Ogilvie, H. A. and Moritz, C. 2017. Validation and description of two new north-western Australian Rainbow skinks with multispecies coalescent methods and morphology. *PeerJ* (PRINO) (Online):26 pp.

Skinner, A., Hutchinson, M. N. and Lee, M. S. Y. 2013. Phylogeny and Divergence Times of Australian *Sphenomorphus* Group Skinks (Scincidae, Squamata). *Molecular Phylogenetics and Evolution* 69(3):906-918.

Slavenko, A., Tamar, K., Tallowin, O. J. S., Kraus, F., Allison, A., Carranza, S. and Meiri, S.Revision of the montane New Guinean skink genus *Lobulia* (Squamata: Scincidae), with the description of four new genera and nine new species. *Zoological Journal of the Linnean Society* 195:220-278.

Smith, L. A. 1985. A revision of the *Liasis childreni* species-group (Serpentes: Boidae). *Records of the Western Australian Museum* 12(3):257-276.

Sprackland, R. G. 1991. Taxonomic review of the *Varanus prasinus* group with description of two new species. *Memoirs of the Queensland Museum* 30:561-576.

Thomas, T. M., Granatosky, M. C., Bourque, J. R., Krysto, K. L., Moler, P. E., Gamble, T., Suarez, E., Leone, E., Enge, K. M. and Roman, J. 2014. Taxonomic assessment of Alligator Snapping

Turtles (Chelydridae: *Macrochelys*), with the description of two new species from the southeastern United States. *Zootaxa* (PRINO) (Online) 3786(2):141-165.

Thomson, S. and Georges, A. 2009. *Myuchelys Gen. Nov*. - A New Genus For *Elseya Latisternum* And Related Forms Of Australian Freshwater Turtle (Testudines: Pleurodira: Chelidae). *Zootaxa* (PRINO) (Online) 2053:32-42.

Thomson, S., Kennett, R. and Georges, A. 2000. A new species of long-necked turtle (Chelidae: *Chelodina*) from the sandstone plateau of Arnhem Land, Northern Australia. *Chelonian Conserv. Biol*. 3:690-685.

Troncoso-Palacios, J., De Gamboa, M. R., Langstroth, R., Ortiz, J. C. and Labra, A. 2019. Without a body of evidence and peer review, taxonomic changes in Liolaemidae and Tropiduridae (Squamata) must be rejected. *ZooKeys* 813:39-54.

Uetz, P. 2022a. What's new? (March 2024). Post dated 14 March on "The Reptile Database" at: http://www.reptile-database.org/db-info/news.html

Uetz, P. 2022b. Post on 14 March on Facebook calling for erasure of all Russian authors scientific names and papers from the herpetological and scientific record with regards to reptiles. Posted at: https://www.facebook.com/ReptileDatabase/posts/4276023512500344

Wallach, V., Wüster, W. and Broadley, D. G. 2009. In praise of subgenera: taxonomic status of cobras of the genus *Naja* Laurenti (Serpentes: Elapidae). *Zootaxa* (PRINO) (Online) 2236: 26-36 (2009), online paper downloaded from: http://www.mapress.com/zootaxa/2009/f/zt02236p036.pdf on 27 September 2009, via

http://www.mapress.com/zootaxa/taxa/Reptilia.html.

Webster, G. N. and Bool, I. 2022. A new genus for four myobatrachid frogs from the South Western Australian Ecoregion. *Zootaxa* (PRINO) (Online) 5154(2):127-151.

Weijola, V. and Kraus, F. 2023. Two new species of monitor lizards (Squamata: *Varanus*) endemic to the Louisiade and Tanimbar Archipelagos with a key to the subgenus *Euprepiosaurus*. *Journal of Natural History*, 57:13-16, 947-975.

Wellington, R. W. 2015. Comment on the proposed confirmation of the availability of the generic name *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and for the nomenclatural validation of the journal in which it was published. *Bulletin of Zoological Nomenclature* 72(3):222-226.

Wellington, R. W. 2016. *Acanthophis cryptamydros* Maddock, Ellis, Doughty, Smith & Wüster, 2015 is an invalid junior synonym of *Acanthophis lancasteri* Wells & Wellington, 1985 (Squamata, Elapidae). *Bionomina* (Online) 10(1):74-90.

Wells, R. W. 2002. Taxonomic notes on the genus *Cyrtodactylus* (Reptilia: Gekkonidae) in Australia. *Australian Biodiversity Record* (3):1-8.

Wells, R. W. 2007. Some taxonomic and nomenclatural considerations on the class Reptilia in Australia. A new genus of the family Chelidae from eastern Australia. *Australian Biodiversity Record* (3):1-13.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Wells, R. W. and Wellington, C. W. 1988. Amphibians and Reptiles of the Upper Cox's River area, Sydney Basin, New South Wales, Australia, with comments on Greer and Cogger's recent Reclassifiation of the Genus *Anomalopus* (*sensu lato*). *The Australian Herpetologist* 505:15 pp. and cover.

Wells, R. W. and Wellington, C. R. 1999. A response to Ken Aplin's article on herpetology in Australia. *Monitor: Journal of the Victorian Herpetological Society* 10 (2/3):110-112.

Witten, G. J. 1994. Taxonomy of *Pogona* (Reptilia: Lacertilia: Agamidae). *Memoirs of the Queensland Museum* 37(1):329-343.

Wood, P. L., Guo, Z., Travers, S. L., Su, Y., Olsen, K. V., Bauer, A. M., Grismer, L. L., Siler, C. D., Moyle, R. G., Anderson, M. J. and Brown, R. M. 2019. Parachute geckos free fall into synonymy: *Gekko* phylogeny, and a new subgeneric classification, inferred from thousands of ultraconserved elements.

bioRxiv preprint first posted online Jul. 28, 2019; doi: http://dx.doi.org/10.1101/719020. No zoobank references published with article rendering new names within as unavailable according to the *International Code of Zoological Nomenclature* as amended as of 2019.

Wüster, W., Chirio, L., Trape, J., Ineich, I., Jackson, K., Greenbaum, E., Barron, C., Kusumba, C., Nagy, Z. T., Storey, R., Hall, C., Wüster, C. E., Barlow, A. and Broadley, D. G. 2018. Integration of nuclear and mitochondrial gene sequences and morphology reveals unexpected diversity in the forest cobra (*Naja melanoleuca*) species complex in Central and West Africa (Serpentes: Elapidae). *Zootaxa* (PRINO) (Online) 4455:1

Zaher, H., Murphy, R. W., Arredondo, J. C., Graboski, R., Machado-Filho, P. R., Mahlow, K., Montingelli, G. G., Quadros, A. B., Orlov, N. L., Wilkinson, M., Zhang, Y. and Grazziotin, F. G. 2019. Large-scale molecular phylogeny, morphology, divergence-time estimation, and the fossil record of advanced caenophidian snakes (Squamata: Serpentes). *PLOS One* (May) (PRINO) (Online) 14(5).

CONFLICT OF INTEREST / THIS AUTHOR AND THE WÜSTER GANG OF THIEVES

The author has no known conflicts of interest in terms of this paper and conclusions within, other than a desire that rules of nomenclature be followed.

However, it is appropriate to note that some of the names illegally overwritten by Wolfgang Wüster and his gang of thieves have been formally assigned by this author, so there is the issue of ownership of intellectual property and potential financial benefits this brings. Wolfgang Wüster via Kaiser *et al*. (2013) and elsewhere have explicitly told others to ignore copyright laws and therefore this group and those who follow them are legally liable for damages.

On 9 December 2018, Matthew Christopher Gatt, acting on instructions given by Wolfgang Wüster's group on Facebook stole a rare python from a reptile display being done by Raymond Hoser in the city of Melbourne. On 31 December 2018, Gatt was raided by heavily armed police and the snake stolen snake was recovered, albeit covered with parasitic snake mites, being a victim of animal abuse and cruelty.

Gatt pled guilty to the theft on 21 March 2019 at the Melbourne Magistrate's Court.

He was convicted and fined $8,000 after the magistrate agreed that the carefully planned theft had been done to maximize damage to Raymond Hoser by improperly blaming Raymond Hoser for having the snake stolen. In other words Gatt and the cohort had tried to blame shift the crime to Raymond Hoser, who was in fact the victim.

The relevant claim was that Raymond Hoser was not watching his reptiles and therefore negligent in allowing the theft to occur.

Gatt admitted to working as part of the relevant gang of thieves and should have been jailed as a result. In view of the light penalty of $8,000 he chose not to appeal the conviction.

Subsequent to his conviction for theft, Gatt twice attempted to get suppression orders on the media reporting the case, by way of "intervention orders" but failed. Both applications were refused by magistrates because he lied to the court in his formal applications as shown by cross referencing his claims to the relevant magistrates with the findings of the magistrate who

convicted Gatt of theft in the first instance.

The magistrates hearing the applications were able to view the details of the earlier case on their computer screen as Gatt made his false claims.

On Facebook, members of the Wolfgang Wüster gang falsely alleged that Gatt had been "set up" by Raymond Hoser in order to discredit their group. Such was not physically possible but is yet another example of the ridiculous lies and smear the Wüster gang engage in to further their nefarious and illegal acts and to give their despicable acts a thin veneer of credibility.

Gatt had in fact been identified by way of hidden cameras and was never in any way induced to steal the said snake. As already mentioned, the theft was well planned and due to the diligence of people working for Raymond Hoser protecting the display, it was identified within minutes of occurring, as was the culprit.

In 2017, another member of the Wolfgang Wüster gang of thieves, Michael Alexander, induced a major hardware store to illegally market himself to the public as "The Snake Man" for an illegal and unsafe reptile display.

"Snakeman" and "Snake Man" both are registered trademarks of Raymond Hoser throughout the English-speaking world, including in Australia, the USA and UK and have been for many years.

The trademarks cover pretty much all kinds of goods and services and certainly anything relevant to reptiles, wildlife, wildlife displays and online advertising and information.

The store was sued for trademark infringement, admitted to the infringement early in proceedings and had to pay over $30,000 in damages, pay for corrective advertising in newspapers and make legally binding undertakings not to illegally use Raymond Hoser trademarks in the future.

Michael Alexander got the Euroa Agricultural Show to advertise him as "the Snake Man" in 2022 as part of his non-stop actions to divert our business clients to his own unsafe poor quality law-breaking wildlife display enterprise.

Alexander was not sued for trademark infringement because he is twice divorced and pled bankruptcy in the earlier matter.

The Show Society was sued and defended the matter, because they were insured and did not have to pay for it.

But they did not get far.

They ended up settling before trial and paid $40K in damages.

Just so there is no confusion, Michael Alexander of Warburton East in Victoria, who is twice divorced and been accused of family violence by the ex-wives is not the Wüster gang member found to have raped and bashed ex wives over 1,000 times in civil (not criminal) proceedings.

That is another member of the Wüster gang cohort and his name has been suppressed by court order on request of this same Wüster gang member (the man found by the judge to have committed the offences in the civil case).

It has been widely reported online that I, Raymond Hoser am the "snake man" found guilty of this extreme family violence. This is not so.

I have no ex-wives to bash or rape!

The confusion has arisen for several reasons including because this Wüster gang member had been using my registered trademarks (snake man, snake avoidance, reptile parties, etc) for some years and still does. Hence the confusion mistakenly identifying me as this wife-basher has been fanned by the Wüster gang as part of their general attacks on all things "Hoser" to justify their acts of theft against myself in all areas, including making these claims or variations of them on a Wikipedia page created and managed on behalf of the Wüster gang for the purposes of traducing myself.

Hoser 2024 - Australasian Journal of Herpetology 72:47-63.

Illegal name coined by associates of the Wolfgang Wüster gang of thieves and improperly promoted.	Comments or reasons given by author for breaching *International Code of Zoological Nomenclature*.	Correct taxon name according to scientific ethics and *International Code of Zoological Nomenclature*.
* *Acanthophis cryptamydros* Maddock, Ellis, Doughty, Smith and Wüster, 2015	Falsely alleged Wells and Wellington, 1985 name not code compliant. See Wellington (2016).	*Acanthophis lancasteri* Wells and Wellington, 1985
Afronaja Wallach, Wüster and Broadley 2009.	Falsely alleged earlier Hoser paper not published according to Article 8 of Zoological Code.	*Spracklandus* Hoser, 2009.
Ahaetuliinae Figuero *et al.*, 2016.	No reason given. Due to time factor and authorship, oversight must have been deliberate.	Charlespiersonserpeniinae Hoser, 2013 (Alt: Ahaetuliinae Hoser, 2013)
* *Amalosia nebula* Hoskin and Couper, 2023	Paper behind paywall, but Hoskin is a card carrying Wuster gang member.	*Celertenues evanwhittoni* Hoser, 2017
* *Amalosia saxicola* Hoskin and Couper, 2023	Paper behind paywall, but Hoskin is a card carrying Wuster gang member.	*Celertenues helengrasswillae* Hoser, 2017
Amerotyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Altmantyphlops* Hoser, 2012
Amyda ornata jongli Praschag and Gemel, 2022	Cited Rhodin *et al.* (2021), claimed Hoser name "*nomen rejectum*"	*Amyda ornata magnapapulae* Hoser, 2021
* *Anstisia* Webster and Bool, 2022	Cited Kaiser *et al.* (2013).	*Wellingtondella* Hoser, 2020
* *Antaresia stimsoni* (Smith, 1985)	Name published after Wells and Wellington, 1985, (date priority) but improperly not renounced. (Actually a separate taxon anyway)	*Antaresia saxacola* Wells and Wellington, 1985. Note: *Nomen nudem* claim on Wikipedia is false.
* *Antaresia maculosa peninsularis* Esquerré, Donnellan, Pavón-Vázqueza, Fenkera and Scott Keogh. 2011	No citation of Hoser (2003). No reason given for renaming taxon. Authors have signed support of Kaiser *et al.* (2013) in part.	*Antaresia maculosa brentonoloughani* Hoser, 2003
Antillotyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Mosestyphlops* Hoser, 2012
Archipelagekko Wood *et al.* 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Extentusventersquamus* Hoser, 2018
Asiatyphylops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Argyrophis* Gray, 1845
Assinoa Dubois *et al.*, 2021	Overlooked Hoser, 2020.	*Wellingtondella* Hoser, 2020
* *Bartleia* Hutchinson *et al.* 1990	Deliberately ignored name authority to rename taxon (*nomen furtum*).	*Techmarscincus* Wells and Wellington, 1985
* *Bassiana* Hutchinson *et al.* 1990	Deliberately ignored name authority to rename taxon (*nomen furtum*).	*Acritoscincus* Wells and Wellington, 1985
Brachyseps Erens *et al.*, 2016	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Oxyscincus* Hoser, 2015
Broadleysaurus Bates *et al.*, 2013	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Funkisaurus* Hoser, 2013
Bungarus sagittatus Aksornneam, Rujiwaran, Yodthong, Sung and Aowphol , 2024 *Bungarus suzhenae* Chen *et al.* 2021	No reason given. Hoser (2018) not cited by any authors in any way.	*Bungarus sloppi* (Hoser, 2018) or *Aspidoclonion sloppi* Hoser, 2018
Candoiidae Pyron *et al.*, 2014	No reason given, but authors and stated reviewers have improperly attacked Hoser for years.	*Candoiidae* Hoser, 2013
* *Carlia isostriacantha* Afonso Silva *et al.*, 2017	No reason given. Did not cite Wells and Wellington, 1985.	*Carlia mysteria* Wells and Wellington, 1985
* *Cautula* Hutchinson *et al.* 1990	Deliberately ignored name authority to rename taxon (*nomen furtum*).	*Harrisoniascincus* Wells and Wellington, 1984
* *Chelodina burrungandjii* Thomson, Kennett and Georges, 2000	Alleged Wells and Wellington, 1985 not code compliant when it was.	*Chelodina billabong* (Wells and Wellington, 1985)
* *Chelodina canni* McCord and Thomson, 2002	Falsely claimed Wells and Wellington, 1985 *nomen nudem.*	*Chelodina rankini* Wells and Wellington, 1985
* *Chelydera* Shea, Thomson and Georges, 2020	No citation or reason given.	*Supremechelys* Hoser, 2014
Crocodylus halli Murray *et al.*, 2019	No citation or reason given.	*Crocodylus adelynhoserae* (Hoser, 2012)
* *Ctenophorus cartiwarru* Edwards and Hutchinson, 2023	No reason given, but have overwritten ICZN names for decades.	*Ctenophorus (Phthanodon) fordi scottyjamesi* Hoser, 2020
* *Ctenophorus ibiri* Edwards and Hutchinson, 2023	No reason given, but have overwritten ICZN names for decades.	*Ctenophorus (Phthanodon) fordi scottgranti* Hoser, 2020
* *Ctenophorus spinodomus* Sadlier, Colgan, Beatson and Cogger, 2019	Falsely claimed Wells and Wellington, 1985 name invalid.	*Ctenophorus hawkeswoodi* (Wells and Wellington, 1985)
* *Ctenophorus tjakalpa* Edwards and Hutchinson, 2023	No reason given, but have overwritten ICZN names for decades.	*Ctenophorus (Phthanodon) fordi danielmani* Hoser, 2020

* *Ctenophorus tuniluki* Edwards and Hutchinson, 2023	No reason given, but have overwritten ICZN names for decades.	*Ctenophorus (Phthanodon) fordi maryannmartinekae* Hoser, 2020
Cubatyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Dannytyphlops* Hoser, 2012
Cuora amboinensis aurantiae Blanck, Gaillard, Protiva, Wheatley, Shi, Liu, Ray & Anders, 2023	Paper behind paywall. Reason not known.	*Cuora boxboyi* Hoser, 2021
Cuora philippinensis Blanck, Gaillard, Protiva, Wheatley, Shi, Liu, Ray & Anders, 2023	Paper behind paywall. Reason not known.	*Cuora oxyslopp* Hoser, 2021
Cuora praschagi Blanck, Gaillard, Protiva, Wheatley, Shi, Liu, Ray & Anders, 2023	Paper behind paywall. Reason not known.	*Cuora adelynhoserae* Hoser, 2021
Cyclocoridae, Zaher *et al.* 2019 (via Weinell and Brown, 2018)	Authors cited Kaiser *et al.* (2015 version)	Oxyrhabdiumiidae Hoser, 2013. (by later author's family definitions)
* *Cyrtodactylus hoskini* Shea, Couper, Wilmer and Amey, 2011	Made invalid neotype designation against rules of ICZN Code.	*Cyrtodactylus abrae* Wells, 2002
Cyrtodactylus petani Riyanto, Grismer and Wood, 2015	Authors chose to ignore earlier paper.	*Cyrtodactylus klakahensis* Hartmann, Mecke, Kieckbusch, Mader and Kaiser, 2016
Dasypeltis arabica Bates and Broadley, 2018	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Dasypeltis saeizadi* Hoser, 2013
* *Diporiphora granulifera Melville et al.* 2019.	See for *Lophognathus horneri* Melville *et al.*, 2018.	*Diporiphora melvillae* Hoser, 2015.
* *Diporiphora gracilis Melville et al.* 2019.	See for *Lophognathus horneri* Melville *et al.*, 2018.	*Diporiphora garrodi* Hoser, 2015.
* *Egernia arnhemensis* Sadlier, 1990	Original name over-written in expectation ICZN would rule against Wells and Wellington (they didn't!).	*Hortonia obiri* Wells and Wellington, 1985 (genus in contention)
* *Emydocephalus orarius* Nankivell *et al.* 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Emydocephalus teesi* Hoser, 2016
* *Emydura macquarii dharra* Cann, 1998	Alleged Wells and Wellington, 1985 not code compliant when it was.	*Emydura cooki* (Wells and Wellington, 1985)
* *Emydura macquarii emmotti* Cann, McCord and Joseph-Ouni, 2003	Alleged Wells and Wellington, 1985 not code compliant when it was.	*Emydura macquarii windorah* (Wells and Wellington, 1985)
Eunectes akayima Rivas *et al.* 2024.	Creatively interpreted ICZN Code to strike out Latrielle's work and name which was not cited.	*Eunectes gigas* Latreille, 1802
Flexiseps Erens *et al.*, 2016	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Clarascincus* Hoser, 2015
* *Gehyra arnhemica* Oliver, *et al.* 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Phryia paulhorneri* Hoser, 2018
* *Gehyra capensis* Kealley *et al.*, 2018	No reason given. But published several weeks after Hoser, 2018.	*Dactyloperus bulliardi* Hoser, 2018.
* *Geocrinia sparsiflora* Parkin *et al.* 2023	No citation or reason given, Authors have signed Wuster *et al.* 2023, etc.	*Geocrinia otwaysensis* (Hoser, 2020)
Hapturosaurus Bucklitsch, Böhme and Koch, 2016	No reason given. Also co-published hate rant (Denzer *at al.* 2016).	*Shireenhosersaurea* Hoser, 2013
* *Helioporus australiacus flavopunctatus* Mahony, Penman, Bertozzi, Lemckert, Bilney, and Donnellan, 2021	No citation of Hoser (2019). No reason given for renaming taxon. Authors have signed support of Kaiser *et al.* (2013) in part.	*Philocryphus hoserae*, Hoser, 2019
* *Indotyphlops* Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Maxhoserus* Hoser, 2012
Japonigekko Wood *et al.* 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Sparsuscolotes* Hoser, 2018
Leiopython meridionalis Schleip, 2014	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Leiopython hoserae* Hoser, 2000
Leiopython montanus Schleip, 2014	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Leiopython albertisi bennetti* Hoser, 2000
Lemuriatyphlops Pyron and Wallach, 2014	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Elliotttyphlopea* Hoser, 2012
Lepidodactylus aignanus Kraus, 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Shireenhosergecko jarradbinghami* Hoser, 2018
Lepidodactylus kwasnickae Kraus, 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Adelynhosergecko brettbarnetti* Hoser, 2018
Lepidodactylus mitchelli Kraus, 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Adelynhosergecko stevebennetti* Hoser, 2018
Lepidodactylus pollostos Karkkainen, Richards, Kraus, Tjaturadi, Krey and Oliver 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Adelynhosergecko sloppi* Hoser, 2018

Lepidodactylus sacrolineatus Kraus and Oliver, 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Bobbottomcolotes bobbottomi* Hoser, 2018
Lepidodactylus zweifeli Kraus, 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Bobbottomcolotes potens* Hoser, 2018
* *Litoria balatus* Rowley, Mahony, Hines, Myers and Price, 2021	No reason given, or citation of earlier work. (PRINO / *Zootaxa*)	*Colleeneremia dentata toowoombaensis* Hoser, 2020
Litoria ridibunda Donnellan, *et al.* 2023	No reason given in paper. Description effectively lifted from Hoser, 2020.	*Kumanjayiwalkerus kumanjayi* Hoser, 2020
* *Lophognathus horneri* Melville *et al.*, 2018	No reason given in paper. Description lifted from Hoser, 2015. Editor cited Kaiser *et al.* veto.	*Lophognathus wellingtoni* Hoser, 2015
Macrochelys apalachicolae Thomas *et al.*, 2014	Falsely claimed no holotype ever existed. Claim rebutted by co-author.	*Macrochelys muscati* Hoser, 2013.
Macrochelys suwanniensis Thomas *et al.*, 2014	Falsely claimed no holotype ever existed. Claim rebutted by co-author.	*Macrochelys maxhoseri* Hoser, 2013.
Madatyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Ronhoserus* Hoser, 2012
Malayodracon Denzer, Manthey, Mahlow and Böhme, 2015	No reason given. Later published hate rant (Denzer *at al.* 2016).	*Daraninagama* Hoser, 2014
Malayopython Reynolds *et al.*, 2013a, 2013b, 2014	Invoked Kaiser veto; also falsely claimed *Broghammerus* a *nomen nudum*	*Broghammerus* Hoser, 2004
Malayotyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Katrinahosertyphlops* Hoser, 2012
Matobosaurus Bates *et al.*, 2013	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Swilesaurus* Hoser, 2013
Metlapilcoatlus Campbell, Frost and Castoe, 2019	No reason given. No citation of Hoser, 2012.	*Adelynhoserserpenae* Hoser, 2012
Microauris Pal *et al.* 2018	No reason or citation of Hoser, 2013.	*Tamilnaducalotes* Hoser, 2014
Micrelapidae Das *et al.* 2023	No reason or citation of Hoser, 2013.	*Micrelapiidae* Hoser. 2013
* *Mixophyinae* Dubois *et al.*, 2021	Overlooked Hoser, 2020	*Mixophyinae* Hoser, 2020
* *Mixophyes australis* Mahony, Bertozzi, Guzinski, Hines, and Donnellan, 2023	No reason given. No citation of Hoser, 2020.	*Mixophyes hoserae* Hoser, 2020
Monilesaurus Pal *et al.* 2018	No reason given. No citation of Hoser, 2014.	*Skrijelus* Hoser, 2014
Montivipera xanthina occidentalis Cattaneo, 2017	No reason given. No citation of Hoser, 2016.	*Montivipera yeomansi europa* Hoser, 2016 (or simply *M. yeomansi* Hoser, 2016)
Montivipera xanthina varoli Afsari, Yakin, Cicek and Ayaz 2019	No reason given. No citation of Hoser, 2016.	*Montivipera snakebustersorum* Hoser, 2016.
* *Myuchelys* Thomson and Georges, 2009	Falsely claimed Wells 2007 breached article 8 of Zoological Code.	*Wollumbinia* Wells, 2007
Mopanveldophis Figuero *et al.*, 2016.	No reason given. Due to time factor and authorship, oversight must have been deliberate.	*Chrismaxwellus* Hoser, 2013
* *Narawan* Esquerré *et al.*, 2020	No reason given in online paper.	*Nictophylopython* Wells and Wellington, 1985
Naja (*Boulengerina*) *guineensis* Wüster *et al.* 2018	Wolfgang Wüster said on Facebook he invoked Kaiser "veto" to coin new name.	*Boulengerina jackyhoserae* Hoser, 2013
* *Nephrurus eromanga* Oliver, Donnellan and Gunn, 2022	Cited Kaiser *et al.* (2013) and Wuster *et al.* (2022)	*Nephrurus saxacola* Hoser, 2016
* *Niveoscincus* Hutchinson *et al.* 1990	Deliberately ignored name authority to rename taxon (*nomen furtum*).	*Litotescincus* Wells and Wellington, 1985
* *Oedura elegans* Hoskin, 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Marlenegecko shireenhoserae* Hoser, 2017.
* *Oedura nesos* Oliver *et al.* 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Oedura bulliardi* Hoser, 2017
* *Oedura luritja* Oliver and McDonald, 2016	Falsely alleged Wells and Wellington, 1985 name not code compliant.	*Oedura greeri* Wells and Wellington, 1985
Ophiomorus kardesi Kornilios *et al.*, 2018	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Ophiomorus macconchiei* Hoser, 2015
Ornithuroscincus Slavenko *et al.* 2022	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Lateratenebriscus* Hoser, 2019
Paracriniinoa Dubois *et al.*, 2021	Overlooked Hoser, 2020	*Paracriniana* Hoser, 2020
Paralaudakia Baig *et al.*, 2012	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Adelynkimberleyea* Hoser, 2012
Paraxenodermus Deepak, Lalronunga, Lalhmingliani, Das,	No reason given for ignoring Hoser, 2016. Paper was allegedly reviewed	*Parastoliczkia* Hoser, 2016

Narayanan, Das and Gower, 2021	by Larry Lee Grismer, who was aware of Hoser, 2016.	
Pareas carinatus tenasserimicus Poyarkov, Nguyen, Vogel, Pawangkhanant, Yushchenko and Suwannapoom, 2022	Cited Kaiser et al. (2013) Wood *et al.*, 2020 and Wüster *et al.*, 2021 but not Hoser (2016)	*Pareas carinatus malayaensis* Hoser, 2016
* *Petaurus australis brevirostrum* Cooper, Travouillon and Helgen, 2023	Cited Kaiser *et al.* (2013) and Wüster *et al.*, 2021 but not Hoser (2020).	*Petaurus australis adelynhoserae* Hoser, 2020
* *Pogona brevis* Witten, 1994	Witten falsely claimed the Wells and Wellington, 1985 holotype was "missing" when it never was.	*Pogona henrylawsoni* Wells and Wellington, 1985
Psammodynastidae Das *et al.* 2024	Authors included in Wüster *et al.*, 2021	*Psammodynastiidae* Hoser, 2013
Pseudoindotyphlops Sidharthan, Roy and Karanth, 2024	Paper behind a paywall – no reason known.	*Freudtyphlops Hoser, 2012.*
Ptychozoon cicakterbang Grismer *et al.* 2019.	Authors over-written Hoser names previously. See for *Mopanveldophis.*	*Cliveevattcolotes* (or alternatively *Ptychozoon*) *steveteesi* Hoser, 2018
Rhacogekko Wood *et al.* 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Alexteescolotes* Hoser, 2018
* *Sepsiscus* Hutchinson, Couper, Amey and Wilmer, 2021	No reason given. Probably overlooked earlier paper.	*Suppressascincus* Wells and Wellington, 1988
* *Silvascincus* Skinner *et al.*, 2013.	Co-author Mark Hutchinson has long term form for renaming Wells and Wellington taxa (e.g. *Niveoscincus*).	*Karma* Wells, 2009.
Solomonsaurus Bucklitsch, Böhme and Koch, 2016	No reason given. Also co-published hate rant (Denzer *at al.* 2016).	*Oxysaurus* Hoser, 2013
Spicospininia Dubois *et al.*, 2021	Overlooked Hoser, 2020	*Spicospininia* Hoser, 2020
Stegonotus melanolabiatus Ruane *et al.* 2017	No reason given. Ostensibly overlooked by 6 authors and alleged peer reviewers. Diagnosis effectively lifted from Hoser 2012.	*Stegonotus adelynhoserae* Hoser, 2012
Sundagekko Wood *et al.* 2019	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Scelotretus* Fitzinger, 1843
Sundatyphlops Hedges *et al.*, 2014	Author was a signatory to Kaiser *et al.* documents of 2012/2013.	*Sivadictus* Wells and Wellington, 1985, (Note: *Anilios* Gray, 1845, is a different genus: Type sp. *australis*)
* *Suta gaikhorstorum* Maryan *et al.* 2020	Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.	*Feresuta hamersleyensis* Hoser, 2018
Tribolonotus parkeri Rittmeyer and Austin, 2017	No reason given. Remote possibility it was a genuine oversight.	*Pediporus* (*Feretribolonotus*) *greeri* Hoser, 2016
* *Tropicagama* Melville *et al.* 2018	No reason given in paper. Description lifted from Hoser, 2015. Editor cited Kaiser *et al.* veto.	*Melvillesaurea* Hoser, 2015
* *Tumbunascincus* Skinner *et al.*, 2013	Co-author Mark Hutchinson has long term form for renaming Wells and Wellington taxa (e.g. *Niveoscincus*).	*Magmellia* Wells, 2009.
* *Tympanocryptis argillosa* Melville *et al.* 2019.	No reason given. See for *Lophognathus horneri.*	*Tympanocryptis optus* Hoser, 2019.
* *Tympanocryptis osbornei* Melville *et al.* 2019.	Falsely claimed *T. lineata* holotype was *T. telecom* Wells and Wellington, 1985 to assert species unnamed.	*Tympanocryptis lineata* Peters, 1863.
* *Tympanocryptis petersi* Melville *et al.* 2019	No reason given. See for *Lophognathus horneri.*	*Tympanocryptis snakebustersorum* Hoser, 2019.
* *Tympanocryptis rustica* Melville *et al.* 2019	No reason given. See for *Lophognathus horneri.*	*Tympanocryptis lachlanheffermani* Hoser, 2019.
* *Tympanocryptis tolleyi* Melville *et al.* 2019	No reason given. See for *Lophognathus horneri.*	*Tympanocryptis vodafone* Hoser, 2019.
* *Varanus citrinus* Pavón-Vázquez, Esquerré, Fitch, Maryan, Doughty, Donnellan & Scott Keogh, 2022	No reason given. Esquerré, Maryan, Doughty, Donnellan and Scott Keogh cited Kaiser *et al.* (2013) previously.	*Worrellisaurus scotteipperi* Hoser, 2018 or *Varanus scotteipperi* (Hoser, 2018)
Varanus (Euprepiosaurus) louisiadensis Weijola and Kraus, 2023	No reason given. No citation of Hoser. Previously cited Hoser to overwrite names.	*Euprepiosaurus lenhoseri* Hoser, 2020
Varanus (Euprepiosaurus) tanimbar Weijola and Kraus, 2023	No reason given. No citation of Hoser. Previously cited Hoser to overwrite names.	*Euprepiosaurus scottgranti* Hoser, 2020
* *Varanus teriae* Sprackland, 1991	Allegedly overlooked name authority and then refused to renounce synonym.	*Varanus keithhornei* (Wells and Wellington, 1985). (Note: genus assignment is in flux).
Vipera monticola saintgironsi Martinez-Frying, Freitas, Veil-Anton,	Cited Kaiser *et al.* (2013)	*Vipera hoserae* Hoser, 2015

Lucchini, Fahd, Larbes, Folders, Santos and Brito, 2021		
Vipera latastei arundana Martinez-Frying, Freitas, Veil-Anton, Lucchini, Fahd, Larbes, Folders, Santos and Brito, 2021	Cited Kaiser *et al*. (2013)	*Vipera wellingtoni* Hoser, 2015
Xerotyphlops Hedges *et al*., 2014	Author was a signatory to Kaiser *et al*. documents of 2012/2013.	*Lenhosertyphlops* Hoser, 2012

Underlined names are OBJECTIVE synonyms (as in exactly the same type specimen or type species).
Items in blue (others) are so-called subjective synonyms, but based on second authors taxonomic diagnosis are one and the same taxon as earlier items on right, meaning oldest available names must be used. Items in blue typically include specimens from same location and collection series and/or extremely closely related species if genus, with later authors typically lifting important diagnostic material from earlier authors papers (mainly uncited or alternatively derided, but bootlegged).
About half the junior synonyms have NOT been recorded in Zoobank (ICZN Repository) as of end May 2022 and many of the others are incompletely listed. All senior Hoser names (most on this list) have been fully recorded in Zoobank at time of original publication since inception of Zoobank (ICZN), and also recorded on publication and archived at Zoological Record, National Library of Australia, Natural History Museum, UK, etc, and fully comply with rules of the in force *International Code of Zoological Nomenclature.*

*** means an Australian taxon**

Last updated with:
About 119 renamed taxa (above) as of 8 June 2024
The list is almost certainly incomplete.

Tympanocryptis vodafone Hoser, 2019 depicted below was unlawfully renamed as *Tympanocryptis tolleyi* Melville *et al.* 2019. The correct name to use is therefore *Tympanocryptis vodafone* Hoser, 2019.

Hoser 2024 - Australasian Journal of Herpetology 72:47-63.

Australasian Journal of Herpetology

Issue 72

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