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A new species of Water Dragon from North Queensland, Australia (Reptilia: Squamata: Sauria: Agamidae: *Intellagama* Wells and Wellington, 1985).

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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**
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ABSTRACT

A new species of Australian Water Dragon, genus *Intellagama*, Wells and Wellington, 1985 is formally identified for the first time.

It is named according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al*. 1999) as amended *Intellagama wellsandwellingtonorum sp. nov*. in recognition of the monumental contributions to Australian herpetology by two men, Richard Wells and Cliff Ross Wellington.

This contribution includes via some significant taxonomy publications in the 1980's and other important herpetological works since then.

Their contributions included the first formal diagnosis of the genus *Intellagama*.

Keywords: Taxonomy; reptilia; squamata; nomenclature; Australia; Queensland; *Intellagama*; *Physignathus*; *lesueurii*; *howitti*; new species; *wellsandwellingtonorum*.

INTRODUCTION

The iconic Australian Agamid, the "Eastern Water Dragon" has been treated by most herpetologists as consisting a single species, *Intellagama leueurii* Gray, 1831 (e.g. Amey *et al*. 2012). As recognized to date, the taxon has been recorded as naturally occurring from lower Cape York in north Queensland along coastal and near coastal regions into eastern Victoria. Feral populations have also become established in the suburbs of Melbourne and Adelaide, where they are expanding in size (land area found) and number (population of individuals) exponentially.

This is particularly the case near the Yarra River in Hawthorn and Kew in inner Melbourne, where many hundreds if not thousands occur along the river and nearby homes and gardens, with populations noticeably increasing year on year at many sites.

The morphologically distinct form, naturally occurring from the southern third of New South Wales and nearby Victoria, originally described as *Physignathus lesueurii howittii* McCoy, 1884 has been regarded by most publishing authors since as synonymous with *Intellagama leueurii* (Gray, 1831).

Most publishing authors have treated the species *Intellagama leueurii* as being monotypic for the genus.

The genus *Intellagama* was erected by Wells and Wellington in 1985 to accommodate Australian species formerly included in the genus *Physignathus* Cuvier, 1829, since restricted to the Asian bioregion.

Contrary to this prevailing view in terms of "*Physignathus lesueurii howittii* McCoy, 1884" has been Wells and Wellington (1985) and Hoser (1989) who published independently from one another and steadfastly maintained the qualified opinion that the two forms were very different species. Hoser (1989) even published comparative photos of adult specimens of both forms on the same page to further demonstrate the obvious morphological differences between each species, noting allopatry, which should have settled any doubts as to the differences, once and for all.

It should also be mentioned that among relevant publishing authors, Wells, Wellington and Hoser were unique in that they had actually inspected specimens of both putative taxa, as opposed to merely relying on printed descriptions in lieu of hands-on inspection of living animals.

In the era of the internet and online "experts" proliferating, it is alarming that non-experts can easily publish taxonomic declarations and questionable nomenclature without a shred of evidence on sites like Peter Uetz's, search engine optimized website called "The Reptile Database" where evidence-free taxonomy and false and defamatory claims against competent herpetologists are common.

Significantly in 1985, Wells and Wellington at page 17 wrote of *Intellagama leueurii* (Gray, 1831), "A number of undescribed species await investigation".

Because of evil and noisy people masquerading as herpetologists, literally shouting down anyone who refers to or

cites the relevant Wells and Wellington (1985) paper and other works by these authors, including going so far as censoring scientific journals that do so, the Wells and Wellington works have been largely ignored by herpetologists in Australia.

In fact most practicing herpetologists in Australia, while offering opinions on the relevant Wells and Wellington paper, have not in fact even read it!

This ridiculous state of affairs is due to the original cohort of money grabbing ego-freaks seeking to rename taxa named by these authors and seek self-gratification for having "discovered" the same taxa along with their ability to convince other more naïve people that the Wells and Wellington works are "non-science" and should therefore be ignored.
This is manifested in the numerous publications of Wolfgang Wüster and his gang of thieves, known as the Wüster gang or Kaiser *et al.* as cited by Hoser (2007, 2009, 2012a, 2012b, 2013, 2015a-f, 2019a-b) and sources cited therein.

See also the very negative comments about these people (e.g. Kaiser *et al.*) by Dubois *et al.* (2019).

Over five decades of intensive fieldwork throughout the known range of the genus *Intellagama*, including inspection of thousands of specimens, I have been acutely aware of there being significant regional variation within the putative species *Intellagama leueurii* (Gray, 1831), most notably being that of the until now unnamed North Queensland specimens.

These lizards (both sexes as adults) are morphologically divergent from specimens further south (south of Rockhampton in Queensland), and are also geographically dijunct, based on museum collection records.
This disjunction is not as a result of non-collection in the relevant region, as it is a heavily collected part of Queensland with numerous other reptiles lodged in State museums from the relevant area.

On the basis of significant morphological divergence, distributional disjunction, not created by modern human settlement and the fact that the north Queensland specimens are clearly evolving as a separate ecological unit, I have no hesitation whatsoever in formally describing them as a new species in accordance with the provisions of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended online by the ICZN since.
I note that Cogger *et al.* (1983) list several synonyms for the species they describe as *Physignathus lesueurii* (Gray, 1831), however all are referrable to specimens from New South Wales or Brisbane, in south-east Queensland, except for the single specimen referred to as the holotype for *Physignathus lesueurii howitti* McCoy, 1884. That taxon has a type locality in eastern Victoria.

MATERIALS, METHODS AND RESULTS

These are inferred in both the abstract and introduction and self evident in the description that follows.

There is no conflict of interest in terms of this paper or the conclusions arrived at herein.

Several people including anonymous peer reviewers who revised the manuscript prior to publication are also thanked as are relevant museum curators in New South Wales, Queensland and Victoria.

SPECIES *INTELLAGAMA WELLSANDWELLINGTONORUM SP. NOV.*

LSID urn:lsid:zoobank.org:act:28EE37D7-367D-4F04-9136-6D4BAF1E63EC

Holotype: A preserved specimen in the Queensland Museum, Brisbane, Australia, Amphibians and Reptiles Collection, Specimen number J30855, collected from Mulgrave River, via Gordonvale, north Queensland, Australia, Latitude: -17.20 S., Longitude: 145.75 E.

Paratype: A preserved specimen in the Museum and Art Gallery of the Northern Territory, Reptile Collection, specimen number R00935, collected from Mareeba, Atherton Tablelands, Queensland, Australia, Latitude -16.99 S., Longitude 145.43 E.

Diagnosis: Until now *Intellagama wellsandwellingtonorum sp. nov.* has been treated as the north Queensland population of *I. lesueurii* (Gray, 1831).
The diagnosis for all species in the genus (as a genus diagnosis) is given in Wells and Wellington (1985) at page 17.
A diagnosis separating *I. lesueurii* and *I. howitti* is on page 63 of Hoser (1989) and assisted by the comparative photos of each species.

Adult *I. howitti* have significant amounts of grey-blue to grey-green pigment on the sides of the head and flanks. This is especially the case in large adult males as seen in the images on page 63 of Hoser (189) (top two images) or Swan, Shea and Sadlier (2004) at page 76 (top).

This is not the case in either *I. lesueurii* or *I. wellsandwellingtonorum sp. nov.*.

I. howitti lacks a stripe running from the eye to ear as is seen in both *I. lesueurii* and *I. wellsandwellingtonorum sp. nov.*.
Adult males of these species have distinctive red on their belly, not seen in *I. howitti,* as seen in Swan, Shea and Sadlier (2004) at page 77 (top).
Adult male *I. wellsandwellingtonorum sp. nov.* while having brilliant red on their belly like seen in *I. lesueurii*, has a noticeably less intense colouration which also tends not to extend onto the flanks near the rear of the front limbs, as is commonly seen in *I. lesueurii.*

Adult *I. wellsandwellingtonorum sp. nov.* of both sexes are readily separated from *I. lesueurii* by colouration. In adult *I. wellsandwellingtonorum sp. nov.* of both sexes the following colouration occurs. Commencing behind the ear, is a series of 5-7 deep yellow, to yellowish-orange squarish to diamond-shped blotches along the mid flanks, each of which is fairly distinct and well bounded and reducing in size progressively towards the back legs. These distinct blotches are absent in both *I. lesueurii* (and *I. howitti*).

Between these blotches are areas of peppered black and grey, being the lower remnants of semi-distinctive cross bands across the vertebral line.

The black stripe running from the eye to ear and beyond in *I. lesueurii* is thick and unbroken along the entire length from the eye. In *I. wellsandwellingtonorum sp. nov.* this stripe is either thin or broken at the anterior (eye) end, also being bounded by distinctive dark yellow near the eye.

While females have smaller and less distinctive spines on the head and vertebral line than in males of *I. wellsandwellingtonorum sp. nov.*, both sexes have relatively smaller spines than seen in either *I. lesueurii* and *I. howitti* of like gender and age. The exact degree of spine length difference between the species has not been quantified and measured.
Colour photos of *I. wellsandwellingtonorum sp. nov.* in real life can be found on the internet at:

www.flickr.com

on numerous photstreams including at:

https://www.flickr.com/photos/aussiegypsy/15659928254/in/album-72157647965020564/
and

https://www.flickr.com/photos/kristenmartyn/48811355163/in/album-72157711106451122/

and

https://www.flickr.com/photos/gocatters/26393825731/in/album-72157667062499972/

and also at:
https://www.jungledragon.com/image/8916/colorful_lizard.html
(all most recently downloaded on 20 Dec 2019).
Photos of *I. lesueurii* and *I. howitti* are common on the internet and also seen in Hoser (1989).

All three species can be readily separated and identified from

photos or inspection of live animals in the absence of given locality data. Blind tests to this effect scored a 100% success rate (10 of each species in a test of 30 specimens).

Distribution: *I. wellsandwellingtonorum sp. nov.* is known only from north Queensland in the vicinity of Cairns, generally north of Townsville, Queensland and including the general wet-tropics region (Cooktown in the north to just north of Townsville in the south). Specimens of the species *I. lesueurii* occur from Rockhampton and south to New South Wales.

The species *I. howitti*, is found in the southern third of New South Wales (coastal and near zone only), from Kiama (including hills west of there) and south to north-east Victoria. Preferred habitats for the genus are discussed in Hoser (1989) (described in that text as "*Physignathus*").

Etymology: Named in honour of Richard Wells and Cliff Ross Wellington in recognition of significant publications on Australian herpetology, including Wells and Wellington (1985) and numerous other important works in the decades since that time.

Common Name: Northern Water Dragon is an appropriate common name for this species.

It separates this taxon from the already well-known "Eastern Water Dragon" and "Gippsland Water Dragon", both also identified with reference to their general locations of provinence.

Conservation: In spite of the fact that *I. wellsandwellingtonorum sp. nov.* occurs in a reasonably well-populated part of Australia (Queensland's wet tropics region), the number of specimens in museums and recorded sightings on government databases is fairly low, being in the dozens of specimens. While this may in part be due to difficulty in capturing fast-moving dragon lizards, this taxon is both range and habitat restricted. It appears to be most common in rocky riverine habitats in wetter forested regions, the absence of such areas forming a significant biogeographic barrier to connection with *Intellagama* populations further south (S. E. Qld). As an egg-layer, breeding specimens are vulnerable to feral species such as foxes, able to locate and eat freshly laid eggs, which may be causing a potentially terminal decline in the species.
Any such decline may be hard to detect in the absence of targeted research on this taxon due to where these lizards are most common (National Parks).

Delays in recognition of this species could jeopardise the long-term survival of this taxon as outlined by Hoser (2019a, 2019b) and sources cited therein and therefore attempts by taxonomic vandals like the Wüster gang (Kaiser *et al.*) to unlawfully suppress the recognition of this taxon on the basis they have a personal dislike for the person who formally named it should be resisted (Dubois *et al.* 2019).

REFERENCES CITED

Amey, A. P., Couper, P. J. and Shea, G. M. 2012. *Intellagama lesueurii* (Gray, 1831), the correct binomial combination for the Australian Eastern Water Dragon (Sauria, Agamidae). *Zootaxa* (Online) 3390:65-67.

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.

Dubois, A., Bauer, A. M., Ceriaco, L. M. P., Dusoulier, 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* (online), 17:1-111.

Gray, J. E. 1831. A synopsis of the species of Class Reptilia. In: Griffith, E and Pidgeon, E.: *The animal kingdom arranged in conformity with its organisation by the Baron Cuvier with additional descriptions of all the species hither named, and of many before noticed* [V Whittaker, Treacher and Co., London: 481+110 pp. [1830]

Hoser, R. T. 1989. *Australian Reptiles and Frogs*. Pierson and Co., Sydney, NSW, Australia:238 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. 2013. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journ. of Herp.* 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 Journ. 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.

McCoy, F. 1884. The Gippsland water lizard. *Prod. Zool. Vict.* 9:7-10.

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.

Swan, G., Shea, G. and Sadlier, R. 2004. *A field guide to reptiles of New South Wales*. Reed New Holand, Chatswood, NSW, Australia:302 pp.

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

CONFLICTS OF INTEREST - NONE.