

A new species within the *Odatria glauerti* (Squamata: Varanidae) species complex.

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ABSTRACT

Hoser (2013) divided the taxon known at the time as *Odatria glauerti* (Mertens, 1957) into two, naming the distinctive Arnhem-land population as a new species, namely *O. hoserae* Hoser, 2013.

The same paper referred to eastern and western Kimberley populations as being morphologically distinct, but treated both as being of the same taxon.

This paper formally divides *O. glauerti* into two, formally naming the population found in the East Kimberley and nearby parts of the Northern Territory (extending to near the mouth of the Victoria River, on both sides) as a new species, namely *O. davidhancocki* sp. nov.. The new taxon is morphologically divergent to *O. glauerti*, with disjunct distribution and has significant molecular divergence as published by Fitch *et al.* (2006).

On that basis the decision to recognize the taxon as a full species as opposed to subspecies was made obvious.

Keywords: Taxonomy; nomenclature; Varanidae; *Odatria*; *Varanus*; *glauerti*; *hoserae*; Northern Territory, Western Australia; Australia; new species; *davidhancocki*.

INTRODUCTION

As part of a global audit of the Varanidae, Hoser (2013) reclassified the mainly western Australian taxon known as *Varanus glauerti* Mertens, 1957 by transferring it into the genus *Odatria* Gray, 1838. The same act had been performed by Wells and Wellington (1984 and 1985), but unfortunately their eminently sensible (and in hindsight obvious) decision had been effectively boycotted by publishing herpetologists in the intervening two decades. In other words the taxon remained known to most as *Varanus glauerti*.

This boycott had absolutely nothing to do with science, but instead was an unscientific manifestation of ego politics among other so-called herpetologists and their intent to rob Wells and Wellington of any credit for their contributions to herpetology as outlined by Hoser (2007) or more recently Hoser (2015a-f).

As I have always put science before politics, it was for that reason that in 2013 I accepted the Wells and Wellington placement of *Varanus glauerti* Mertens, 1957 within the genus *Odatria* Gray, 1838, making it known as *Odatria glauerti* (Mertens, 1957) (Hoser 2013).

For some years it was known that a morphologically and biologically different population from Arnhem-land referred to *O. glauerti* existed and so it was inevitable that in Hoser (2013) it was afforded formal recognition as a species.

O. hoserae Hoser, 2013 was named in honour of Katrina Joan Hoser in recognition of her monumental contributions to Australian varanid conservation as outlined in Hoser (2013).

The same description in the same paper referred to eastern and western Kimberley populations as being morphologically distinct, but treated both as being of the same species-level taxon.

Further inspection of specimens from across the Kimberley shows that the East and West Kimberley populations are sufficiently divergent to warrant taxonomic recognition and in fact at the species-level.

Therefore the purpose of this paper is to formally divide *O. glauerti* as recognized to date into two, by formally naming the population found in the East Kimberley and nearby parts of the Northern Territory (extending to near the mouth of the Victoria River, on both sides) as a new species, namely *O. davidhancocki* sp. nov..

The new taxon is morphologically divergent to *O. glauerti*, of allopatric and disjunct range and also shows significant divergence by way of molecular data as published by Fitch *et al.* (2006).

On this basis the decision to recognize the taxon as a full species as opposed to subspecies was made obvious.

While there is a significant body of material published in relation to *O.*

glauerti as recognized prior to the publication of Hoser (2013), most of this is not relevant here, in as much as the sole purpose of this paper is the formally identify and name a new species in accordance with the rules set out in the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

However I do make mention of relevant materials and methods leading to the obvious results and conclusions, the finality being the published description herein.

Hoser (2013) flagged that there were two distinct populations being referred to as *O. glauerti*. The molecular data of Fitch *et al.* (2006) *et al.* confirmed that the two populations had species-level divergence. As the holotype for *O. glauerti* (Mertens, 1957) is from Wotjulum, West Kimberley, specimen number WAM R12337, at the Western Australian Museum in Perth, Western Australia, it is self evident that it is the population from the East Kimberley that needs to be formally named.

The reason for the delay in formally naming the East Kimberley population in 2013 was the lack of material from nearby parts of the north-west Northern Territory, to ascertain the species status of these animals or whether or not they had a relationship to *O. hoserae*. Specimens from both sides of the mouth of the Victoria River in the Northern Territory have since been inspected and morphologically in all major respects seem to conform with the specimens from the Lake Argyle and Bungle Bungles areas, which combined forms the whole known range of this newly named taxon.

In total I inspected about 100 specimens assigned to *O. glauerti*, including specimens of *O. hoserae* from across the range of all three putative taxa. These have included specimens in government-owned State Museums, for which acknowledgement is not normally explicitly given here or in my other taxonomic papers as it is should be assumed by any vaguely sensible reader. I have also seen numerous relevant specimens in life and by way of quality photos of specimens with known locality data.

While I have formally recognized the taxon from the East Kimberley, I should note that I am not entirely satisfied that all other Kimberley specimens are in fact of a single species, or of one single subspecies-level taxon.

This view is based on different morphotypes from the north and north-west Kimberley, versus those from the south-west, including the type locality for *O. glauerti* and of course including the type specimen for *O. glauerti* itself, which I have viewed.

I also note that it appears that until now, besides myself, no other

herpetologist appears to have countenanced that there may be more than one species within *O. glauerti* as generally recognized, but from where I stand, it appears patently obvious as I am sure it will to others in future years.

I should also note that there has not been any significant taxonomic review of the taxon generally known as *O. glauerti* post-dating the original scientific description by Mertens save for that of Storr (1980) and with the exception of a single poorly preserved specimen from near Kununurra, WA, it is self-evident from his paper that he never actually inspected any specimens of the East Kimberley form.

This is indicated by the fact that his paper did not even discuss regional variation in the putative taxon, whereas such discussion is given for other taxa inspected by Storr.

In terms of the scientific name assigned to this new species level taxon, it should not be amended in any way unless absolutely mandatory under the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

ODATRIA DAVIDHANCOCKI SP. NOV.

Holotype: A preserved specimen in the Western Australian Museum, Perth Western Australia, Australia, specimen number: WAM R103399 collected from the Bungle Bungle National Park in Western Australia, Australia, Latitude -17.19 S., Longitude 128.25 E.

The Western Australian Museum, Perth, Western Australia, Australia is a government-owned facility that allows access to its holdings.

Paratypes: 1-2. Two preserved specimens in the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers: WAM R103400 and WAM R103401 collected from the Bungle Bungle National Park in Western Australia, Australia, Latitude -17.15 S., Longitude 128.18 E.

3. A specimen in the Western Australian Museum, Perth, Western Australia, Australia, specimen number: WAM R103371 from the Bungle Bungle National Park in Western Australia, Australia, Latitude -17.27 S., Longitude 128.25 E.

Diagnosis: *Odatria davidhancocki sp. nov.* would until now be keyed out as *O. glauerti* (Mertens, 1957), better known as *Varanus glauerti* Mertens, 1957 in most contemporary texts such as Cogger (2014). *Odatria davidhancocki sp. nov.* is readily separated from *O. glauerti* on the basis of colouration as stated in Hoser (2013). *O. davidhancocki sp. nov.* is also readily separated from *O. glauerti* by the following: On the second half of the length of original unbroken tails there are 20-26 white cross bands, versus 14-19 in *O. glauerti*, while in *O. hoseri* Hoser, 2013, there are just 10-12 white cross bands, this being perhaps the most easy way to distinguish the three species from one another at a glance and in the absence of locality data. *O. davidhancocki sp. nov.* is characterised by a dorsal body pattern that is more-or-less reddish-orange with yellow bands, versus a grey to tan colour, generally being obviously grey on the forebody and head in *O. glauerti*, versus reddish at the forebody of *O. davidhancocki sp. nov.*

O. hoseri is separated from both *O. davidhancocki sp. nov.* and *O. glauerti* by having well developed and prominent ocelli on both the back of the neck and all four legs, this not being seen in the other two species, which instead have either spots on the legs or spots tending to form incomplete or indistinct ocelli, and no well defined ocelli on the neck.

O. hoseri is of similar body colouration to *O. davidhancocki sp. nov.* but differs in having much stronger contrast between the dark and light bands, as well as dark reddish bands being twice as wide as the yellowish ones, versus lighter bands being slightly wider than the dark bands or of the same width in *O. davidhancocki sp. nov.*

O. glauerti is readily separated from both *O. hoseri* and *O. davidhancocki sp. nov.* by the fact that the base and anterior of the upper surface of the tail does not have well-defined bands, whereas the banding on this part of the tail in the other two species is prominent.

O. glauerti is further separated from both *O. hoseri* and *O. davidhancocki sp. nov.* by the colouration on the throat, which is a thick dark yellow colour (slight orange), versus light yellow in both *O. hoseri* and *O. davidhancocki sp. nov.*

Specimens of *O. glauerti* from Mitchell Plateau, in line with the holotype form from further south on the south-west Kimberley coast, have reduced yellow markings on the back, giving a well defined ocellated pattern on the body not seen in other *O. glauerti* from other parts of the north Kimberley or south-west Kimberley, or the other two species. However on the neck, these ocelli are not prominent as seen in *O. hoseri*.

O. glauerti, *O. hoseri* and *O. davidhancocki sp. nov.* are separated from all other Australasian monitors by the following suite of characteristics: Medium adult size up to 80 cm in total length; gracile build, with a long neck and the tail that may exceed 1.8 times the body length; a black tail with brilliant white or bluish-white rings to the tip;

neck and shoulders being grey to tan or yellowish to rusty in colour, a prominent black temporal stripe; an unmarked yellow or white throat. Brown (2014), at page 853 bottom left has a photo of *O. davidhancocki sp. nov.* in life.

Brown (2014), at page 853 top has a photo of *O. glauerti* in life.

Brown (2015), at page 852 bottom has a pair of images of *O. glauerti* from the Mitchell Plateau area of Western Australia.

Brown (2014), at page 853 middle left has a photograph of *O. hoseri* in life.

All conform to the diagnosis just given.

Distribution: *O. davidhancocki sp. nov.* is known only from the East Kimberley in Western Australia, in the region of the Ord River drainage from about the Bungle Bungles in the south, north to about Kununurra and east to Bradshaw Station in the north-west Northern Territory, Australia. *O. glauerti* is found throughout the western half of the Kimberley district in Western Australia, including on numerous offshore islands. *O. hoseri* is confined to the Arnhem Land area in the Northern Territory, Australia.

Etymology: Named in honour of David Hancock, Barrister in Melbourne, Victoria, Australia, for services to wildlife conservation as well as for taking on powerful and corrupt government bureaucracies on behalf of victims of their systems (Griffin 2011).

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CONFLICT OF INTEREST

There are no conflicts of interest in terms of this paper and the author.