

The description of a fourth subspecies of
Odatria (Kimberleyvaranus) glebopalma
(Mitchell, 1955) (Reptilia: Squamata: Varanidae).

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ABSTRACT

Hoser (2014) formally divided the species *Odatria (Kimberleyvaranus) glebopalma* (Mitchell, 1955) known in most texts as *Varanus glebopalma* into three well-defined and geographically distinct subspecies, namely *O. glebopalma glebopalma* (Mitchell, 1955), *O. glebopalma funki* Hoser, 2014 and *O. glebopalma maderi* Hoser, 2014.

At the time Hoser (2014) was published, the Mount Isa (Queensland) population of the species was regarded as being of the type form from Groote Eylandt. However inspection of further live specimens and a disjunct distribution has confirmed that these lizards should also be treated as a separate subspecies.

The formal naming of the Mount Isa population as a biological entity is essential so that they can be managed as a separate taxon (or management unit) and that the conservation outcomes are managed as befits the importance of this regional population.

The subspecies is therefore formally named for the first time according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), as *Odatria (Kimberleyvaranus) glebopalma jimgreenwoodi* subsp. nov.

Keywords: Taxonomy; nomenclature; Goanna; Monitor lizard; Varanidae; *Varanus*; *Odatria*; *Kimberleyvaranus*; genus; subgenus; species; *glebopalma*; subspecies; *maderi*; *funki*; Hoser; 2013; 2014; Kimberley; Western Australia; Northern Territory; Queensland; Groote Eylandt; Mount Isa; Australia; new subspecies; *jimgreenwoodi*; Jim Greenwood; veterinary surgeon.

INTRODUCTION

Hoser (2014) was the first significant review of the taxonomy of the clade of Australian varanids known as *Odatria (Kimberleyvaranus) glebopalma* (Mitchell, 1955), generally identified in texts as *Varanus glebopalma*.

The result of that paper was division of the taxon *O. glebopalma* into three well-defined and geographically distinct subspecies, namely *O. glebopalma glebopalma* (Mitchell, 1955), *O. glebopalma funki* Hoser, 2014 and *O. glebopalma maderi* Hoser, 2014.

At the time Hoser (2014) was published, the Mount Isa population of the species was regarded as being of the type form from Groote Eylandt. However inspection of further live specimens in the period preceding 2018 and a disjunct distribution of known specimens of the species has confirmed that the Mount Isa lizards should also be treated as a separate subspecies.

The formal naming of the Mount Isa population as a biological entity is essential so that they can be managed as a separate taxon (or management unit) and that the conservation outcomes are managed as befits the importance of this regional population.

The subspecies is therefore formally named for the first time according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), as *Odatria (Kimberleyvaranus) glebopalma jimgreenwoodi* subsp. nov.

Hoser (2014) and sources cited therein, in particular Hoser (2013) and sources cited therein accurately account for the state of play in terms of the taxonomy and nomenclature of the relevant species and so none of this is repeated here. Both papers are widely available online as of 2018 and should be read in conjunction with this one.

I merely note that *Odatria* Gray, 1838 as a genus name has been around for a long time, although even as of 2018 it is rarely used. Hoser (2013) erected the subgenus *Kimberleyvaranus* for the single (as then recognized) species *O. glebopalma*.

Molecular data, as published by Fitch *et al.* (2006) at fig. 1., strongly supports the contention that *O. glebopalma* should be partitioned at least into subspecies, based on the divergence between isolated populations at different localities within the Northern Territory alone and it is for this reason that I have no hesitation in naming the fourth subspecies herein.

**ODATRIA (KIMBERLEYVARANUS) GLEBOPALMA
JIMGREENWOODI SUBSP. NOV.**

Holotype: A preserved specimen in the Queensland Museum, Brisbane, Queensland, Australia, specimen number: J94266 collected at Lake Corella, 60 km west of Cloncurry, Queensland, Australia, Latitude -20.83 S., Longitude 140.03 E.

The Queensland Museum, Brisbane, Queensland, Australia is a government-owned facility that allows access to its holdings.

Paratypes: Three specimens at the Australian Museum in Sydney, New South Wales, Australia, specimen numbers: R18829, R107883 and R 66264, collected from Mount Isa in Queensland, Australia, Latitude -20.44 S., Longitude 139.29 E.

Diagnosis: *O. glebopalma jimgreenwoodi* subsp. nov. is similar in most respects to the nominate subspecies of *O. glebopalma*, and would identify as this subspecies based on the diagnosis of each of three subspecies then identified in Hoser (2014) as stated in Hoser (2014). However it differs from nominate *O. glebopalma glebopalma* in having a reddish sheen in colour (versus yellowish-brown) and adults are different from other subspecies in that feet and toes are dark black with very tiny bright yellow spots on them, versus toes that have medium to large white spots on them or white clusters of scales giving the toes a barred or banded appearance.

The nominate subspecies (*O. glebopalma glebopalma* (Mitchell, 1955) and *O. glebopalma jimgreenwoodi* subsp. nov. are separated from both subspecies (*O. glebopalma funki* Hoser, 2014 and *O. glebopalma maderi* Hoser, 2014) on the basis of colouration.

In the nominate subspecies and *O. glebopalma jimgreenwoodi* subsp. nov., there is a generally speckled pattern dorsally and little if any black anterior to the eye. No reticulated pattern or banding is on the neck and upper body and if markings are present on the body, they tend towards neither a reticulated pattern or banding. Hatchlings may have a very faint reticulated pattern at the head and fore-body, and this is as opposed to being very distinct and well-marked in hatchlings in the Arnhem Land form namely *O. glebopalma funki* Hoser, 2014.

Otherwise the diagnosis for this subspecies is as for the subgenus *Kimberleyvaranus* Hoser, 2013 as stated in Hoser (2013).

O. glebopalma funki Hoser, 2014 from the western side of the top end of the Northern Territory is readily separated from the other subspecies of *O. glebopalma* by the obvious dorsal patterning including an obvious and distinct reticulated pattern at the head and fore-body, which is not seen in any other subspecies.

The subspecies *O. glebopalma maderi* Hoser, 2014 is separated from the other subspecies of *O. glebopalma* as follows: It is diagnosed as for the nominate subspecies but separated from it by the presence of a distinct dark stripe or similar, anterior to the eye and running to it. No reticulated pattern is present on the fore-body or if there is one, it is tending towards indistinct bands (peaking near the hind limbs where ocelli form into bands). This tending towards bands is most notable in juveniles, which have a colouration consisting of moderately obvious darker and lighter cross-bands. These bands are discernible in all specimens, though less distinct with age. Some specimens have a distinct pattern of oversized brownish ocelli across the entire dorsal body, not forming any kind of reticulation

pattern as seen in *O. glebopalma funki* Hoser, 2014. The reticulation pattern as seen in *O. glebopalma funki* Hoser, 2014. separates that taxon from *O. glebopalma maderi* Hoser, 2014.

Otherwise the diagnosis for the subspecies *Odatria glebopalma maderi* is as for the subgenus *Kimberleyvaranus* Hoser, 2013 as stated within Hoser (2013).

The subgenus *Kimberleyvaranus* Hoser, 2013 within the genus *Odatria* Gray, 1838, monotypic for *O. glebopalma* is separated from all other living varanids by the following suite of characters: supraocular scales are subequal; the keels of the caudal scales are sometimes very strong, but never spinose; the tail is either round in section or somewhat dorsoventrally compressed, or at the very most, very slightly laterally compressed in the last half; there is no obvious median double keel dorsally along the tail; the scales on the top of the head are smooth; the tail is longer than the head and body, being well over twice as long as the head and body (unbroken and intact tail); tail pattern if present,

is transversely aligned distally; the last half of the tail is a distinctive creamy white to yellow in colour; the tubercles on the lower surfaces of the feet are large and glossy being a very dark brown or black in colour.

The subgenus *Kimberleyvaranus* Hoser, 2013 is further defined as follows: Colouration is dorsally black with individually fawn coloured scales which may form a reticulum on the flanks (where they predominate over the black) or alternatively small black centred ocelli on the midline (where black predominates), or occasionally flecks. The top of the head and upper surfaces of the limbs are black with small cream or fawn flecks and spots, clustering to form larger spots on the limbs. The anterior half of the tail is mostly black above and the posterior half is a distinct creamy white to yellow in colour. The throat is white often with a broad reticulum of light purplish fawn extending on to the sides of the throat, but forming bars on the lower lips. The belly and chest are white with indistinct transverse bars of light purplish fawn. The tail and limbs are creamy yellow below. Palms and soles have rounded shiny, very dark brown or black scales. The head scales are smooth, irregular and very small. The nostrils are much nearer to the tip of the snout than the eye and lateral in position. There are 130-170 scales around the middle of the body. Caudal scales are smooth or with low keels.

A photo of *O. glebopalma jimgreenwoodi* subsp. nov. in life is depicted on page 202 of Wilson (2015).

Distribution: This taxon (*O. jimgreenwoodi* subsp. nov.) is currently known only from the vicinity of Mount Isa in Queensland, Australia and rocky areas immediately north of there.

Etymology: *O. jimgreenwoodi* subsp. nov. is named in honour of Melbourne, Victoria, Australia based veterinary surgeon, Dr. Jim Greenwood, who for many years worked at Canterbury Veterinary Clinic in Melbourne's eastern suburbs in recognition of his significant contributions to reptile medicine and surgery in Melbourne. This included the ensuring that many rare and significant captive reptiles remained in good health. Many of these reptiles were used in vitally important captive breeding projects. He has also assisted Snakebusters: Australia's best reptiles shows on the rare occasions we have had to seek outside assistance when dealing with reptile health and management issues and this critically important contribution is acknowledged herein.

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CONFLICT OF INTEREST

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