

Tortrix australis Gray, 1841, a senior synonym of *Demansia reticulata* (Gray, 1842) (Elapidae)

Glenn M. Shea^{1,2}

¹ Sydney School of Veterinary Science B01, University of Sydney, NSW 2006, Australia.

² Australian Museum Research Institute, Australian Museum, 1 William St, Sydney, NSW 2010, Australia.

Email: glenn.shea@sydney.edu.au

ABSTRACT – The long-forgotten snake name *Tortrix australis* Gray, 1841 is shown to be a senior synonym of *Demansia reticulata* (Gray, 1842), an elapid species from Western Australia. The holotype, originally lodged in the collection of the Museum of the Army Medical Service at Chatham, now lost, is likely to have been collected from the Perth area, through the auspices of one of the surgeons associated with army regiments assigned to Australia. The most likely source of the specimen is Dr William Milligan, who was stationed in the Swan River Colony between 1830 and 1834. Through designation of a neotype and use of Article 23.9 of the Code of Zoological Nomenclature, *Demansia reticulata* is made a nomen protectum, and *Tortrix australis* a nomen oblitum, stabilising nomenclature.

KEYWORDS: *Demansia*, Elapidae, nomenclature, synonymy, Chatham Museum, William Milligan

INTRODUCTION

In a recent paper, Nankivell et al. (2023) provided resolution of the *Demansia psammophis* species complex (Elapidae), recognising three species: *D. psammophis* (Schlegel, 1837) in eastern Australia, *D. reticulata* (Gray, 1842) in the western parts of Western Australia, and a new species in intervening areas, *D. cyanochasma*. The only previous formal taxonomic treatment of these, by Storr (1978) and covering only the Western Australian members of the complex, had recognised a more widespread *D. reticulata*, with a northern/inland subspecies *D. reticulata cupreiceps* Storr. However, Storr et al. (1986), with additional material having accumulated in the Western Australian Museum collection, partially recanted Storr's previous conclusions, suggesting that both were subspecies of *D. psammophis*, and that his *D. reticulata cupreiceps* was divisible into two entities, one of which represented a western population of *D. psammophis psammophis*. The informal nature of this rearrangement, included in a field guide without any analysis, and without consideration of variation within eastern Australian populations of *Demansia psammophis*, led to uncertainty over the taxonomy of the complex, with a variety of nomenclatural combinations appearing in the literature over the following 40 years: *D. psammophis*, *D. p. psammophis*, *D. reticulata*, *D. r. reticulata*, *D. p. reticulata*, *D. r. cupreiceps* and *D. p. cupreiceps*. Uncertainty over the location of

potential contact zones between the three entities led to many authors simply using an expanded *D. psammophis* as the name for all of these. Hutchinson and Tyler (1996) recognised a parapatric distribution of two taxa in the Flinders Ranges, using the name *cupreiceps* for the taxon in the lowlands to the west of the ranges, and *psammophis* for the species in the ranges, and to the east. Further complicating the nomenclature was the purported type locality of *D. psammophis* being from King George Sound in Western Australia (Duméril et al. 1854), outside the range of any *Demansia* species, but closest to *D. reticulata*. The work by Nankivell et al. (2023), using larger samples than available to Storr 45 years earlier, and with sequence data, provided further validation of the parapatric distribution of two entities in South Australia, identified only two taxa in Western Australia, and recognised all three as full species. However, their work changed the position of the boundary between the south-western species and the inland species. As a result of the type locality of *D. reticulata cupreiceps* now being within the range of *D. reticulata*, the inland species was described as a new taxon.

Nankivell et al. (2023) considered the type material of *Elaps psammophis* Schlegel, 1837, and *Lycodon reticulatus* Gray, 1842, identifying the former as representing the eastern Australian taxon, and the latter as representing the western taxon. However, they did not note the existence of a name that antedates *D. reticulata*, and which potentially imperils that name.

Gray's description of *Lycodon reticulatus* was published in a paper that spanned two issues of his occasional series, *The Zoological Miscellany*. The first six pages, including the description of *Lycodon reticulatus*, were published in an issue bearing an imprint date of April 1842. The last page, containing descriptions of two frogs, appeared at the beginning of the next issue, with an imprint date of May 1842.

Synonymy of *Tortrix australis* Gray, 1841 with *Demansia reticulata* (Gray, 1842)

In a publication likely written after September 1841, and released about November 1841 (Shea et al. 2020), just five months before he named *Lycodon reticulatus*, John Edward Gray (1841) compiled a listing of the reptiles of Australia as an appendix to the published journals of the explorer George Grey. This account included a short description of a new species, *Tortrix australis*. The name appears twice. On p. 432, there is only a brief mention:

‘74. *Tortrix australis* — Gray.

Inhab. New Holland, Mus. Chatham, n. 68.’

This was followed by a description on p. 444:

‘74. *Tortrix australis* — Pale olive, scales black-edged, on the sides widest; beneath bluish, with a white edged black band across the end of the muzzle; a white band before the front and back of the eyes, and a triangular black spot at the lower hinder angle of the eyes; pupil round; one large and two posterior ocular shields, no loreal shields; nostrils lateral, in the suture between the two nasal shields; scales smooth imbricate, those of the sides larger, of the tail six-sided.’

The name was not mentioned in subsequent literature, including the two later catalogues of snakes by Gray's successors at the British Museum (Günther 1858; Boulenger 1898). The only subsequent mentions I can locate of *Tortrix australis* are by Cogger et al. (1983), who list it as a species inquirenda, and Wallach et al. (2014), who follow Cogger et al. (1983) in so listing it.

While neither of the mentions of the name by Gray (1841) explicitly gives a locality for his species, it was published in a paper that was a list of the reptiles of Australia, and the title states that the new species were from Western Australia, although only a few of them are specifically listed as from there. With the redefinitions and redescrptions of the species of *Demansia* provided by Shea (1998), revising the northern Black Whip Snakes, Shea and Scanlon (2007), revising the smaller tropical species of Whip Snakes and Nankivell et al. (2023) revising the southern species, it is possible to unequivocally identify Gray's species as a *Demansia*, due to the facial markings described, and to allocate the name to a species. The trans-rostral dark line, bordered

with white, and the pale zones anterior and posterior to the eye, along with the triangular dark patch at the posteroventral angle of the eyes (a teardrop mark), are all characteristics of several *Demansia* species, and in combination are unique to *Demansia* within the Australian snake fauna. Further, the pale olive ground colour of the body with dark-edged scales only fits *D. reticulata* among the *Demansia* species (Nankivell et al. 2023). All of these features are visible on the individual photographed as Figure 1. However, there are two features of *Tortrix australis* that do not fully fit with *D. reticulata*. The first of these is the ‘bluish’ ventral colour, with *D. reticulata* generally described as having a whitish to yellowish or pale green-white venter (Storr 1978; Storr et al. 1986; Nankivell et al. 2023). A bluish-grey discolouration is a common feature of preservation, and it is possible that the colour is an artefact of preservation of Gray's specimen. Gray also describes the dark teardrop marking under the eye as a triangular black spot, while the teardrop in *D. reticulata* is relatively long, with the tail extending from the subocular supralabial across the length of the fifth supralabial to the anterior part of the sixth supralabial (Nankivell et al. 2023). However, in the absence of details, it is not possible to be sure that Gray's ‘spot’ was not a ‘streak’.

The type of *Tortrix australis* is no longer extant to verify the details of Gray's description. The ‘Mus. Chatham’ was the Museum of the Army Medical Service at Fort Pitt, Chatham, a natural history collection that was used for training army surgeons and physicians for deployment by the army to various parts of the British Empire, and was supplied with specimens by those medical staff from their various stations. The collection was discarded/dispersed in the 1850s, and specimens are no longer able to be traced. Two catalogues of the natural history collections of the Museum Chatham were published. The first, on birds and mammals, was compiled while the collection was actively growing, and was under the supervision of Edward Burton (Burton 1838). The second, covering reptiles and amphibians, was produced anonymously (Anonymous 1843), but was possibly compiled by the zoologist and physician Andrew Smith, who took over responsibility for the collection from 15 September, 1837 on Burton's retirement (Anonymous 1837), and remained in direct charge of the collection until at least 1841, when he was promoted to Principal Medical Officer at Fort Pitt, becoming responsible for all training and assignment of new recruits to the Army Medical Service (Kirby 1965). By 1845, Smith had left Chatham, being promoted to Professional Assistant in the Office of the Army Medical Department, assisting the Director-General in London (Kirby 1965). Smith, who published extensively on herpetological topics, is attributed as the author on 21 of the names in the catalogue, most of which would remain nomina nuda (three names were



FIGURE 1 Details of colour and pattern of head and body of *Demansia reticulata* from Shay Gap, Western Australia showing the white-edged dark transrostral line, pale lines anterior and posterior to eye, dark teardrop under the eye, and reticulate body pattern on a greenish-yellow ground colour (photo: B. Bush).

validly published at other times: *Cordylus polyzonus* and *C. capensis*, both published by Smith (1838) and *Platydictylus bibronii*, published as *Tarentola bibronii* by Smith (1846)). At the time of publication of the reptile and amphibian catalogue, there is evidence that many of the specimens previously present had already been disposed of. The earliest account of the scope of the collection (Anonymous 1832) reports that 120 reptiles had been donated in that year alone, giving 352 herpetological specimens, of 2718 zoological specimens in total. Burton's catalogue of 1838, four years later, reported the zoological collections to have grown to 9386 specimens. If a similar proportion of herpetological specimens constituted the collection at that date, there would have been of the order of 1200 reptile and amphibian specimens in 1838, and hence presumably more would have been expected to have accumulated by 1843. However, Anonymous (1843) only lists 16 species of chelonians, 4 species of crocodylians, 99 species of lizards, 121 species of snakes and 22 species of amphibians.

Gray (1834, 1838, 1839, 1841) described six species of Australian reptiles from specimens attributed to the Chatham collection: *Lialis burtonis* (Pygopodidae), *Tiliqua stoddartii* (Scincidae, current identification unknown), *Tiliqua vachelli* (Scincidae, current identification unknown), *Lygosoma australis* (= *Hemiergis gracilipes* (Steindachner, 1870), Scincidae), *Tropidonotus mairii* (= *Tropidonophis mairii*, Colubridae) and *Trimeresurus olivaceus* (= *Elapognathus coronatus* (Schlegel, 1837), Elapidae). An additional species, *Elaps lewisii* (= *Dendrelaphis punctulatus* Gray, 1827, Colubridae) was described by Gray (1841) from specimens attributed to Dr Thomas Lewis, a member of the 4th Regiment (and hence likely to also be from the Chatham collection), and the same paper also reported specimens of two Australian snakes already described that were listed as sourced from Dr John Mair of the 39th Regiment, a contributor to the Chatham collection (Shea 2021a).

Of these species, only *Lialis burtonis* (as *L. burtonii*), *Elapognathus coronatus* (as *Elaps coronatus*) and possibly *Demansia reticulata* (*D. psammophis* is listed)

were present in the collection as listed in the 1843 catalogue, all (as with all Australian reptiles listed) with the locality either New South Wales (most species) or New Holland (*Lialis burtonis*, *Morelia spilota* [as *Python peronii*]).

While the herpetological catalogue for the Chatham collection does not list collectors for the specimens, the previous mammal and bird collection does provide lists of the donors to the collections, in order of the number of specimens each person donated. Of those listed for mammals and birds, three are likely to have collected or received specimens from Western Australia, while others are known to have been associated with regiments based in New South Wales (largely around Sydney), and Tasmania. Although based in Sydney, Dr John Mair of the 39th Regiment, after whom Gray named *Tropidonotus mairii*, seems to have received the herpetological specimens collected by Captain Collet Barker, who was commandant of the settlement at Raffles Bay in the Northern Territory, and later at Albany in Western Australia; Barker spent a month in Perth between October and November 1829 between these two assignments, and seems to have collected several snake species there (Shea 2021a). Mair is 23rd on the list of bird donors, but is not listed among mammal donors by Burton (1838). Barker was accompanied during his postings by Dr Robert Martin Davis, assistant surgeon of the 39th Regiment, who is 24th on the list of bird donors (Davis subsequently travelled to Madras with the regiment in 1832, and died there of cholera; Mulvaney and Green 1992). Both Davis and Barker would only have been able to collect *Demansia reticulata* during the month they spent in Perth, as the species does not occur in the Top End of the Northern Territory, or Albany. A much more likely source of a specimen of *Demansia reticulata* is Dr Milligan of the 63rd Regiment, 21st on the list of bird donors presented by Burton (1838).

Milligan is Assistant Surgeon William Milligan, whose life is known in some detail as a result of work by staff at the Perth Hospital, an institution founded by Milligan (Brine and friends 1991). The dates relating to his military career are confirmed by Johnston (1907). Milligan was born at Cavan, Ireland on 1 February 1795, entered the army medical service as a hospital assistant in July 1813, rapidly promoted to Assistant Surgeon in the 82nd Regiment of Foot in February 1814. In January 1819, his first overseas posting was to Mauritius with the same regiment. A year later he returned home, enrolling as a medical student at the University of Edinburgh, graduating in 1822 with a thesis on cholera, a disease he had encountered and studied while in Mauritius. For the next several years, he remained on the half-pay list, apparently also working in private practice in London, and lecturing in Materia Medica and Theory and Practise of Medicine at a London dispensary. On 25 April 1829, Tully Daly, the Assistant Surgeon with

the 63rd Regiment, en route to Western Australia with James Stirling, the founding governor of the Swan River Colony, drowned at the Cape of Good Hope when a boat he was in overturned. On 9 July 1829, Milligan was transferred to the 63rd Regiment to fill Daly's place (Anonymous 1829), leaving London with his family aboard the *Wanstead* on 14 August 1829 (Friend 1831), and arriving at the Swan River Colony on 31 January 1830, just months after the colony was founded by Stirling. Milligan remained at the Swan River Colony, with a short period at Albany in January 1834, for four years, until the regiment was posted to Madras. He departed Swan River aboard the *Merope*, on 18 April 1834 (Anonymous 1834). After several years in Madras, Milligan and his family returned to England in 1839, transferred as Surgeon to the 17th Regiment, then to the 76th Regiment in 1840, and finally to the 6th Dragoons in 1844. He retired on 13 February 1847 due to ill health, and died suddenly on 2 September 1851 at his home at 4 Bentinck Terrace, St Johns Wood.

In summary, *Tortrix australis* Gray, 1841 is almost certainly based on the species now known as *Demansia reticulata* (Gray, 1842). If the type locality is Australia, as inferred from the description, the species is certainly a *Demansia*, and best agrees with *D. reticulata*, a Western Australian species. While the type is now lost, the collection that formerly housed it had received zoological specimens, prior to the date of description, from an army surgeon who had been based in Perth (within the range of *D. reticulata*) for four years, or possibly from two other surgeons who had access to material from Perth for shorter periods.

In order to fix the name, given the very slight uncertainty over the synonymy due to possible disagreement in two morphological characters between the description of *Tortrix australis* and the species *D. reticulata*, I designate the lectotype of *Lycodon reticulatus* Gray, 1842, specimen 1946.1.19.79 in the Natural History Museum, London, presented by William Buchanan, as neotype of *Tortrix australis* Gray, 1841. This specimen has been illustrated by Nankivell et al. (2023). This neotype designation fulfils the criteria of Articles 75.3.1–7 of the Code of Zoological Nomenclature.

This permanently fixes *T. australis* as a senior objective synonym of *Lycodon reticulatus*. I further invoke Article 23.9 of the Code of Zoological Nomenclature to make *T. australis* a nomen oblitum, and *L. reticulatus* a nomen protectum, hence maintaining the use of the name *Demansia reticulata* for the species to which it was ascribed by Nankivell et al. (2023) I have been able to locate 32 publications between 1974 and 2023, a period of fifty years, that use the names *D. reticulatus*, *D. reticulatus reticulatus* or *D. reticulatus cupreiceps* (Dell and Chapman 1977, Dell and Harold 1977; Burbidge and George 1978; Storr 1978; Storr and Harold 1978, 1980, 1984, 1985; Storr and Hanlon 1980;

Johnstone 1983; Storr and Johnstone 1983; Storr et al. 1983; Wells and Wellington 1984, 1985; David and Ineich 1999; Ehmann 2005; Shea and Scanlon 2007; Hutchinson 2009; Brandle and Armstrong 2010; Cogger 2014; Wallach et al. 2014; Gambold and Metters 2016; Mirtschin et al. 2017; Shea 2017; Wilson and Swan 2017; Allen and Vogel 2019; Chapple et al. 2019; Eipper and Eipper 2019, 2022; Williams and Maier 2019; Jolly et al. 2023; Nankivell et al. 2023) and an additional 13 publications that use the combination *D. psammophis reticulatus* (Storr et al. 1986; Wilson and Knowles 1988; Gow 1989; Ehmann 1992; Mirtschin and Davis 1992; Golay et al. 1993; Maryan 1996; Aplin and Smith 2001; Bush et al. 2007, 2010; Aplin et al. 2008; Maryan and Reinhold 2009; Gaikhorst 2015), while there have been no publications that use the name *Tortrix australis* as the valid name for the species since 1900. These uses of the name *reticulata* greatly exceed the minimum requirements for Article 23.9.1.2 to be applied (25 works by more than 10 authors over the preceding 50 years, with the interval not less than 10 years).

The question remains as to why John Edward Gray created two different names, in two different genera, based on different type specimens, for what was a single species, all within one year, and why he placed the first species in the genus *Tortrix*, a genus created by Oppel (1811) for three species that are now placed in the genera *Anilius* (Aniliidae) and *Cylindrophis* (Cylindrophidae), very distant from *Demansia* in the Elapidae. While we cannot be sure, it is likely that the answer involves two intersecting principles. Gray was a prodigious worker, and often very slapdash in his approach. Between his first paper on reptiles (Gray 1825), which appeared when he was 25 years old, and his Catalogue of the lizards in the British Museum (Gray 1845), followed four years later by the first part of his Catalogue of the snakes in the British Museum (Gray 1849) — he did not produce the second part, which was left to his successor, Albert Günther to create (Günther 1858) — Gray wrote vast numbers of papers, not just on reptiles, but also on mammals, birds, molluscs and botany. He emphasised external features in his descriptions, with little interest in internal anatomy as a source of characters, and deliberately made his descriptions brief, as he believed that the purpose of taxonomy was to briefly provide the essential features of taxa to allow rapid discrimination from closely related taxa (Günther 1975). Hence, his often one or two line definitions of higher taxa left much room for errors to be made in assignment. Secondly, in a time before stabilization of principles of binomial nomenclature in zoology, Gray was a prodigious coiner of names, and frequently changed his mind not only on the taxa he recognised, but also on the names he applied to them and what taxa those names would apply to. For example, despite originally creating the scincid genus name *Tiliqua*, he gradually changed the concept of that genus over multiple papers until eventually excluding

the species he originally assigned to that name (Shea 2021b). He also paid little attention to the spelling applied to his names, with numerous variants appearing over time.

In the case of *Tortrix australis*, while Gray (1841) did not define the characters of that genus, he did define his concept of *Tortrix* in an earlier paper which presented a broad classification of the Reptilia (Gray 1831). In that classification, Gray recognised three orders within his Section Squamata: Sauri, Ophisauri, and Ophidii, with *Tortrix* in the Ophisauri, along with five other genera. Gray's Ophisauri constituted squamates with 'mouth non dilatible, skin covered with regular equal scales'. Within the Ophisauri, Gray recognised two Sections, Ptygopleura for those squamates with the regular arrangement of scales on dorsal and ventral surfaces separated laterally by a 'compressed line of small scales on each side', containing the genera *Zonurus* (now Cordylidae), *Ophisaurus* (now in Anguidae), *Chalcides* (now divided between Gymnophthalmidae and Scincidae) and *Amphisbaena* (now Amphisbaenidae), and an unnamed Section II for squamates with 'body covered with imbricate scales', containing the genera *Scincus* (now Scincidae), *Bipes* (species spread over Diploglossidae, Pygopodidae and Scincidae), *Anguis* (now Anguidae), *Tortrix*, *Acontias* (now in Scincidae) and *Typhlops* (now Scolecophidia). Amongst these six latter genera, *Tortrix* was defined as 'body long, cylindrical; back covered with imbricate scales; beneath with larger scales; tongue short, contractile, two-cut; head long' — essentially a snake in the modern use of that word. Hence, if a species was considered to belong to his Ophisauri (which would effectively be reduced to a decision on whether the mouth was distensible or not) then any snake with enlarged ventral scales would be allocated to the genus *Tortrix* by default. However, by the time of his later Catalogue of the Snakes in the collection of the British Museum (Gray 1849), he had returned *Tortrix* to being a genus of true snakes, and restricted it to *Anilius scytale* (Linnaeus, 1758). It is likely that between his 1841 and 1842 papers, he had either recognised his error in placing his new species *australis* in *Tortrix*, and wished to avoid any mention of that mistake, so providing a new species name as well, or he had simply forgotten or overlooked the species he described as *Tortrix australis* when describing *Lycodon reticulatus*, as the name *Tortrix australis* was not classified anywhere close to *Lycodon* and so did not need to be compared to the specimens donated by Walter Buchanan to the British Museum that would become the types of *L. reticulatus*.

ACKNOWLEDGEMENTS

I thank Brian Bush for the use of his photograph as Figure 1.

REFERENCES

- Allen L., and Vogel, G. (2019). *Terralog: Venomous Snakes of Australia and Oceania*. Edition Chimaira, Frankfurt am Main.
- Anonymous (1829). War-Office, 3rd August 1829. *London Gazette* (18599): 1462–1464 (3 August).
- Anonymous (1832). Report on the Fort Pitt Museum and Collections. Thatched House Tavern, 16th May 1832. *Edinburgh Medical and Surgical Journal* **38**: 221–225.
- Anonymous (1834). Shipping Intelligence. *Perth Gazette and Western Australian Journal* **2**(69): 274 (26 April).
- Anonymous (1837). War-Office, 15th September 1837. *London Gazette* (19541): 2426–2427 (15 September).
- Anonymous (1843). *A Catalogue of the Reptiles contained in the Medical Department of the Army, Fort Pitt, Chatham*. James Burrill, Chatham.
- Aplin, K.P., and Smith, L.A. (2001). Checklist of the frogs and reptiles of Western Australia. *Records of the Western Australian Museum Supplement* **63**: 51–74. doi: 10.18195/issn.0313-122x.63.2001.051-074
- Aplin, K., Donnellan, S., and Dell, J. (2008). The herpetofauna of Faure Island, Shark Bay, Western Australia. *Records of the Western Australian Museum Supplement* **75**: 39–53. doi: 10.18195/issn.0313-122x.75.2008.039-053
- Boulenger, G.A. (1898). *Catalogue of the Snakes in the British Museum (Natural History). Volume III., containing the Colubridae (Opisthoglyphae and Proteroglyphae), Amblycephalidae, and Viperidae*. Trustees of the British Museum (Natural History), London.
- Brandle, R., and Armstrong, D. (2010). Reptiles and Frogs. In: Brandle, R. (ed.), *A biological survey of the Eyre Peninsula South Australia*. Department for Environment and Heritage, South Australia. pp. 73–92.
- Brine, J., and friends (1991). *Looking for Milligan. The fascinating search for William Milligan a pioneering doctor of the Swan River colony c. 1795–1851*. Milligan Society, Perth.
- Burbidge, A.A., and George, A.S. (1978). The flora and fauna of Dirk Hartog Island, Western Australia. *Journal of the Royal Society of Western Australia* **60**(3): 71–90.
- Burton, E. (1838). *A Catalogue of the Collection of Mammalia and Birds in the Museum of the Army Medical Department, at Fort Pitt, Chatham*. James Burrill, Chatham.
- Bush, B., Maryan, B., Browne-Cooper, R., and Robinson, D. (2007). *Reptiles and Frogs in the Bush: Southwestern Australia*. University of Western Australia Press, Perth.
- Bush, B., Maryan, B., Browne-Cooper, R., and Robinson, D. (2010). *Field Guide to Reptiles and Frogs of the Perth Region*. Western Australian Museum, Perth.
- Chapple, D.G., Tingley, R., Mitchell, N.J., Macdonald, S.L., Keogh, J.S., Shea, G.M., Bowles, P., Cox, N.A., and Woinarski, J.C.Z. (2019). *The Action Plan for Australian Lizards and Snakes 2017*. CSIRO Publishing, Clayton South.
- Cogger, H.G. (2014). *Reptiles and Amphibians of Australia*. Seventh Edition. CSIRO Publishing, Collingwood.
- Cogger, H.G., Cameron, E.E., and Cogger, H.M. (1983). *Zoological Catalogue of Australia. Vol. 1. Amphibia and Reptilia*. Australian Government Publishing Service, Canberra.
- David, P., and Ineich, I. (1999). Les serpents venimeux du monde: systématique et répartition. *Dumerilia* **3**: 3–499.
- Dell, J., and Chapman, A. (1977). A Vertebrate Survey of Cockleshell Gully Reserve, Western Australia. *Records of the Western Australian Museum Supplement* **4**: 1–87.
- Dell, J., and Harold, G. (1977). Amphibians and Reptiles. In: Kenneally, K. (ed.), *The Natural History of the Wongan Hills*. Handbook II. Western Australian Naturalists' Club, Perth. pp. 97–99.
- Duméril, A.M.C., Bibron, G., and Duméril A. (1854). *Erpétologie générale ou histoire naturelle complète des Reptiles. Tome Septième — Deuxième Partie*. Librairie Encyclopédique de Roret, Paris.
- Ehmann, H. (1992). *Encyclopedia of Australian Animals. Reptiles*. Angus & Robertson, Pymble.
- Ehmann, H. (2005). *South Australian Rangelands and Aboriginal Lands Wildlife Management Manual: a resource handbook*. Dept of Water, Land & Biodiversity Conservation, South Australia, Adelaide.
- Eipper, S., and Eipper, T. (2019). *A naturalist's guide to the Snakes of Australia*. John Beaufoy Publishing, Oxford.
- Eipper, S., and Eipper, T. (2022). *Australasian Elapids – Husbandry, Captive Care and Ecology*. Edition Chimaira, Frankfurt am Main.
- Friend, M.A. (1831). 'Journal of a voyage to Hobart with account of the settlement on the Swan River, 1829–1831'. Manuscript, State Library of Western Australia b3511109.
- Gaikhorst, G. (2015). Reptiles and amphibians of Forrestdale Lake Nature Reserve and the Anstey Keane Dampland, Western Australia. *Western Australian Naturalist* **29**(4): 281–288.
- Gambold, N., and Metters, D. (2016). *Reptiles and Frogs of Alice Springs*. Revised Edition. Land for Wildlife, Alice Springs.
- Golay, P., Smith, H.M., Broadley, D.G., Dixon, J.R., McCarthy, C., Rage, J.-C., Schatti, B., and Toriba, M. (1993). *Endoglyphs and other Major Venomous Snakes of the World. A checklist*. Azemiops S. A., Geneva.
- Gow, G. (1989). *Graeme Gow's Complete Guide to Australian Snakes*. Angus & Robertson, North Ryde.
- Gray, J.E. (1825). A synopsis of the genera of Reptiles and Amphibia, with a description of some new species. *Annals of Philosophy (Series 2)* **10**(3): 193–217.
- Gray, J.E. (1827). Reptilia. In: King, P.P. (ed.), *Narrative of a Survey of the Intertropical and Western Coasts of Australia. Performed between the years 1818 and 1822. With an appendix, containing various subjects relating to hydrography and natural history*. Volume 2. John Murray, London. pp. 424–434.
- Gray, J.E. (1831). A synopsis of the species of the Class Reptilia. In: Griffith, E., and Pidgeon, E. (eds), *The Animal Kingdom arranged in conformity with its organization*. Whittaker, Treacher, & Co., London. pp. 1–110.
- Gray, J.E. (1834). Characters of a new genus of reptiles (*Lialis*) from New South Wales. *Proceedings of the Zoological Society of London* **2**: 134–135.
- Gray, J.E. (1838). Catalogue of the slender-tongued saurians, with descriptions of many new genera and species [3rd part]. *Annals of Natural History* **2**(10): 287–293.
- Gray, J.E. (1839). Catalogue of the slender-tongued saurians, with descriptions of many new genera and species [4th part]. *Annals of Natural History* **2**(11): 331–337.

- Gray, J.E. (1841). A catalogue of the species of Reptiles and Amphibia hitherto described as inhabiting Australia, with a description of some new species from Western Australia, and some remarks on their geographical distribution. In: Grey, G. (ed.), *Journals of Two Expeditions of Discovery in North-West and Western Australia, during the years 1837, 38, and 39, under the authority of Her Majesty's Government*. Volume 2. T. and W. Boone, London. pp. 422–449.
- Gray, J.E. (1842). *The Zoological Miscellany*. Treuttel, Wurtz & Co., London. pp. 51–57.
- Gray, J.E. (1845). *Catalogue of the specimens of lizards in the collection of the British Museum*. Edward Newman, London.
- Gray, J.E. (1849). *Catalogue of the specimens of snakes in the collection of the British Museum*. Edward Newman, London.
- Günther, A. (1858). *Catalogue of Colubrine Snakes in the collection of the British Museum*. Trustees of the British Museum, London.
- Günther, A.E. (1975). *A Century of Zoology at the British Museum Through the Lives of Two Keepers 1815–1914*. Wm. Dawson & Sons, London.
- Hutchinson, M. (2009). Reptiles. In: Owens, H., and Graham, A. (eds), *Census of South Australian Vertebrates*. Dept of Environment, Water and Natural Resources, Government of South Australia, Adelaide. pp. 5–54.
- Hutchinson, M.N., and Tyler, M.J. (1996). Reptiles and amphibians. In: Davies, M., Twidale, C.R., and Tyler, M.J. (eds.), *Natural History of the Flinders Ranges*. Royal Society of South Australia, Adelaide. pp. 149–158.
- Johnston, W. (1907). *Roll of Commissioned Officers in the Medical Service of the British Army who served on full pay within the period between the accession of George II and the formation of the Royal Army Medical Corps 20 June 1727 to 23 June 1898 with an introduction showing the historical evolution of the corps*. University Press, Aberdeen.
- Johnstone, R.E. (1983). Herpetofauna of the Hamersley Range National Park Western Australia. In: Muir, B.G. (ed.), *A Fauna Survey of the Hamersley Range National Park Western Australia 1980*. National Parks Authority of Western Australia. pp. 7–11.
- Jolly, C., Schembri, B., and Macdonald, S. (2023). *Field Guide to the Reptiles of the Northern Territory*. CSIRO Publishing, Melbourne.
- Kirby, P.R. (1965). *Sir Andrew Smith, M.D., K.C.B. His life, letters and works*. A.A. Balkema, Cape Town.
- Linnaeus, C. (1758). *Systema Naturae per regna tria naturae, secundum Classes, Ordines, Genera, Species, cum characteribus, differentiis, synonymis, locis. Editio Decima, Reformata. Tomus I. Laurentii Salvii, Holmiae*.
- Maryan, B. (1996). Herpetofauna of Dirk Hartog Island Shark Bay area, Western Australia. *Herpetofauna* **26**(1): 8–11.
- Maryan, B., and Reinhold, L. (2009). Additions to the terrestrial herpetofauna of Koolan and Dirk Hartog Islands. *Western Australian Naturalist* **27**(1): 18–24.
- Mirtschin, P., and Davis, R. (1992). *Snakes of Australia. Dangerous & Harmless*. Hill of Content, Melbourne.
- Mirtschin, P., Rasmussen, A.R., and Weinstein, S.A. (2017). *Australia's Dangerous Snakes. Identification, Biology and Envenoming*. CSIRO Publishing, Clayton South.
- Mulvaney, J., and Green, N. (1992). *Commandant of solitude. The journals of Captain Collet Barker 1828–1831*. Melbourne University Press, Carlton.
- Nankivell, J.H., Maryan, B., Bush, B.G., and Hutchinson, M.N. (2023). Whip it into shape: revision of the *Demansia psammophis* (Schlegel, 1837) complex (Squamata: Elapidae), with a description of a new species from central Australia. *Zootaxa* **5311**(3): 301–339. doi: 10.11646/zootaxa.5311.3.1
- Oppel, M. (1811). *Die Ordnungen, Familien und Gattungen der Reptilien als Prodrome einer Naturgeschichte derselben*. Joseph Lindauer, München.
- Schlegel, H. (1837). *Essai sur la physionomie des serpens. I. Partie Generale, II. Partie Descriptive*. M.H. Schonekat, Amsterdam.
- Shea, G.M. (1998). Geographic variation in scalation and size of the black whip snakes (Squamata: Elapidae: *Demansia vestigiata* complex): evidence for two broadly sympatric species. *The Beagle, Records of the Museums and Art Galleries of the Northern Territory* **14**: 41–61.
- Shea, G. (2017). *Demansia reticulata*, Yellow-faced Whipsnake. *The IUCN Red List of Threatened Species*. doi: 10.2305/IUCN.UK.2017-3.RLTS.T102707320A102707558.en
- Shea, G.M. (2021a). Dr. John Mair, Captain Collet Barker, and the discovery of the Australian Keelback, *Tropidonophis mairii* (Serpentes, Colubridae). *Bibliotheca Herpetologica* **15**(3): 18–28.
- Shea, G.M. (2021b). Nomenclature of supra-generic units within the Family Scincidae (Squamata). *Zootaxa* **5067**(3): 301–351. doi: 10.11646/zootaxa.5067.3.1
- Shea, G.M., and Scanlon, J.D. (2007). Revision of the small tropical whipsnakes previously referred to *Demansia olivacea* (Gray, 1842) and *Demansia torquata* (Günther, 1862) (Squamata: Elapidae). *Records of the Australian Museum* **59**: 117–142.
- Shea, G., Thomson, S., and Georges, A. (2020). The identity of *Chelodina oblonga* Gray 1841 (Testudines: Chelidae) reassessed. *Zootaxa* **4779**(3): 419–437. doi: 10.11646/zootaxa.4779.3.9
- Smith, A. (1838). Contributions to South African Zoology. No. I. *Magazine of Natural History* **2**(13): 30–33.
- Smith, A. (1846). *Illustrations of the Zoology of South Africa, consisting chiefly of figures and descriptions of the objects of natural history collected during an expedition into the interior of South Africa, in the years 1834, 1835, and 1836, fitted out by "The Cape of Good Hope Association for Exploring Central Africa."* Reptilia. Smith, Elder & Co., London. pl. L and two unnumbered pages following.
- Steindachner, F. (1870). Herpetologische Notizen (II). Über einige neue oder seltene Reptilien des Wiener Museums. *Sitzungsberichte der Mathematisch-Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften, Wien* **62**(21): 336–349 and pl. I–VIII.
- Storr, G.M. (1978). Whip snakes (*Demansia*, Elapidae) of Western Australia. *Records of the Western Australian Museum* **6**(3): 287–307.
- Storr, G.M., and Hanlon, T.M.S. (1980). Herpetofauna of the Exmouth region, Western Australia. *Records of the Western Australian Museum* **8**(3): 423–440.
- Storr, G.M., and Harold, G. (1978). Herpetofauna of the Shark Bay region, Western Australia. *Records of the Western Australian Museum* **6**(4): 449–467.
- Storr, G.M., and Harold, G. (1980). Herpetofauna of the Zuytdorp Coast and hinterland, Western Australia. *Records of the Western Australian Museum* **8**(3): 359–375.

- Storr, G.M., and Harold, G. (1984). Herpetofauna of the Lake MacLeod region, Western Australia. *Records of the Western Australian Museum* **11**(2): 173–189.
- Storr, G.M., and Harold, G. (1985). Herpetofauna of the Onslow region, Western Australia. *Records of the Western Australian Museum* **12**(3): 277–291.
- Storr, G.M., and Johnstone, R.E. (1983). Snakes of the Perth Metropolitan Area. *SWANS Wildlife Journal* **13**(2): 20–24.
- Storr, G.M., Hanlon, T.M.S., and Dunlop, J.N. (1983). Herpetofauna of the Geraldton region, Western Australia. *Records of the Western Australian Museum* **10**(3): 215–234.
- Storr, G.M., Smith, L.A., and Johnstone, R.E. (1986). *Snakes of Western Australia*. Western Australian Museum, Perth.
- Wallach, V., Williams, K.L., and Boundy, J. (2014). *Snakes of the World. A catalogue of living and extinct species*. CRC Press, Boca Raton.
- 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.
- Williams, C., and Maier, C. (2019). *A Tribute to the Reptiles and Amphibians of Australia and New Zealand*. Reed New Holland, Wahroonga.
- Wilson, S.K., and Knowles, D.G. (1988). *Australia's Reptiles. A photographic reference to the terrestrial reptiles of Australia*. William Collins, Sydney.
- Wilson, S., and Swan, G. (2017). *A Complete Guide to Reptiles of Australia*. (5th Edition). Reed New Holland, Sydney.

MANUSCRIPT RECEIVED 7 AUGUST 2023; ACCEPTED 17 NOVEMBER 2023.