

**Five new species of Australian venomous snake, within the Australian genus *Brachyuropis* Günther, 1863 (Serpentes: Elapidae).**

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**ABSTRACT**

As part of an ongoing audit of Australian reptiles, specimens of the fossorial snake *Brachyuropis* Günther, 1863 from across all the known range of the putative species were examined.

Twelve formally described and named species were recognized.

In accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended, this paper formally describes as new species, five well recognized forms previously treated as races of other species.

One species was formally regarded as a variant of *Brachyuropis campbelli* (Kinghorn, 1929), two as variants of *Brachyuropis incinctus* (Storr, 1967) and another two as variants of *Brachyuropis roperi* (Kinghorn, 1931). All are consistently morphologically divergent from their closest congener and also geographically divergent with no known gene flow between populations.

Any later name coined by Wolfgang Wüster and his gang of thieves (as sought in Kaiser *et al.* 2013 as amended frequently) should therefore be ignored.

**Keywords:** Snakes; taxonomy; nomenclature; Elapidae; Australia; Western Australia; Northern Territory, Queensland; *Brachyuropis*; *approximans*; *australis*; *campbelli*; *fasciatus*; *fasciolatus*; *incinctus*; *morrisi*; *murrayi*; *pulchella*; *roperi*; *semifasciatus*; *woodjonesi*; new species; *alexanteneri*; *paultamisi*; *paulwoolfi*; *lesshearimi*; *richardshearimi*.

**INTRODUCTION**

An audit of Australian reptiles spanning more than 40 years included inspection of all species of snake within the putative genus *Brachyuropis* Günther, 1863 as well as a review of existing and available literature of relevance.

Current taxonomic arrangements were inspected and included assignment of relevant specimens from all relevant regions to previously described and named species.

All available names as listed by Cogger *et al.* (1983) were scrutinized in terms of whether or not they were for valid species taxa, or merely synonyms of others.

Two more recently described forms, namely *Brachyuropis morrisi* (Horner, 1998) and *Brachyuropis murrayi* (Wells and Wellington, 1985) were also looked at and in my considered view almost certainly include two species-level taxa, albeit closely allied forms and so both also recognized herein.

The purpose of this exercise was to formulate a robust taxonomy for the genus, including resurrection of names as appropriate or synonymising names as needed, as well as to name any potentially unnamed forms.

The results follow.

**A NOTE ON THE NOMENCLATURE OF *BRACHYUROPHIS MURRAYI* WELLS AND WELLINGTON, 1985.**

The putative taxon *Brachyuropis murrayi* (Wells and Wellington, 1985) is from the top end of the Northern Territory, Australia.

It is tentatively here treated as a valid species based on the diagnosis in the original description.

I note that *Brachyuropis murrayi* (Wells and Wellington, 1985) has been recklessly overlooked by most, if not all publishing herpetologists in Australia since 1985, due no doubt to the reckless and deliberate misinformation of the Wolfgang Wüster gang of thieves, who have tried to have their gang dishonestly over-write and rename species of people they choose to dislike (including Wells and Wellington) as detailed in their various manifestos, Kaiser *et al.* (2013) and Kaiser (2012a, 2012b, 2013, 2014a, 2014b).

Wüster and his gang of thieves, in acts of extreme taxonomic vandalism then attempt to get others to use their illegally coined names. The names are illegal under the CITES Treaty and other international agreements that most countries, including Australia, the UK, USA, and European Union have signed.

The various illegal actions of the Wüster gang and their extreme damage to science as well as wildlife conservation have been detailed elsewhere. All arguments presented by the gang have been shown to be invalid or based on lies. See for example Dubois *et al.* (2019), Hoser (2007, 2009, 2012a, 2012b, 2013, 2015a-f, 2019a-b).

Having read the relevant description of Wells and Wellington (1985) at pages 44 and 45 of the relevant publication, the description is particularly detailed and goes far beyond what any valid scientific description requires under the rules of the *International Code of Zoological Nomenclature* (editions 2-4).

In the process of auditing specimens and available names for species, I found that with a few exceptions, all specimens conformed with the following list of named species, with a few exceptions.

The list of recognized and already known species in this list differs from those presented in recent texts including Cogger (2014), Wilson and Swan (2017), Eipper and Eipper (2019) and Allen and Vogel (2019) because quite simply those authors have failed to properly review the primary literature, let alone inspect any reasonable number of the relevant taxa.

I do take issue with certain people who write books on snakes, largely by cutting and pasting information gleaned from "Google", each of whom then chooses prostitute their book as a definitive work based on years of non-existent research and then present themselves as experts, when the defects in their works may in fact outweigh any good within them.

See for example the accounts of Allen and Vogel (2019), which appear to have their factual information based on little more than a few telephone conversations with serial trouble maker and thief, Wolfgang Wüster, or from Wüster's steady stream of "Facebook" posts, the end product being a complete abortion of a text with a smattering of a reasonable quantity of fine photographs also presumably or quite likely sourced from "Google Images".

Incorrect information on numerous species and genera, non-stop bootlegging of works of others without attribution, which also happens to be in breach of copyright laws, wrong scientific names and wrong information like "*Brachyuropis incinctus* (Storr, 1868)" (sic) are repeated throughout the book.

So in terms of some of these recent herpetological texts, it really is a case of "buyer beware".

On the basis of the preceding summary, there is no doubt that the classification system presented in this paper, is the most correct one for the genus as of 2020 on the basis of all available information.

#### MATERIALS, METHODS AND RESULTS

Besides inspecting live specimens, museum specimens and quality photos with accurate location data, I also reviewed all relevant available literature, including the primary literature for each relevant species and not just third hand comments from persons who have not. This included the following:

Allen and Vogel (2019), Boulenger (1896), Cogger (2014), Cogger *et al.* (1983), Duméril *et al.* (1854), Eipper and Eipper (2019), Glauert (1954), Gow (1977), Günther (1858, 1863, 1872), Horner (1998), Hoser (1989), Houston (1976), Kinghorn (1929, 1931), Krefft (1864, 1865, 1869), Lee *et al.* (2016), Longman (1916), Lucas and Frost (1896), Mackay (1949), Mengden (1983), Ride *et al.* (1999), Sanders *et al.* (2008), Schembri and Jolly (2017), Stirling and Zietz (1893), Storr (1967, 1979), Storr *et al.* (2002), Thomson (1934), Wells and Wellington (1984, 1985), Wilson (2015), Wilson and Swan (2017) including sources cited therein.

Material relevant to this paper was stolen during an illegal armed raid by government wildlife officers on our research facility on 17 Aug 2011 and this was not returned in spite of orders by courts to do so (Court of Appeal Victoria 2014, Victorian Civil and Administrative Tribunal 2015).

The destructive illegal armed raid was initiated by false complaints made by associates of the Wüster gang.

The actions of the raid and the numerous bogus criminal charges arising from it, all of which were defended in court and won by myself (i.e. all claims by the wildlife department were found to be false) (Court of Appeal Victoria 2014, Victorian Civil and Administrative Tribunal 2015), delayed the publication of this paper and others in any form indefinitely.

In terms of the formal descriptions below, the spelling of the new names should not be changed unless absolutely mandated by the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended, or superseding publication.

Sections of descriptions below may be duplicated in order to ensure compliance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

There is no conflict of interest in terms of this paper and assistances of many people including Museum curators and the like are acknowledged, as are the assistance's of peer reviewers in this and all other papers I have published in the past 40 years of a taxonomic or nomenclatural nature.

Unless otherwise stated, all material downloaded from the internet and cited as such was last downloaded and checked on 7 February 2020.

#### FINAL RESULTS

The complete list of valid species based on morphology and divergence based on all available evidence as of 2020 and using all available names is given below. New names are assigned to previously unnamed forms and those descriptions follow this list. Diagnostic information for each of the previously named taxa can be obtained from the primary literature as cited herein.

Currently recognized and well defined species within the genus are as follows:

- Brachyuropis approximans* (Glauert, 1954)
- Brachyuropis australis* (Krefft, 1864)
- Brachyuropis campbelli* (Kinghorn, 1929)
- Brachyuropis fasciatus* (Stirling and Zietz, 1893)
- Brachyuropis fasciolatus* (Günther, 1872)
- Brachyuropis incinctus* (Storr, 1967)
- Brachyuropis morrisi* (Horner, 1998)
- Brachyuropis murrayi* Wells and Wellington, 1985
- Brachyuropis pulchella* (Lucas and Frost, 1896)
- Brachyuropis roperi* (Kinghorn, 1931)
- Brachyuropis semifasciatus* Günther, 1863
- Brachyuropis woodjonesi* (Thomson, 1934)

The twelve species recognized here is contrary to the eight recognized species (both by name and number) seen in Cogger (2014) and most other texts in the period since.

The names used in the above list are the correct ones using the correct application of the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Five new species are formally named below in this paper.

One species was formerly treated as a southern race of *Brachyuropis campbelli* (Kinghorn, 1929), two were formerly treated as eastern populations of *B. incinctus* (Storr, 1967) and two others as southern and western populations of *B. roperi* (Kinghorn, 1931).

#### **BRACHYUROPHIS ALEXANTENORI SP. NOV.**

**LSID** urn:lsid:zoobank.org:act:0ECF73EE-172C-4294-AA83-D2A05B94414D

**Holotype:** A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number: J90210 collected at Bexley station, 25 km North-west of Longreach in Queensland, Australia, Latitude 23.20 S., Longitude 144.3167 E. This government-owned facility allows access to its holdings.

**Paratype:** A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number: J90211 collected at Bexley station, 25 km North-west of Longreach in Queensland, Australia, Latitude 23.20 S., Longitude 144.3167 E.

**Diagnosis:** *Brachyuropis alexantenori* sp. nov. has until now been treated as a southern population of *Brachyuropis campbelli* (Kinghorn, 1929). The same situation has existed for

another similar taxon *B. woodjonesi* (Thomson, 1934).

Both *B. alexanteneri* sp. nov. and *B. woodjonesi* are readily separated from *B. campbelli* by having 15 instead of 17 mid-body scale rows.

*B. alexanteneri* sp. nov. is readily separated from *B. woodjonesi* and *B. campbelli* by colouration. *B. alexanteneri* sp. nov. and *B. campbelli* has an absence of any prominent dark or black marking on the rostral, versus one in *B. woodjonesi*. Dorsally, *B. alexanteneri* sp. nov. is reddish in colour with narrow and indistinct purplish-brown crossbands, including on the flanks. The indistinctness of the markings in this taxon is caused by significant amounts of white at the anterior end of most of the dorsal scales.

By contrast the dorsal pattern of both *B. woodjonesi* and *B. campbelli* is a pattern of distinct and well defined alternating dark red and dark blackish bands usually running across the body and flanks, or occasionally the darker bands not being fully formed on the flanks. There is a general lack of white at the anterior end of each dorsal scale, which accounts for the very distinctive dorsal pattern in these two species.

*B. campbelli* in life is depicted on page 250 of Wilson (2015), lower image.

*B. woodjonesi* in life is depicted on page 250 of Wilson (2015) upper image and page 39 of Allen and Vogel (2019) top right and middle left images.

*B. alexanteneri* sp. nov. in life is depicted on page 39 of Allen and Vogel (2019), middle right image.

**Distribution:** *B. campbelli* is found in the lower Cape York region, including Almeda and Mungana.

*B. woodjonesi* is found in the upper region of Cape York, including Archer River, Weipa, Laura and Wenlock River.

*B. alexanteneri* sp. nov. is found in the region between Barcardine and Winton in mid-central Queensland.

The three species *B. alexanteneri* sp. nov., *B. woodjonesi* and *B. campbelli* are readily separated from all others in the genus *Brachyuropis* by the following suite of characters: Nasal in contact with pre-ocular; frontal about as broad as long and about three times as long as a supraocular; dark dorsal body bands, less than 60, 3 scales wide at widest point for *B. woodjonesi* and *B. campbelli*, or far less than that and indistinct for *B. alexanteneri* sp. nov..

**Etymology:** Named in honour of Alex Antenor, originally from Sydney, New South Wales, Australia, for his many contributions to herpetology in Australia, including through his work with famous frog and tadpole expert Marion Anstis at the Australian Herpetological Society and Australian Museum in the 1970's and 1980's and ongoing into the year 2020.

#### **BRACHYUROPHIS PAULTAMISI SP. NOV.**

**LSID** urn:lsid:zoobank.org:act:B9A074CC-3581-4488-ADC0-58234A4C1AD3

**Holotype:** A preserved specimen at the Queensland Museum, Brisbane, Australia, specimen number: J39033 collected 27.3 km west of Mount Isa in Queensland on the Barkly Highway, Australia. Latitude 20.5167 S., Longitude 139.4333 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.64336 collected from Mount Isa in Queensland, Australia, Latitude -20.733 S., Longitude 139.483 E.

**Diagnosis:** *Brachyuropis paultamisi* sp. nov. and *B. paulwoolffi* sp. nov. have until now been treated as regional populations of the well-known taxon *B. incinctus* (Storr, 1967). The two species are geographically divergent and morphologically distinct.

*B. paultamisi* sp. nov. and *B. paulwoolffi* sp. nov. are characterised by a lack of a black spot or marking on the anterior of the rostral as seen in *B. incinctus*. *B. paultamisi* sp. nov. further lacks the dark purple or blackish etching of dorsal scales as seen in *B. incinctus*. When there is etching of dorsal

scales on *B. paultamisi* sp. nov. it is light in colour.

*B. paulwoolffi* sp. nov. is separated from both *B. incinctus* and *B. paultamisi* sp. nov. by having a significantly widened rostral, as opposed to strongly triangular in the other two species.

Furthermore *B. paulwoolffi* sp. nov. is separated from the other two species by the size and shape of scales between the eyes. The supraocular in *B. paulwoolffi* sp. nov. is large and squarish, versus small and narrow and somewhat triangular in shape in both *B. incinctus* and *B. paultamisi* sp. nov..

In turn this alters the shape of the frontal shield, which is reduced in size in *B. paulwoolffi* sp. nov. as compared to the other two species. The front line of the suture of this scale is somewhat forward, giving it a diamond head appearance as it intersects the prefrontals, whereas at the same juncture in both *B. incinctus* and *B. paultamisi* sp. nov. the same point is relatively flat, giving the scale a straightish line at the anterior edge. The frontal shield is wide in both *B. incinctus* and *B. paultamisi* sp. nov. versus somewhat squarish in *B. paulwoolffi* sp. nov..

*B. paulwoolffi* sp. nov. is separated further from *B. paultamisi* sp. nov. by the width of the light band across the nape in between two areas of black on the head and upper neck.

Counting straight line (not diagonal), this is 5 scales in depth in *B. paulwoolffi* sp. nov., versus 3-4 in *B. paultamisi* sp. nov.. The width of the light band across the nape in between two areas of black on the head and upper neck is variable within *B. incinctus*.

*B. paultamisi* sp. nov., *B. paulwoolffi* sp. nov. (both treated as *B. incinctus*), *B. incinctus* and *B. morrissi* (Horner, 1998) in most recent texts are separated from all other species in the genus by having a body that is uniform and without cross-bands of any sort, except for a dark collar and associated markings.

*B. morrissi* is separated from all of *B. paultamisi* sp. nov., *B. paulwoolffi* sp. nov. (both treated as *B. incinctus*) and *B. incinctus* by having 15 midbody scale rows combined with a ventral and subcaudal count of less than 165 and only the lower postocular scale is in broad contact with the anterior temporal scale. By contrast both *B. paultamisi* sp. nov., *B. paulwoolffi* sp. nov. (both treated as *B. incinctus*) and *B. incinctus* have 17 midbody scale rows combined with a ventral and subcaudal count of more than 165 and both postocular scales are in broad contact with the anterior temporal scale.

*B. paulwoolffi* sp. nov. in life can be seen Schembri and Jolly (2017) on page 114.

*B. incinctus* in life can be seen in Cogger (2014) on page 867 at bottom right.

*B. paultamisi* sp. nov. in life can be seen in Wilson (2015) at page 250 bottom.

**Distribution:** *B. paultamisi* sp. nov. is generally found in inland parts of Queensland from the Mount Isa area south-west through the western Brigalow belt.

*B. paulwoolffi* sp. nov. is known only from the type locality and holotype specimen collected from the Einasleigh Uplands Bioregion of north-eastern Queensland and is believed to be confined to this general area.

*B. incinctus* is a central Australian endemic, with a distribution centred on the MacDonnell Ranges region, being a separate biogeographical realm for relevant hill dwelling forms.

**Etymology:** Named in honour of Paul Tamis, originally of Moolap, Geelong, Victoria, Australia in recognition of his many contributions to herpetology in Australia, including through a lot of difficult work organising and running the Victorian Association of Amateur Herpetologists with Mick Pugh, Mip Pugh, Neil Davie, and the Bigmore Family, including Stewy and James over many years and including in the 1990's a time of turbulence in Australian herpetology, when as a result of the publications of the books *Smuggled: The Underground Trade in Australia's Wildlife* (Hoser, 1993) and *Smuggled-2: Wildlife trafficking, crime and corruption in Australia* (Hoser, 1996), wildlife laws in Australia were rewritten to allow private individuals and hobbyists to keep live reptiles as pets for the first time in decades.

**BRACHYUROPHIS PAULWOOLFI SP. NOV.**

**LSID** urn:lsid:zoobank.org:act:F3858859-A5F0-4D55-AA59-E033020AC438

**Holotype:** A preserved specimen at the Queensland Museum, Brisbane, Australia, specimen number: J95750, collected at Talaroo Station, 55.6 km west-northwest of Mount Surprise, Queensland, Australia, Latitude 18.0232 S., Longitude 143.4851 E. This government-owned facility allows access to its holdings.

A more detailed description of the holotype and photos of the specimen in life can be found in Schembri and Jolly (2017).

**Diagnosis:** *Brachyuropis paultamisi sp. nov.* and *B. paulwoolfi sp. nov.* have until now been treated as regional populations of the well-known taxon *B. incinctus* (Storr, 1967). The two species are geographically divergent and morphologically distinct.

*B. paultamisi sp. nov.* and *B. paulwoolfi sp. nov.* are characterised by a lack of a black spot or marking on the anterior of the rostral as seen in *B. incinctus*. *B. paultamisi sp. nov.* further lacks the dark purple or blackish etching of dorsal scales as seen in *B. incinctus*. When there is etching of dorsal scales on *B. paultamisi sp. nov.* it is light in colour.

*B. paulwoolfi sp. nov.* is separated from both *B. incinctus* and *B. paultamisi sp. nov.* by having a significantly widened rostral, as opposed to strongly triangular in the other two species.

Furthermore *B. paulwoolfi sp. nov.* is separated from the other two species by the size and shape of scales between the eyes. The supraocular in *B. paulwoolfi sp. nov.* is large and squarish, versus small and narrow and somewhat triangular in shape in both *B. incinctus* and *B. paultamisi sp. nov.*

In turn this alters the shape of the frontal shield, which is reduced in size in *B. paulwoolfi sp. nov.* as compared to the other two species. The front line of the suture of this scale is somewhat forward, giving it a diamond head appearance as it intersects the prefrontals, whereas at the same juncture in both *B. incinctus* and *B. paultamisi sp. nov.* the same point is relatively flat, giving the scale a straightish line at the anterior edge. The frontal shield is wide in both *B. incinctus* and *B. paultamisi sp. nov.* versus somewhat squarish in *B. paulwoolfi sp. nov.*

*B. paulwoolfi sp. nov.* is separated further from *B. paultamisi sp. nov.* by the width of the light band across the nape in between two areas of black on the head and upper neck.

Counting straight line (not diagonal), this is 5 scales in depth in *B. paulwoolfi sp. nov.*, versus 3-4 in *B. paultamisi sp. nov.*. The width of the light band across the nape in between two areas of black on the head and upper neck is variable within *B. incinctus*. *B. paultamisi sp. nov.*, *B. paulwoolfi sp. nov.* (both treated as *B. incinctus*), *B. incinctus* and *B. morrissi* (Horner, 1998) in most recent texts are separated from all other species in the genus by having a body that is uniform and without cross-bands of any sort, except for a dark collar and associated markings.

*B. morrissi* is separated from all of *B. paultamisi sp. nov.*, *B. paulwoolfi sp. nov.* (both treated as *B. incinctus*) and *B. incinctus* by having 15 midbody scale rows combined with a ventral and subcaudal count of less than 165 and only the lower postocular scale is in broad contact with the anterior temporal scale. By contrast both *B. paultamisi sp. nov.*, *B. paulwoolfi sp. nov.* (treated as *B. incinctus*) and *B. incinctus* have 17 midbody scale rows combined with a ventral and subcaudal count of more than 165 and both postocular scales are in broad contact with the anterior temporal scale.

*B. paulwoolfi sp. nov.* in life can be seen Schembri and Jolly (2017) on page 114.

*B. incinctus* in life can be seen in Cogger (2014) on page 867 at bottom right.

*B. paultamisi sp. nov.* in life can be seen in Wilson (2015) at page 250 bottom.

Schembri and Jolly (2017) speculated that the range of *B. incinctus* as defined by them was continuous from the main population in central Australia to that of the Einasleigh Uplands Bioregion of northeastern Queensland. This contention is

generally rejected on the basis that most of the intervening area (over 400 km in a straight line measurement) is not of suitable habitat for all relevant species *B. paultamisi sp. nov.*, *B. paulwoolfi sp. nov.* (both treated as *B. incinctus*) and *B. incinctus*, noting that all have a known preference to hilly rocky areas or sites immediately proximal to such places.

It is because the populations of *B. paultamisi sp. nov.*, *B. paulwoolfi sp. nov.* (both until now treated as *B. incinctus*) and *B. incinctus* are reproductively isolated from one another and believed to have been for a long period, that I had no hesitation in naming these two unnamed forms at the species level.

**Distribution:** *B. paulwoolfi sp. nov.* is known only from the type locality and holotype specimen collected from Einasleigh Uplands Bioregion of north-eastern Queensland and is believed to be confined to this general area.

*B. paultamisi sp. nov.* is generally found in inland parts of Queensland from the Mount Isa area south-west through the western Brigalow belt.

*B. incinctus* is a central Australian endemic, with a distribution centred on the MacDonnell Ranges region, being a separate biogeographical realm for relevant hill dwelling forms.

**Etymology:** Named in honour of Paul Woolf of Walloon, Queensland, Australia for services to herpetology spanning some decades, including as foundation president of the Herpetological Society of Queensland Incorporated and countless other important actions and often behind the scenes logistical work in terms of numerous fieldwork projects across Australia, for which other scientists often get the credit.

**BRACHYUROPHIS LESSHEARIMI SP. NOV.**

**LSID** urn:lsid:zoobank.org:act:B9D408E7-4307-4CCB-BEE1-3D00E42707BF

**Holotype:** A preserved specimen at the Western Australian Museum, Perth, Western Australia, specimen number: R21506, collected at Tenant Creek, Northern Territory, Australia, Latitude 19.6484 S., Longitude 134.1900 E.

This government-owned facility allows access to its holdings.

**Paratypes:** Three preserved specimens at the Western Australian Museum, Perth, Western Australia, specimen numbers: R21507, R21508 and R21509, collected at Tenant Ck., NT, Australia, Latitude 19.6484 S., Longitude 134.1900 E.

**Diagnosis:** That the putative species *Brachyuropis roperi* (Kinghorn, 1931) is in fact a species complex has been known or speculated by numerous authors including Storr (1967), Wells and Wellington (1985), who formally named a form of this putative species and even the taxonomically conservative Harold Cogger in Cogger (2014) agreed there was other species.

The allied putative species *B. campbelli* (Kinghorn, 1929) is formally split three ways in this paper and all are readily separated from the other species remaining in the *B. roperi* complex.

The species *B. roperi* (Kinghorn, 1929) has a type locality of the Roper River, in the Northern Territory and was identified by Storr (1967) and again Wells and Wellington (1985) as being a form with 15 midbody rows. *B. murrayi* Wells and Wellington, 1985, *B. lesshearimi sp. nov.* and *B. richardshearimi sp. nov.* all have 17 midbody rows and are easily separated from this species on the basis of this character alone.

Both *B. murrayi* and *B. roperi* have a small and not upturned or at best only marginally upturned rostral, versus a large and significantly upturned rostral in *B. lesshearimi sp. nov.* and *B. richardshearimi sp. nov.*

*B. lesshearimi sp. nov.* and *B. richardshearimi sp. nov.* have a short-wide frontal, not seen in both *B. murrayi* and *B. roperi*.

Both *B. murrayi* and *B. roperi* are characterised by a dorsal pattern incorporating broad and well defined alternating dark and light bands, typically purple-black and orange-brown in colour, the lighter cross-bands being narrower, but at least two scales wide. By contrast both *B. lesshearimi sp. nov.* and *B. richardshearimi sp. nov.* have a dorsal pattern of more numerous

bands (more than 35 versus less than 35), caused primarily by a narrowing of the lighter bands to less than 2 scales wide.

*B. lessshearimi* sp. nov. has a dorsal colouration of deep orange with dark purple and dark orange crossbands, whereas *B. richardshearimi* sp. nov. has a similar dorsal pattern but with blackish purple and creamish yellow cross bands.

There is a narrow orange band across the nape of *B. lessshearimi* sp. nov. versus a narrow yellow band in *B. richardshearimi* sp. nov..

The nuchal blotch is 14 or more scales long (down the body) in *B. murrayi* and *B. roperi* versus 13 scales or less in *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov..

*B. murrayi*, *B. roperi*, *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. are readily separated from all others in the genus *Brachyuropis* by the following suite of characters: Nasal in contact with pre-ocular; frontal about as broad as long and about three times as long as a supraocular; dark dorsal body bands, less than 60, 4-5 scales wide at widest point for *B. murrayi* and *B. roperi* or far less than that and indistinct for *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. these two species of which are in turn are separated from the otherwise similar *B. alexanteneri* sp. nov. (of Queensland) by having 17 instead of 15 midbody rows.

*B. roperi* in life is depicted in life in Cogger (2014) at page 869, bottom left.

*B. murrayi* in life is depicted in Gow (1977).

*B. lessshearimi* sp. nov. in life is depicted in Allen and Vogel (2019) on page 43, top left image.

*B. richardshearimi* sp. nov. in life is depicted in Allen and Vogel (2019) on page 43, middle left image, or Hoser (1989) on page 171 bottom right image.

**Distribution:** *B. lessshearimi* sp. nov. is known only from the Tenant Creek region of the Northern Territory.

*B. richardshearimi* sp. nov. is found in the drier parts of the Kimberley District in Western Australia.

*B. roperi* is herein restricted to the type locality and areas of suitable habitat west and into northern parts of the Kimberley District of Western Australia.

*B. murrayi* is only known from the type locality as in the environs of Darwin, Northern Territory, Australia.

**Etymology:** Named in honour of Les Shearim, of Sydney, New South Wales, Australia in recognition of his wildlife conservation work, including as a government licensed snake handler.

**BRACHYUROPHIS RICHARDSHEARIMI SP. NOV.**

**LSID** urn:lsid:zoobank.org:act:61D1C640-D6BC-4A0B-9124-9AC5B9CF1736

**Holotype:** A preserved specimen at the Western Australian Museum, Perth, Western Australia, specimen number: R17127, collected at King Leopold Range, Western Australia, Australia, Latitude 17.5000 S., Longitude 125.7500 E. This government-owned facility allows access to its holdings.

**Paratypes:** Four preserved specimens at the Western Australian Museum, Perth, Western Australia, specimen numbers: R13823, R 14187, R20349 and R13822 collected at Derby, WA., Australia, Latitude 17.44 S., Longitude 123.744 E.

**Diagnosis:** That the putative species *Brachyuropis roperi* (Kinghorn, 1931) is in fact a species complex has been known or speculated by numerous authors including Storr (1967), Wells and Wellington (1985), who formally named a form of this putative species, and the taxonomically conservative Harold Cogger in Cogger (2014).

The allied putative species *B. campbelli* (Kinghorn, 1929) is formally split three ways in this paper and all are readily separated from the remaining species in the *B. roperi* complex. The species *B. roperi* (Kinghorn, 1929) has a type locality of the Roper River, in the Northern Territory and was identified by Storr (1967) and again Wells and Wellington (1985) as being a form with 15 midbody rows.

*B. murrayi* Wells and Wellington, 1985, *B. lessshearimi* sp. nov.

and *B. richardshearimi* sp. nov. all have 17 midbody rows and are easily separated from the other species on the basis of this character alone.

Both *B. murrayi* and *B. roperi* have a small and not upturned or at best only marginally upturned rostral, versus a large and significantly upturned rostral in *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov..

*B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. have a short-wide frontal, not seen in both *B. murrayi* and *B. roperi*.

Both *B. murrayi* and *B. roperi* are characterised by a dorsal pattern incorporating broad and well defined alternating dark and light bands, typically purple-black and orange-brown in colour, the lighter cross-bands being narrower, but at least two scales wide.

By contrast both *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. have a dorsal pattern of more numerous bands (more than 35 versus less than 35), caused primarily by a narrowing of the lighter bands to less than 2 scales wide.

*B. lessshearimi* sp. nov. has a dorsal colouration of deep orange with dark purple and dark orange crossbands, whereas *B. richardshearimi* sp. nov. has a similar dorsal pattern but with blackish purple and creamish yellow cross bands.

There is a narrow orange band across the nape of *B. lessshearimi* sp. nov. versus a narrow yellow band in *B. richardshearimi* sp. nov..

The nuchal blotch is 14 or more scales long (down the body) in *B. murrayi* and *B. roperi* versus 13 scales or less in *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov..

*B. murrayi*, *B. roperi*, *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. are readily separated from all others in the genus *Brachyuropis* by the following suite of characters:

Nasal in contact with pre-ocular; frontal about as broad as long and about three times as long as a supraocular; dark dorsal body bands, less than 60, 4-5 scales wide at widest point for *B. murrayi* and *B. roperi* or far less than that and indistinct for *B. lessshearimi* sp. nov. and *B. richardshearimi* sp. nov. these two species of which are in turn are separated from the otherwise similar *B. alexanteneri* sp. nov. (of Queensland) by having 17 instead of 15 midbody rows.

*B. roperi* in life is depicted in life in Cogger (2014) at page 869, bottom left.

*B. murrayi* in life is depicted in Gow (1977).

*B. lessshearimi* sp. nov. in life is depicted in Allen and Vogel (2019) on page 43, top left image.

*B. richardshearimi* sp. nov. in life is depicted in Allen and Vogel (2019) on page 43, middle left image, or Hoser (1989) on page 171 bottom right image.

**Distribution:** *B. lessshearimi* sp. nov. is known only from the Tenant Creek region of the Northern Territory.

*B. richardshearimi* sp. nov. is found in the drier parts of the Kimberley District in Western Australia.

*B. roperi* is herein restricted to the type locality and areas of suitable habitat west and into northern parts of the Kimberley District of Western Australia.

*B. murrayi* is only known from the type locality as in the environs of Darwin, Northern Territory, Australia.

**Etymology:** Named in honour of Richard (Dick) Shearim, of Green Valley, Western Sydney, New South Wales, Australia, now deceased, in recognition of his wildlife conservation work, including as a government licensed snake handler.

**CONSERVATION STATUS OF THE NEWLY DESCRIBED SPECIES**

No known threats exist at present, save for the fact that wildlife laws in Western Australia prevent private individuals from keeping, breeding, or studying this taxon, as noted in Hoser (1989, 1991, 1993, 1996, 2019a, 2019b),

The dysfunctional government-owned Zoo businesses in most States and government-backed zoos in the same or other states, have zero interest in these species or their long-term

survival due to their lack of “wow” factor for paying visitors, or as a means to attract them. Hence there is no captive population to ensure against calamity in the wild.

If the Australian government persists with its “Big Australia Policy”, (see for example Saunders 2019), that being a long-term aim to increase the human population in Australia to over 100 million people by year 2150 (from the present 25 million as of 2019), all sorts of unforeseen threats to the survival of these species may emerge.

These are relatively little-known species as compared to many other Australian elapid species and due to this I recommend further research on the taxa and potential future conservation threats in line with the previous paragraph, including by direct human activities as well as potential threats caused by changed vegetation regimes, introduced pests and potential pathogens, including those introduced via the legal importation of foreign reptiles by government-owned zoos and associated entities.

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**END NOTE**

When looking at the extant species list for the genus *Brachyuropsis* Günther, 1863 as published previously in this paper, conspicuous by lacking brackets around the name authority, author's names were just two named species. One was the taxon *Brachyuropsis semifasciatus* Günther, 1863, type for the genus and formally named at a time when many newly named species were so new to science, that erection of a new genus was commonplace and justified. This in itself is not unusual.

The other taxon, was none other than *Brachyuropsis murrayi* Wells and Wellington, 1985, formally named by Richard Wells and Ross Wellington as recently as 1985.

Not one other herpetologist who named relevant species had the scientific nous to assign their newly named species to the correct genus, based on published and available names, which is exactly why only the Wells and Wellington and Günther named species are written with the name authority names placed outside brackets. The rest are not in their original configuration.

Significant is that in the 150 years since the original erection of the genus *Brachyuropsis*, the two men, Richard Wells and Ross Wellington were the only two herpetologists in Australia naming relevant species to have anything like a realistic grip on this genus of snakes and the assemblage of species within them, including how many there in fact were and to correctly assign them.

Looking at the more recent description of Horner in 1998, in which he named the species *Brachyuropsis morrisoni* (Horner, 1998), incorrectly placed in the genus *Simoselaps* Jan, 1859, one can see that Horner and too many other herpetologists have believed the lies and smear of the Wolfgang Wüster gang of thieves since they tried unsuccessfully to have the Wells and Wellington paper of 1985 formally suppressed by the ICZN for nomenclatural purposes.

As mentioned in the paper above, recent authors including Cogger (2014), Wilson and Swan (2017), Eipper and Eipper (2019) and Allen and Vogel (2019), have by ignoring the Wells and Wellington works and furthermore failing to even inspect relevant primary literature for the relevant species, and worse still in some cases, without even viewing specimens, they have been wholly unable to get a realistic view as to the species composition or diversity in the relevant genus *Brachyuropsis*. From their own publications, it is self evident that no one before or since the much lampooned and derided paper of Wells and Wellington (1985) has had a more accurate and realistic grasp as to the form and content of the genus *Brachyuropsis* in terms of component species.

I note that based on the description itself, the taxon *Brachyuropsis murrayi* Wells and Wellington, 1985 is clearly valid as is *Brachyuropsis woodjonesi* (Thomson, 1934), formally (and sensibly) resurrected by Wells and Wellington (1985).

Both have unfortunately been synonymised by all authors since and I note that not one has provided a shred of evidence to contradict the Wells and Wellington position.

In combination with previously published keys for species of this genus including the material of Storr (1967), Cogger (2014) and this paper (within the relevant descriptions), all 17 species identified by name herein can be readily identified and separated on the basis of robust morphological characters.

The take home message of this end note is that before joining a chorus of hate and lies as peddled by the Wolfgang Wüster gang of thieves, all publishing herpetologists should check all primary literature and specimens themselves before accepting or making any taxonomic judgements.

Contrary to the practices of the Wolfgang Wüster gang of thieves, herpetology depends on science based on evidence and sound scientific practices which should be published after formal and hands off (by the author) peer review by relevant experts. Furthermore any overlooked errors, or changes that may be required with the emergence of new evidence, must be corrected and repaired as soon as possible and before any further potential damage is caused, either by author, publisher or both and not just before publication, but also after if this is the requirement arising after an error is found.

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