

Two new species and thirteen new subspecies within the Australian Skink genus *Eremiascincus* Greer, 1979.

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ABSTRACT

It has been common knowledge among Australian herpetologists that the species diversity within the Australian skink genus *Eremiascincus* Greer, 1979 has been underestimated.

To partially correct this situation, obviously divergent forms are herein formally named as new species or subspecies in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Within the *E. isolepis* (Boulenger, 1887) complex, five species are recognized herein, being *E. isolepis*, *E. foresti* (Kinghorn, 1932) and *E. harwoodi* (Wells and Wellington, 1985) as well as two newly named forms. North Queensland specimens referred to the taxon are herein formally named as a new species *E. gudjal* sp. nov. and specimens from the Arnhem Land escarpment in the Northern Territory are formally named *E. yolngu* sp. nov..

In addition to this, within each of *E. isolepis* and *E. foresti* a new subspecies is formally named for the first time being *E. isolepis jinigudera* subsp. nov. and *E. foresti martu* subsp. nov..

The species *E. musivus*, Mecke, Doughty and Donnellan, 2009 is also formally divided into two subspecies, with the north eastern population being of the newly named and divergent form, being *E. musivus oculorum* subsp. nov..

The species *E. pallida* (Günther, 1875) is split into two divergent subspecies, with the south-western form formally named for the first time as *E. pallida flavescens* subsp. nov..

The northern outlier population of *E. intermedia* (Sternfeld, 1919) from the mid-north of the Northern Territory around the upper reaches of the Roper River system, which has a consistently higher number of body bands is formally named as the subspecies *E. intermedia yungman* subsp. nov..

E. richardsonii (Gray, 1845) is divided into ten morphologically divergent subspecies, including the nominate form and the resurrected "*Hinulia ambigua* De Vis, 1888" as one of them and eight newly named forms being, *E. richardsonii djaru* subsp. nov., *E. richardsonii yindjibarndi* subsp. nov., *E. richardsonii nyiyarparli* subsp. nov., *E. richardsonii baiyungu* subsp. nov., *E. richardsonii ngaanyatjarra* subsp. nov., *E. richardsonii neglectas* subsp. nov., *E. richardsonii pindiini* subsp. nov. and *E. richardsonii wiradjuri* subsp. nov..

The basis of the taxonomic actions has been a thorough review of all previously published relevant literature, including molecular data that indicates divergent lineages as well as inspection of relevant specimens of the putative taxa.

Each newly named form appears to have been allopatrically separated from their nearest relatives by barriers formed from differing habitat, sometimes combined with the impact of closely related and competing species, in particular others within *Eremiascincus*.

Keywords: Australia; skink; reptile; taxonomy; nomenclature; *Eremiascincus*; *Mawsoniascincus*; *Sphenomorphus*; *Hinulia*; *Eremiascincus*; *isolepis*; *foresti*; *harwoodi*; *musivus*; *pallida*; *fasciolatus*; *intermedius*; new species; *gudjal*; *yolngu*; new subspecies; *jinigudera*; *martu*; *oculorum*; *flavescens*; *yungman*; *djaru*; *yindjibarndi*; *nyiyarparli*; *baiyungu*; *ngaanyatjarra*; *neglectas*; *pindiini*; *wiradjuri*.

INTRODUCTION

It has been common knowledge among Australian herpetologists for many years, that the species diversity within the Australian “sand-swimming” skink genus *Eremiascincus* Greer, 1979 has been underestimated.

The genus was first defined by Greer in 1979, consisting of just two putative species, being *E. fasciolatus* (Günther, 1867) and *E. richardsonii* (Gray, 1845).

Previously various other forms were described, but were synonymised within these two taxa as detailed in Cogger *et al.* (1983).

In the decades post-dating the publication of Cogger *et al.* (1983), other species have been added to the genus *Eremiascincus*, by way of resurrecting forms from synonymy, descriptions of new species and the transfer of morphologically similar species into the genus following molecular studies.

Wilson and Swan (2021) claim 11 species within continental Australia and there are another five described forms from the lesser Sundas (3 islands), these consisting of all the widely recognized forms, as in those that appear within contemporary texts.

Notable is that within this collection of named and recognized taxa within the genus *Eremiascincus*, is the conspicuous absence of the form formally named by Wells and Wellington (1985), originally described as “*Glaphyromorphus harwoodi* Wells and Wellington, 1985”, and later synonymised with *E. isolepis* (Boulenger, 1887) by all later authors without explanation or evidence in support of the action.

Obviously that putative taxon (*Glaphyromorphus harwoodi* Wells and Wellington, 1985) was first among many synonym forms that needed to be assessed critically to see if they were in fact valid forms and not merely synonyms as was generally thought.

In terms of “*Glaphyromorphus harwoodi* Wells and Wellington, 1985”, it was a taxon I had inspected in the wild on a number of occasions and I was well convinced that there is no way, it was merely another population of the type form of *E. isolepis* (Boulenger, 1887) as was being stated by relevant publishing “herpetologists” in Australia, either directly or by inference. It was a substantially larger, more heavily built lizard. It was of different colour, habits and also allopatric to the type population of *E. isolepis* (Boulenger, 1887).

It was also separated from *E. isolepis* by a number of known biogeographical barriers and within a wholly divergent and different eco-system.

Anyone can simply go to a photo-sharing website such as “Inaturalist” or “Flickr” and confirm the obvious fact that *E. isolepis* and *E. harwoodi* are not of the same species.

Hence it appears that the non-recognition of *E. harwoodi* as a valid species has been a direct result of the unscientific anti Wells and Wellington doctrine being promulgated by Richard Shine and others in Australian herpetology, as detailed in Hoser (2007) and elsewhere.

The preceding example of non-recognition of a divergent form in the genus *Eremiascincus* is mentioned to indicate an obvious need to re-assess the genus, with a view to formally identifying unrecognized and divergent forms in the complex and preferably before any may become extinct.

Hence the audit of the genus and the final publication of this paper. To partially correct this situation, obviously divergent forms were scrutinized to see if they should be recognized as either species or subspecies and if no synonym names were available, then to formally name them in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (ICZN 2012).

MATERIALS AND METHODS

Specimens of all recognized putative species within *Eremiascincus* Greer, 1979, *sensu* Wilson and Swan (2021), including the five non-Australian species from the Lesser Sundas (Timor, Wetar and Sumba) were inspected from across the putative ranges for each putative taxon.

This included dead, live and photos with good locality data.

Consistent differences were noted and ultimately matched with the ranges of different forms and as a rule were found to be distributed

allopatric to other like specimens of closest related forms.

Relevant literature was also consulted to confirm the absence of any possible synonym forms or names of any potential newly identified taxa, which did not exist beyond those outlined already, or if there were synonym names available, whether or not they could be used for any given newly identified form (herein).

Publications relevant to the ultimate taxonomic and nomenclatural conclusions made herein included

Aplin *et al.* (1993), Boulenger (1887, 1897), Brongersma (1942), Brown (2014), Chapple *et al.* (2019), Cogger (2014), Cogger *et al.* (1983), de Rooij (1915), De Vis (1888), Dunn (1927), Glauert (1960), Gray (1842, 1845), Greer (1979, 1990), Günther (1867, 1875), Hoser (1989, 1991, 2007, 2012, 2015a-g, 2017, 2018, 2019a-b, 2020), Kinghorn (1932), Lidth de Jeude (1895), Mecke and Doughty (2018), Mecke *et al.* (2009, 2013), Mertens (1928, 1930), Peters (1966), Reeder (2003), Ride *et al.* (1999), Shea and Sadlier (1999), Singhal *et al.* (2018), Skinner *et al.* (2013), Smith (1927, 1937), Steindachner (1867), Sternfeld (1919), Storr (1967, 1972, 1974), Swan *et al.* (2022), Swanson (1976), Wells (2009), Wells and Wellington (1984, 1985), Werner (1910), Wilson (2022), Wilson and Knowles (1988), Wilson and Swan (2021) and sources cited therein.

RESULTS

Numerous potentially previously unnamed forms were identified and it was soon apparent that they should all carry proper scientific names.

Relevant synonyms lists for Australian species that have synonyms are published within Cogger *et al.* (1983) and Wells (2009) and are therefore not formally given here again.

In terms of the putative species *E. isolepis* (Boulenger, 1887), it became clear that within this wide-ranging putative species that there were multiple forms.

Five species are recognized herein, including the previously named *E. isolepis* with a type locality of Nichol Bay, Western Australia), *E. foresti* (Kinghorn, 1932), with a type locality of Forrest River, East Kimberley District in Western Australia and *E. harwoodi* (Wells and Wellington, 1985), with a type locality of Brunette Downs Station in the Barkly Tableland District of the Northern Territory as well as two newly named forms. Each of the three preceding forms generally occupy the areas of their type localities, except for *E. harwoodi* which also appears to occupy most of the top third of the Northern Territory, including around Lawn Hill in far north-west Queensland. North-east Queensland specimens referred to the taxon are herein formally named as a new species *E. gudjal sp. nov.*, generally occurring in the dry zone of the lower Cape York, west to about Hughenden.

Specimens from the Arnhem Land escarpment in the Northern Territory are formally named *E. yolngu sp. nov.* and appear to be range restricted to the relevant sandstone plateaux.

There is no molecular basis to divide the five taxa (no data), but each are allopatric to each other and significantly different in form. Furthermore, the two newly named forms occur in areas of known endemism, the north-east Queensland species also being separated from its morphology divergent nearest relative by a wide zone of unsuitable black-soil habitat (the north-central Queensland fold).

In addition to this, within each of *E. isolepis* and *E. foresti* a new subspecies is formally named for the first time being *E. isolepis jinigudera subsp. nov.* and *E. foresti martu subsp. nov.*

The molecular basis for the formal recognition of the divergent form *E. foresti* as being separate from *E. isolepis* is seen in Mecke *et al.* (2009). I note that Wells and Wellington (1985) set a precedent in formally recognising *E. foresti* as valid and no basis to reject this position has even been advanced by any herpetologist within Australia at any time.

This paper also gives a molecular basis to separate each of the preceding two mentioned subspecies, which also happen to morphologically divergent.

The populations are allopatric and separated by known biogeographical barriers, so the subspecies-level differentiation is not altogether surprising.

In terms of the species *E. harwoodi* (Wells and Wellington, 1985), I

simply mention that it is morphologically the most divergent form of the complex within putative *E. isolepis* as currently recognized that it is astounding that it hasn't been widely recognized to date.

Because there is no formal description of that taxon within this paper, and the taxon is not well known in Australian herpetology, I give some relevant identifying information about this species.

E. harwoodi is readily separated from all others in the putative *E. isolepis* complex by the distinctive light yellow-brown dorsum, versus reddish or grey brown in the other species, upper labials (numbering 7) that are white and with light brown etchings, but no dark etching, or bars, or alternating dark reddish-brown and white; there is heavy peppering on the mid dorsum forming what appears to be a darker line down the midline, and plain brown or reduced markings on the dorso-lateral edge.

The species also considerably larger and more robust in build than either *E. isolepis* and *E. foresti* being with a snout-vent length of 40-86 mm, mean of 64.6 mm, versus 29-72 mm, mean of 52 in both *E. isolepis* and *E. foresti* (see Storr 1972).

Wells and Wellington (1985) wrote that their taxon "is another of a growing list of endemic species from the black soil plains of the Barkly Tablelands".

That does not appear to be strictly true.

E. harwoodi appears to be most abundant in elevated and sandy areas adjacent to the black soil plains both on the Barkly Tablelands and to the north and west of there, rather than the black soil areas themselves. Brunette Downs Station and Rockhampton Downs Station immediately to the west have considerable areas of elevated land with mainly red dirt, not covered in black soil as seen more commonly to the south and south-east and also to a lesser extent, within parts of these large commercial properties.

The distribution of *E. harwoodi*, does occupy areas with black soil on some occasions, but only when there are intervening dunes or other sandy soils, from where the main populations seem to be found. They otherwise appear to be absent from the expansive black soil plains themselves.

The species *E. musivus*, Mecke, Doughty and Donnellan, 2009, with a type locality of 20 km east north-east of Karratha, Western Australia is also formally divided into two subspecies, with the allopatric north eastern population being of the newly named and divergent form, being *E. musivus oculorum* subsp. nov.

Again Mecke *et al.* (2009) gives a molecular basis to explain the allopatric divergence and explanation for the consistent physical differences between specimens in each population.

The species *E. pallida* (Günther, 1875), with a type locality of Nickol Bay, Western Australia is split into two divergent subspecies, with the south-western form formally named for the first time as *E. pallida flavescens* subsp. nov.

E. intermedia (Sternfeld, 1919), with a type locality of Hermannsburg Mission, Central Australia, Northern Territory is split into two regionally allopatric subspecies.

The divergent form, which has a consistently higher number of body bands, from the mid-north of the Northern Territory, generally being found in moderately elevated areas around the upper reaches of the Roper River system, is formally named as the subspecies *E. intermedia yungman* subsp. nov.

The pan Australian taxon, *E. richardsonii* (Gray, 1845), with a type locality of Houtman's Abrolhos, Western Australia, with the associated junior synonym of the proximally close *E. monotropis* (Boulenger, 1887) with a type locality of Chapiion Bay, Western Australia (herein treated as a synonym of the nominate form), is divided into ten morphologically divergent subspecies.

This is including the nominate form (combined with *E. monotropis*) and the resurrected "*Hinulia ambigua* De Vis, 1888", with a type locality of Charleville, Queensland, as another of them and eight newly named forms being, *E. richardsonii djaru* subsp. nov., *E. richardsonii yindjibarndi* subsp. nov., *E. richardsonii nyiyarparli* subsp. nov., *E. richardsonii baiyungu* subsp. nov., *E. richardsonii ngaanyatjarra* subsp. nov., *E. richardsonii neglectas* subsp. nov., *E. richardsonii pindiini* subsp. nov. and *E. richardsonii wiradjuri* subsp. nov.

Each form appears to be associated with a mountain range or otherwise elevated rocky area in areas known for endemism with

other saxacoline associated reptile taxa.

They appear to be morphologically divergent in each of the relevant areas, as detailed by Storr (1972 and 1974) and are largely split on a similar basis.

The main difference is the division of Pilbara and Kimberley specimens which he grouped together and are split here four ways on the basis of consistent differences and allopatry, across known biogeographical breaks.

These are populations within the East Kimberley (including referred populations from the west Kimberley district), North Pilbara (generally north of the Fortescue River), south Pilbara (generally south of the Fortescue River), and the Cape Range outlier.

I note that the number of described forms in the *E. richardsonii* complex is far higher than the already named number of subspecies forms in the *E. fasciolatus* complex, which occupies a similar pan Australian range.

However the two species are quite different in preferred habitats. They are usually exclusive of one another in that *E. richardsonii* occupies rocky areas and those immediately adjacent, whereas the *E. fasciolatus* complex species occupy the intervening areas, not necessarily tied to hills and rocks. It is this important factor that causes the putative *E. richardsonii* populations to allopatrically separate.

The decision to treat each of the ten forms as subspecies has been made in the absence of molecular data and none being likely in the near future.

Obviously if and when such data becomes available for the relevant forms, it may be necessary to elevate one or more to full species.

The basis of the taxonomic actions noted above has been a thorough review of all previously published relevant literature, including molecular data that indicates divergent lineages as well as through inspection of relevant specimens of the putative taxa.

Biogeographical evidence has also been assessed.

Each newly named form appears to have been allopatrically separated from their nearest relatives by barriers formed from differing habitat, sometimes combined with the impact of closely related and competing species, in particular others within *Eremiascincus*.

I note that the genus name *Mawsoniascincus* Wells and Wellington, 1985, type species "*Lygosoma isolepis* Boulenger, 1887" has been proposed.

The concept as most recently put forward in Wells (2009) is as follows:

"The genus *Mawsoniascincus* Wells and Wellington, 1985 is restricted to the *isolepis* complex of species - *Mawsoniascincus brongersmai* (Storr, 1972); *Mawsoniascincus douglasi* (Storr, 1967); *Mawsoniascincus foresti* (Kinghorn, 1932); *Mawsoniascincus harwoodi* (Wells and Wellington, 1985) comb. nov.; *Mawsoniascincus isolepis* (Boulenger, 1887)."

That genus concept is not at all supported by the phylogeny published by Mecke *et al.* (2009); see Fig 2, page 5.

At best it would be restricted to four species, not including the first two listed in the Wells account and additionally including *E. musivus*. However the type species for *Eremiascincus*, namely *E. richardsonii* is shown to be close in the same phylogeny, indicating synonymy is probably the best option.

That phylogeny is not calibrated and dated.

A different genus concept using the available name *Mawsoniascincus* Wells and Wellington, 1985 is seen in Skinner *et al.* (2013), see Fig. 1 on page 911, which shows putative *E. isolepis* on a stem by itself (separate from all other species within *Eremiascincus*), just under 10 MYA divergent from the rest in a calibrated tree.

This position if confirmed in later studies, may warrant recognition of *Mawsoniascincus* at some stage as either a subgenus (most likely on the basis of the above) or less likely as a full genus.

On the basis of the ambiguous molecular results just cited and as a matter of convenience, I choose not to use the available ICZN name *Mawsoniascincus*, with respect of the relevant taxa later in this paper.

NOTES ON THE SCIENTIFIC DESCRIPTIONS THAT FOLLOW

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

Several people including anonymous peer reviewers who revised the manuscript prior to publication are also thanked, as are relevant staff at museums who made specimens and records available in line with international obligations.

In terms of the following formal descriptions, spelling should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (ICZN).

This includes if Latinisation is wrong, any apparent spelling mistakes and so on.

Any online citations within this paper, are not as a rule cited in the references part of this paper and have the same most recent viewing and checking date of 14 August 2023 (at which time they were still online as cited).

Unless otherwise stated explicitly, colour and other descriptions apply to living adult male specimens of generally good health, as seen by day and not under any form of stress by means such as excessive cool, heat, dehydration, excessive ageing, abnormal skin or reaction to chemical or other input.

While numerous texts and references were consulted prior to publication of this paper, the criteria used to separate the relevant species or subspecies has already been spelt out and/or is done so within the formal description and does not rely on material within publications not explicitly cited herein.

Photos of species or subspecies referred to within the formal descriptions (within publications and/or online) also have characters that conform to the diagnostic characters as stated in the descriptions.

In the unlikely event that someone seeks to synonymise forms formally named herein, the name to be used in the first instance is that which appears first in this paper by way of description and page priority as listed in the abstract keywords.

Some material within descriptions is repeated to ensure each fully complies with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

CONSERVATION

The following taxa are formally named in accordance with the rules of ICZN as published in the *International Code of Zoological Nomenclature* (Ride *et al.* 1999). I do not use the alternative illegal nomenclature of the ever changing rules of the Wolfgang Wüster gang, as detailed in a blog document known as Wüster (2012), rebadged as Kaiser *et al.* (2013) (cited herein), as frequently amended since.

I also do not support the other illegal actions of the cohort, including thefts of live reptiles from wildlife displays, attempted theft of ICZN name authority by way of plagiarism of earlier papers and acts of taxonomic vandalism, unlawful telephone threats to kill (as confirmed in the law courts), physical and sexual violence against vulnerable women and children (as confirmed in the law courts), scientific fraud, running thousands of fake social media accounts for the purposes of spreading hate and lies (as confirmed in the law courts), scamming money from funding bodies on false pretences and other unlawful activity, as detailed by Goodman (2019), Hoser (2009, 2012a-b, 2013a-b, 2015a-f, 2016a, 2016b, 2019a-b) and sources cited therein.

In case it has not already been made clear, I note that in the 5 years preceding this publication, Australian law courts have found against members of the Wolfgang Wüster gang for acts of theft of snakes, criminal damage to property, intellectual property theft, trademark infringement, copyright infringement, making false complaints to government authorities to instigate illegal armed raids, running thousands of fake social media accounts for illegal activities, an unlawful attempt to defraud the Accor Hotels Group, shooting native Australian aboriginals, supporting international terrorist groups including ISIS, perjury and other serious criminal actions. Penalties have included fines, jail, numerous court restraining orders, as well as payment of damages and restitution (e.g. Goodman 2019).

Significantly the unlawful actions by the Wolfgang Wüster gang have serious negative conservation implications.

Delays in recognition of these species and subspecies could jeopardise the long-term survival of the taxa as outlined by Hoser (2019a, 2019b) and sources cited therein.

Also refer to the relevant comments within Hoser (1989, 1991, 1993, 1996 and 2007).

Therefore attempts by taxonomic vandals like the Wolfgang Wüster gang via Kaiser (2012a, 2012b, 2013, 2014a, 2014b) and Kaiser *et al.* (2013) (as frequently amended and embellished, e.g. Rhodin *et al.* 2015, Thiele *et al.* 2020, Hammer and Thiele 2021) to unlawfully suppress the recognition of these taxa on the basis they have a personal dislike for the person who formally named it should be resisted (e.g. Ceriaco *et al.* 2023, Cogger 2014, Dubois *et al.* 2019, Hawkeswood, 2021, Mosyakin 2022 and Wellington 2015).

Claims by the Wüster gang against this paper and the descriptions herein will no doubt be no different to those the gang have made previously, all of which were discredited long ago as outlined by Ceriaco *et al.* (2023), Cogger (2014), Cotton (2014), Dubois *et al.* (2019), Hawkeswood (2021), Hoser, (2007a-b, 2009a, 2012a, 2012c, 2013, 2015a-f, 2019a, 2019b), ICZN (1991, 2001, 2021), Mosyakin (2022), Wellington (2015) and sources cited therein.

EREMIASCINCUS GUDJAL SP. NOV.

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Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.63803 collected from Mount Surprise, North Queensland, Australia, Latitude -18.15 S., Longitude 144.316 E.

This government-owned facility allows access to its specimens.

Paratypes: Three preserved specimens at the Queensland Museum, Brisbane, Queensland, Australia, being 1/ Specimen number J59028, collected from Amber Station via Mount Surprise, North Queensland, Australia, Latitude -17.733333 S., Longitude 144.283333 E., 2/ Specimen number J60295 collected at "Croc Hole" Mount Surprise, North Queensland, Australia, Latitude 17.741667 S., Longitude 144.341667 E., 3/ Brodies Camp, near Bulleringa National Park, North Queensland, Australia, Latitude -17.678056 S., Longitude 143.9475 E.

Diagnosis: Until now *Eremiascincus gudjal sp. nov.* has been treated as an east Australian outlier population of *Eremiascincus isolepis* (Boulenger, 1887), with a type locality of Nickol Bay, Western Australia.

E. gudjal sp. nov. is separated from *E. isolepis* and related forms previously treated as putative *E. isolepis* the following suite of characters: Its larger size being a snout-vent of 68 mm, (versus an average of 52 mm in the type form of *E. isolepis*); a distinctive purplish pink upper surface of the snout and similar behind the eye and near the ear; upper and lower labials heavily barred purple and white, the purple being slightly wider than the white; above the eye on the scales on the bulge of the upper eye the colour is a dull greenish-yellow grey-brown; there is a brown dorsum that is indistinctly spotted purple, the spotting generally absent around the dorsolateral line, before reappearing on most of the flanks, below which white peppering grades onto the white lower surfaces. The speckled tail is a yellow-golden brown colour. Overall the colour is relatively light, sometimes giving an opaque appearance.

The only species within the complex until now treated as putative *E. isolepis* of similar large size to *E. gudjal sp. nov.* are *E. harwoodi*, type locality Brunette Downs, Northern Territory and occurring in most of the top third of the Northern Territory, as well as a small part of far north-west Queensland in the vicinity of Lawn Hill and *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. harwoodi is readily separated from all others in the putative *E. isolepis* complex by the distinctive light yellow-brown dorsum, versus reddish or grey brown in the other species, upper labials (numbering 7) that are white and with light brown etchings, but no dark etching, or bars, or alternating dark reddish-brown and white; heavy peppering on the mid dorsum forming what appears to be a darker line down the midline, and plain brown or reduced markings on the dorso-lateral edge.

The species also considerably larger and more robust in build than either *E. isolepis* and the closely related *E. foresti* (Kinghorn, 1932)

being with a snout-vent length of 40-86 mm, mean of 64.6 mm, versus 29-72 mm, mean of 52 in both *E. isolepis* and *E. foresti* (see Storr 1972).

Besides being a more thick-set species than *E. gudjal sp. nov.* and *E. yolngu sp. nov.*, *E. harwoodi* lacks the purplish-pink tinge over the dorsum and flanks, this tinge only being noticeable on the upper surfaces of the front limbs. The upper surfaces of the hind limbs are mainly a dull grey colour.

Another species in the *E. isolepis* complex, *E. foresti* with a type locality of the Forrest River, East Kimberley District, Western Australia, is most similar to *E. isolepis*, but was shown by the phylogeny of Mecke *et al.* (2009) at Fig. 2. to be a different species. It is readily separated from *E. isolepis* by being generally dark in dorsal colour (versus light) and with fewer midbody scale rows, being 25-30, mean 27.7, versus, 28-32, mean 30.6 in *E. isolepis* (Storr, 1972).

E. foresti of the nominate form is separated from all other species in the complex, as well as the subspecies *E. foresti martu subsp. nov.* by having the black peppering on the dorsum coalescing into two distinctive lines, running on either side of the vertebral line.

Furthermore *E. foresti martu subsp. nov.* has a dorsum that is uniform brown in colour and with black spots on the dorsum forming two distinct lines down the dorsum on either side of the vertebral line, as opposed to the thick peppering forming the lines on the back in type *E. foresti* or the similar black peppering across the dorsum seen in the other related taxa.

E. foresti martu subsp. nov. being the west Kimberley form of the species, has scattered semi-distinct white spots on the flanks, versus numerous distinct white spots on the flanks in the nominate form of *E. foresti*.

E. isolepis jinigudera subsp. nov. from the Cape Range of Western Australia and the Exmouth Gulf is separated from the nominate subspecies of *E. isolepis* found further north along the Pilbara Coast, north of Warraboo, by the presence of black on the upper flank being bound by white on the lower flank and both areas being distinct, and with a well defined border between the two, versus indistinct blackish on the upper flank and whitish below and without any well defined border in the nominate form of *E. isolepis*.

Both nominate *E. isolepis* and *E. isolepis jinigudera subsp. nov.* are separated from all related species by the presence of a pale brown dorsum with numerous black spots scattered fairly evenly across the entire dorsal surface, including all the way to the dorsolateral line and with no reduction either along the vertebral line or near the flanks.

These spots are highly contrasting in *E. isolepis jinigudera subsp. nov.*, but only moderately so in nominate *E. isolepis*.

The anterior upper surface of the tail in *E. isolepis jinigudera subsp. nov.* has more black than brown, versus the reverse in the nominate subspecies of *E. isolepis*.

E. yolngu sp. nov. a species confined to the Arnhem Land escarpment and adjacent formations in the Litchfield National Park area, is morphologically most similar to *E. gudjal sp. nov.* as defined and diagnosed above, but is separated from that species (and by extension, all the others) by having a more strongly purple colouration running through the otherwise brownish dorsum; an upper flank that is dark purple to purple-brown in colour, overlain with numerous evenly spaced, scattered white spots, versus brown with heavy purple peppering at the mid flank in *E. gudjal sp. nov.* and tiny dark specks or peppering on the dorsal surface, versus medium-sized regularly arranged dull spots on the dorsum in *E. gudjal sp. nov.*

Both species have heavily barred purple and white labials.

The morphologically similar, sometimes sympatric species *E. douglasi* (Storr, 1967), with a type locality of Darwin in the Northern Territory, is readily separated from *E. yolngu sp. nov.* by the presence of numerous bold white spots scattered across the flank.

The morphologically similar, sometimes sympatric species *E. darwiniensis* (Storr, 1967), with a type locality of Darwin, Northern Territory, is readily separated from *E. yolngu sp. nov.* by the fact that the adpressed limbs do not meet and are separated by noticeably more than the length of the forelimb; and 20-22 mid body rows, versus 24 or more in *E. yolngu sp. nov.*

All the preceding mentioned species and subspecies (except for *E. douglasi* and *E. darwiniensis*) are collectively separated from all other species within *Eremiascincus* Greer, 1979 by the following unique combination of characters:

Dorsal scales are smooth and without keels; adpressed limbs overlap or almost touch; mid dorsal and ventral scales are subequal; seven supralabials; no solid black dorsolateral stripe without spots or flecks; fourth toe lamellae are strongly keeled and those on the basal quarter are divided, 24 or more midbody rows (modified from Cogger 2014).

E. isolepis of the type form is depicted in life online at:

<https://www.flickr.com/photos/euprepiosaur/51018115301/>

and

<https://www.inaturalist.org/observations/153398277>

E. gudjal sp. nov. is depicted in life in Wilson (2022) on page 152 bottom right, and online at:

<https://www.flickr.com/photos/127392361@N04/51282980490/>

and

<https://www.flickr.com/photos/171250498@N08/51283163284/>

and

<https://www.flickr.com/photos/127392361@N04/49458338778/>

and

<https://www.flickr.com/photos/128497936@N03/38912302375/>

and

<https://www.flickr.com/photos/euprepiosaur/5834217765/>

E. yolngu sp. nov. is depicted in life in Cogger (2014) on page 557 at top left, Horner (1992) on page 136 at bottom.

E. harwoodi is depicted in life online at:

<https://www.flickr.com/photos/ryanfrancis/8394139754/>

and

<https://www.inaturalist.org/observations/66912783>

E. foresti is depicted in life online at:

<https://www.inaturalist.org/observations/26046002>

E. foresti martu subsp. nov. is depicted in life in Wilson and Swan (2021) on page 327 at top, as well as Storr, Smith and Johnstone (1981) on plate 17, photo 2, and online at:

<https://www.flickr.com/photos/stephenmahony/7541162776/>

and

<https://www.flickr.com/photos/58828131@N07/44520537932/>

and

<https://www.flickr.com/photos/stephenmahony/7541157854/>

and

<https://www.flickr.com/photos/23031163@N03/6745396031/>

and

<https://www.inaturalist.org/observations/169358717>

and

<https://www.inaturalist.org/observations/161890091>

E. isolepis jinigudera subsp. nov. is depicted in life online at:

<https://www.inaturalist.org/observations/9963997>

and

<https://www.inaturalist.org/observations/9866899>

and

<https://www.inaturalist.org/observations/9605602>

Distribution: *E. gudjal sp. nov.* occurs in north Queensland, generally on the southern parts of the drier parts of Cape York Peninsula, from about Mount Carbine in the north-east, Croydon in the north-west and to Hughenden in the south-west.

Etymology: *E. gudjal sp. nov.* is a name taken from that of Gudjal people, the original native Aboriginal Australian inhabitants of the area from which this species occurs.

Most of these people were exterminated by the British King and Queen's Royal servants and the land since occupied by invaders.

Most of this region is now a weed infested wasteland with massively degraded ecosystems.

Surviving Gudjal people, who have not been shot and killed by Queensland police can occasionally be found living under sheets of tin and abandoned car wrecks.

EREMIASCINCUS YOLNGU SP. NOV.

LSIDDurn:lsid:zoobank.org:act:A88A4290-EF44-4AB6-8751-B5DF69896BBE

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.12873 collected from Howley Mines, Northern Territory, Australia, Latitude -13.45 S., Longitude 131.383 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.41281 collected from Nourlangie Rock, Northern Territory, Australia, Latitude -12.883 S., Longitude 132.833 E.

Diagnosis: Until now *Eremiascincus gudjal sp. nov.* has been treated as an east Australian outlier population of *Eremiascincus isolepis* (Boulenger, 1887), with a type locality of Nickol Bay, Western Australia as has been *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. gudjal sp. nov. is separated from *E. isolepis* and related forms previously treated as putative *E. isolepis* the following suite of characters: Its larger size being a snout-vent of 68 mm, (versus an average of 52 mm in the type form of *E. isolepis*); a distinctive purplish pink upper surface of the snout and similar behind the eye and near the ear; upper and lower labials heavily barred purple and white, the purple being slightly wider than the white; above the eye on the scales on the bulge of the upper eye the colour is a dull greenish-yellow grey-brown; there is a brown dorsum that is indistinctly spotted purple, the spotting generally absent around the dorsolateral line, before reappearing on most of the flanks, below which white peppering grades onto the white lower surfaces. The speckled tail is a yellow-golden brown colour. Overall the colour is relatively light, sometimes giving an opaque appearance.

The only species within the complex until now treated as putative *E. isolepis* of similar large size to *E. gudjal sp. nov.* are *E. harwoodi*, type locality Brunette Downs, Northern Territory and occurring in most of the top third of the Northern Territory, as well as a small part of far north-west Queensland in the vicinity of Lawn Hill and *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. harwoodi is readily separated from all others in the putative *E. isolepis* complex by the distinctive light yellow-brown dorsum, versus reddish or grey brown in the other species, upper labials (numbering 7) that are white and with light brown etchings, but no dark etching, or bars, or alternating dark reddish-brown and white; heavy peppering on the mid dorsum forming what appears to be a darker line down the midline, and plain brown or reduced markings on the dorso-lateral edge.

The species also considerably larger and more robust in build than either *E. isolepis* and the closely related *E. foresti* (Kinghorn, 1932) being with a snout-vent length of 40-86 mm, mean of 64.6 mm, versus 29-72 mm, mean of 52 in both *E. isolepis* and *E. foresti* (see Storr 1972).

Besides being a more thick-set species than *E. gudjal sp. nov.* and *E. yolngu sp. nov.*, *E. harwoodi* lacks the purplish-pink tinge over the dorsum and flanks, this tinge only being noticeable on the upper surfaces of the front limbs. The upper surfaces of the hind limbs are mainly a dull grey colour.

Another species in the *E. isolepis* complex, *E. foresti* with a type locality of the Forrest River, East Kimberley District, Western Australia, is most similar to *E. isolepis*, but was shown by the phylogeny of Mecke *et al.* (2009) at Fig. 2. to be a different species. It is readily separated from *E. isolepis* by being generally dark in dorsal colour (versus light) and with fewer midbody scale rows, being 25-30, mean 27.7, versus, 28-32, mean 30.6 in *E. isolepis* (Storr, 1972).

E. foresti of the nominate form is separated from all other species in the complex, as well as the subspecies *E. foresti martu subsp. nov.* being the west Kimberley form of the species, by having the black peppering on the dorsum coalescing into two distinctive lines, running on either side of the vertebral line.

Furthermore *E. foresti martu subsp. nov.* has a dorsum that is uniform brown in colour and with black spots on the dorsum forming two distinct lines down the dorsum on either side of the vertebral line, as opposed to the thick peppering forming the lines on the back in type *E. foresti* or the similar black peppering across the

dorsum seen in the other related taxa.

E. foresti martu subsp. nov. has scattered semi-distinct white spots on the flanks, versus numerous distinct white spots on the flanks in the nominate form of *E. foresti*.

E. isolepis jinigudera subsp. nov. from the Cape Range of Western Australia and the Exmouth Gulf is separated from the nominate subspecies of *E. isolepis* found further north along the Pilbara Coast, north of Warraboo, by the presence of black on the upper flank being bound by white on the lower flank and both areas being distinct, and with a well defined border between the two, versus indistinct blackish on the upper flank and whitish below and without any well defined border in the nominate form of *E. isolepis*.

Both nominate *E. isolepis* and *E. isolepis jinigudera subsp. nov.* are separated from all related species by the presence of a pale brown dorsum with numerous black spots scattered fairly evenly across the entire dorsal surface, including all the way to the dorsolateral line and with no reduction either along the vertebral line or near the flanks.

These spots are highly contrasting in *E. isolepis jinigudera subsp. nov.*, but only moderately so in nominate *E. isolepis*.

The anterior upper surface of the tail in *E. isolepis jinigudera subsp. nov.* has more black than brown, versus the reverse in the nominate subspecies of *E. isolepis*.

E. yolngu sp. nov. a species confined to the Arnhem Land escarpment and adjacent formations in the Litchfield National Park area, is morphologically most similar to *E. gudjal sp. nov.* as defined and diagnosed above, but is separated from that species (and by extension, all the others) by having a more strongly purple colouration running through the otherwise brownish dorsum; an upper flank that is dark purple to purple-brown in colour, overlain with numerous evenly spaced, scattered white spots, versus brown with heavy purple peppering at the mid flank in *E. gudjal sp. nov.* and tiny dark specks or peppering on the dorsal surface, versus medium-sized regularly arranged dull spots on the dorsum in *E. gudjal sp. nov.*

Both species have heavily barred purple and white labials.

The morphologically similar, sometimes sympatric species *E. douglasi* (Storr, 1967), with a type locality of Darwin in the Northern Territory, is readily separated from *E. yolngu sp. nov.* by the presence of numerous bold white spots scattered across the flank. The morphologically similar, sometimes sympatric species *E. darwiniensis* (Storr, 1967), with a type locality of Darwin, Northern Territory, is readily separated from *E. yolngu sp. nov.* by the fact that the adpressed limbs do not meet and are separated by noticeably more than the length of the forelimb; and 20-22 mid body rows, versus 24 or more in *E. yolngu sp. nov.*

All the preceding mentioned species and subspecies (except for *E. douglasi* and *E. darwiniensis*) are collectively separated from all other species within *Eremiascincus* Greer, 1979 by the following unique combination of characters:

Dorsal scales are smooth and without keels; adpressed limbs overlap or almost touch; mid dorsal and ventral scales are subequal; seven supralabials; no solid black dorsolateral stripe without spots or flecks; fourth toe lamellae are strongly keeled and those on the basal quarter are divided, 24 or more midbody rows (modified from Cogger 2014).

For photos of the relevant species and subspecies, refer to the preceding description of *E. gudjal sp. nov.*

Distribution: *E. yolngu sp. nov.* is a species confined to the Arnhem Land escarpment and adjacent formations in the Litchfield National Park area of the Northern Territory, Australia.

Etymology: *E. yolngu sp. nov.* is named in honour of the Yolngu people, being the original native Australian inhabitants of the area the species occurs in recognition of their tenure of the land for more than 40K years. The Yolngu people have done better than most other original Australians in the wake of the British invasion in the late 1700's and early 1800's.

Although they were shot, killed and stripped of all they owned like other Aboriginal Australians, the few lucky survivors had a stroke of luck in the 1970's.

In the 1970's they managed to gain control of a "rocky wasteland" that was "given" to them by their British invaders, because 1/ the

asked for it and 2/ The British invaders saw no use in the land at all. It was called Arnhem Land and the British Australians simply couldn't cope with the plague proportions of biting insects.

Shortly thereafter, uranium deposits were found at Narbalek, which the British desperately needed to continue to test their nuclear weapons at Maralinga in South Australia (tough luck for the Maralinga tribe), just in case they decided to drop a few bombs on the Soviets, Chinese or anyone else they couldn't screw over. The Yolngu managed to cut a royalty deal with the mining company and within a short time they became the wealthiest Aboriginal tribe in Australia.

EREMIASCINCUS ISOLEPIS JINIGUDERA SUBSP. NOV.
LSIDurn:lsid:zoobank.org:act:0D28C8A4-692A-45F0-B4C3-64562C8D023C

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R157220, collected from Hope Island, Western Australia, Australia, Latitude -22.166667 S., Longitude -22.166667 S.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R100793 collected at Simpson Island, Western Australia, Australia, Latitude -22.133333 S., Longitude 114.483333 E.

Diagnosis: *Eremiascincus isolepis jinigudera subsp. nov.* from the Cape Range of Western Australia and the Exmouth Gulf is separated from the nominate subspecies of *E. isolepis* found further north along the Pilbara Coast, north of Warraraboo, to about Whim Creek (and including immediately offshore islands) by the presence of black on the upper flank being bound by white on the lower flank and both areas being distinct, and with a well defined border between the two, versus indistinct blackish on the upper flank and whitish below and without any well defined border in the nominate form of *E. isolepis*.

Both nominate *E. isolepis* and *E. isolepis jinigudera subsp. nov.* are separated from all related species formerly treated as putative *E. isolepis* by the presence of a pale brown dorsum with numerous black spots scattered fairly evenly across the entire dorsal surface, including all the way to the dorsolateral line and with no reduction either along the vertebral line or near the flanks.

These spots are highly contrasting in *E. isolepis jinigudera subsp. nov.*, but only moderately so in nominate *E. isolepis*.

The anterior upper surface of the tail in *E. isolepis jinigudera subsp. nov.* has more black than brown, versus the reverse in the nominate subspecies of *E. isolepis*.

Until now *Eremiascincus gudjal sp. nov.* has been treated as an east Australian outlier population of *Eremiascincus isolepis* (Boulenger, 1887), with a type locality of Nickol Bay, Western Australia as has been *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. gudjal sp. nov. is separated from *E. isolepis* and related forms previously treated as putative *E. isolepis* the following suite of characters: Its larger size being a snout-vent of 68 mm, (versus an average of 52 mm in the type form of *E. isolepis*); a distinctive purplish pink upper surface of the snout and similar behind the eye and near the ear; upper and lower labials heavily barred purple and white, the purple being slightly wider than the white; above the eye on the scales on the bulge of the upper eye the colour is a dull greenish-yellow grey-brown; there is a brown dorsum that is indistinctly spotted purple, the spotting generally absent around the dorsolateral line, before reappearing on most of the flanks, below which white peppering grades onto the white lower surfaces. The speckled tail is a yellow-golden brown colour. Overall the colour is relatively light, sometimes giving an opaque appearance.

The only species within the complex until now treated as putative *E. isolepis* of similar large size to *E. gudjal sp. nov.* are *E. harwoodi*, type locality Brunette Downs, Northern Territory and occurring in most of the top third of the Northern Territory, as well as a small part of far north-west Queensland in the vicinity of Lawn Hill and *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. harwoodi is readily separated from all others in the putative *E. isolepis* complex by the distinctive light yellow-brown dorsum, versus reddish or grey brown in the other species, upper labials

(numbering 7) that are white and with light brown etchings, but no dark etching, or bars, or alternating dark reddish-brown and white; heavy peppering on the mid dorsum forming what appears to be a darker line down the midline, and plain brown or reduced markings on the dorso-lateral edge.

The species is also considerably larger and more robust in build than either *E. isolepis* and the closely related *E. foresti* (Kinghorn, 1932), being with a snout-vent length of 40-86 mm, mean of 64.6 mm, versus 29-72 mm, mean of 52 in both *E. isolepis* and *E. foresti* (see Storr 1972).

Besides being a more thick-set species than *E. gudjal sp. nov.* and *E. yolngu sp. nov.*, *E. harwoodi* lacks the purplish-pink tinge over the dorsum and flanks, this tinge only being noticeable on the upper surfaces of the front limbs. The upper surfaces of the hind limbs are mainly a dull grey colour.

Another species in the *E. isolepis* complex, *E. foresti* with a type locality of the Forrest River, East Kimberley District, Western Australia, is most similar to *E. isolepis*, but was shown by the phylogeny of Mecke *et al.* (2009) at Fig. 2. to be a different species. It is readily separated from *E. isolepis* by being generally dark in dorsal colour (versus light) and with fewer midbody scale rows, being 25-30, mean 27.7, versus, 28-32, mean 30.6 in *E. isolepis* (Storr, 1972).

E. foresti of the nominate form is separated from all other species in the complex, as well as the subspecies *E. foresti martu subsp. nov.* being the west Kimberley form of the species, by having the black peppering on the dorsum coalescing into two distinctive lines, running on either side of the vertebral line.

Furthermore *E. foresti martu subsp. nov.* has a dorsum that is uniform brown in colour and with black spots on the dorsum forming two distinct lines down the dorsum on either side of the vertebral line, as opposed to the thick peppering forming the lines on the back in type *E. foresti* or the similar black peppering across the dorsum seen in the other related taxa.

E. foresti martu subsp. nov. has scattered semi-distinct white spots on the flanks, versus numerous distinct white spots on the flanks in the nominate form of *E. foresti*.

E. yolngu sp. nov. a species confined to the Arnhem Land escarpment and adjacent formations in the Litchfield National Park area, is morphologically most similar to *E. gudjal sp. nov.* as defined and diagnosed above, but is separated from that species (and by extension, all the others) by having a more strongly purple colouration running through the otherwise brownish dorsum; an upper flank that is dark purple to purple-brown in colour, overlain with numerous evenly spaced, scattered white spots, versus brown with heavy purple peppering at the mid flank in *E. gudjal sp. nov.* and tiny dark specks or peppering on the dorsal surface, versus medium-sized regularly arranged dull spots on the dorsum in *E. gudjal sp. nov.*

Both species have heavily barred purple and white labials.

The morphologically similar, sometimes sympatric species *E. douglasi* (Storr, 1967), with a type locality of Darwin in the Northern Territory, is readily separated from *E. yolngu sp. nov.* by the presence of numerous bold white spots scattered across the flank.

The morphologically similar, sometimes sympatric species *E. darwiniensis* (Storr, 1967), with a type locality of Darwin, Northern Territory, is readily separated from *E. yolngu sp. nov.* by the fact that the addressed limbs do not meet and are separated by noticeably more than the length of the forelimb; and 20-22 mid body rows, versus 24 or more in *E. yolngu sp. nov.*

All the preceding mentioned species and subspecies (except for *E. douglasi* and *E. darwiniensis*) are collectively separated from all other species within *Eremiascincus* Greer, 1979 by the following unique combination of characters:

Dorsal scales are smooth and without keels; addressed limbs overlap or almost touch; mid dorsal and ventral scales are subequal; seven supralabials; no solid black dorsolateral stripe without spots or flecks; fourth toe lamellae are strongly keeled and those on the basal quarter are divided, 24 or more midbody rows (modified from Cogger 2014).

For photos of the relevant species and subspecies, refer to the preceding description of *E. gudjal sp. nov.*

Distribution: *Eremiascincus isolepis jinigudera subsp. nov.* occurs around the Cape Range of Western Australia and the Exmouth Gulf coasts and islands only. It is separated from the nominate subspecies of *E. isolepis* found further north along the Pilbara Coast, north of Warraboo, to about Whim Creek and including immediately offshore islands, being apparently allopatric.

Etymology: *E. isolepis jinigudera subsp. nov.* is named in honour of the Jinigudera people, being the original native Aboriginal inhabitants of the region this species occurs.

EREMIASCINCUS FORESTI MARTU SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:EBCFDA17-7184-49D3-94B8-FC59956229E7

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R139066 collected from Mandora, Western Australia, Australia, Latitude -19.4752 S., Longitude 121.2652 E.

This government-owned facility allows access to its holdings.

Paratype: Four preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R139079, R139082, R139090 and R139116 collected from Mandora, Western Australia, Australia, Latitude -19.4752 S., Longitude 121.2652 E.

Diagnosis: The following diagnosis of the relevant species includes all that is necessary for the diagnosis for the subspecies *E. foresti martu subsp. nov.*

Eremiascincus isolepis jinigudera subsp. nov. from the Cape Range of Western Australia and the Exmouth Gulf is separated from the nominate subspecies of *E. isolepis* found further north along the Pilbara Coast, north of Warraboo, to about Whim Creek (and including immediately offshore islands) by the presence of black on the upper flank being bound by white on the lower flank and both areas being distinct, and with a well defined border between the two, versus indistinct blackish on the upper flank and whitish below and without any well defined border in the nominate form of *E. isolepis*.

Both nominate *E. isolepis* and *E. isolepis jinigudera subsp. nov.* are separated from all related species formerly treated as putative *E. isolepis* by the presence of a pale brown dorsum with numerous black spots scattered fairly evenly across the entire dorsal surface, including all the way to the dorsolateral line and with no reduction either along the vertebral line or near the flanks.

These spots are highly contrasting in *E. isolepis jinigudera subsp. nov.*, but only moderately so in nominate *E. isolepis*.

The anterior upper surface of the tail in *E. isolepis jinigudera subsp. nov.* has more black than brown, versus the reverse in the nominate subspecies of *E. isolepis*.

Until now *Eremiascincus gudjal sp. nov.* has been treated as an east Australian outlier population of *Eremiascincus isolepis* (Boulenger, 1887), with a type locality of Nickol Bay, Western Australia as has been *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. gudjal sp. nov. is separated from *E. isolepis* and related forms previously treated as putative *E. isolepis* the following suite of characters: Its larger size being a snout-vent of 68 mm, (versus an average of 52 mm in the type form of *E. isolepis*); a distinctive purplish pink upper surface of the snout and similar behind the eye and near the ear; upper and lower labials heavily barred purple and white, the purple being slightly wider than the white; above the eye on the scales on the bulge of the upper eye the colour is a dull greenish-yellow grey-brown; there is a brown dorsum that is indistinctly spotted purple, the spotting generally absent around the dorsolateral line, before reappearing on most of the flanks, below which white peppering grades onto the white lower surfaces. The speckled tail is a yellow-golden brown colour. Overall the colour is relatively light, sometimes giving an opaque appearance.

The only species within the complex until now treated as putative *E. isolepis* of similar large size to *E. gudjal sp. nov.* are *E. harwoodi*, type locality Brunette Downs, Northern Territory and occurring in most of the top third of the Northern Territory, as well as a small part of far north-west Queensland in the vicinity of Lawn Hill and *E. yolngu sp. nov.* from the Arnhem Land escarpment.

E. harwoodi is readily separated from all others in the putative

E. isolepis complex by the distinctive light yellow-brown dorsum, versus reddish or grey brown in the other species, upper labials (numbering 7) that are white and with light brown etchings, but no dark etching, or bars, or alternating dark reddish-brown and white; heavy peppering on the mid dorsum forming what appears to be a darker line down the midline, and plain brown or reduced markings on the dorso-lateral edge.

The species is also considerably larger and more robust in build than either *E. isolepis* and the closely related *E. foresti* (Kinghorn, 1932), being with a snout-vent length of 40-86 mm, mean of 64.6 mm, versus 29-72 mm, mean of 52 in both *E. isolepis* and *E. foresti* (see Storr 1972).

Besides being a more thick-set species than *E. gudjal sp. nov.* and *E. yolngu sp. nov.*, *E. harwoodi* lacks the purplish-pink tinge over the dorsum and flanks, this tinge only being noticeable on the upper surfaces of the front limbs. The upper surfaces of the hind limbs are mainly a dull grey colour.

Another species in the *E. isolepis* complex, *E. foresti* with a type locality of the Forrest River, East Kimberley District, Western Australia, is most similar to *E. isolepis*, but was shown by the phylogeny of Mecke *et al.* (2009) at Fig. 2. to be a different species. It is readily separated from *E. isolepis* by being generally dark in dorsal colour (versus light) and with fewer midbody scale rows, being 25-30, mean 27.7, versus, 28-32, mean 30.6 in *E. isolepis* (Storr, 1972).

E. foresti of the nominate form is separated from all other species in the complex, as well as the subspecies *E. foresti martu subsp. nov.* being the west Kimberley form of the species, by having the black peppering on the dorsum coalescing into two distinctive lines, running on either side of the vertebral line.

Furthermore *E. foresti martu subsp. nov.* has a dorsum that is uniform brown in colour and with black spots on the dorsum forming two distinct lines down the dorsum on either side of the vertebral line, as opposed to the thick peppering forming the lines on the back in type *E. foresti* or the similar black peppering across the dorsum seen in the other related taxa.

E. foresti martu subsp. nov. has scattered semi-distinct white spots on the flanks, versus numerous distinct white spots on the flanks in the nominate form of *E. foresti*.

E. yolngu sp. nov. a species confined to the Arnhem Land escarpment and adjacent formations in the Litchfield National Park area, is morphologically most similar to *E. gudjal sp. nov.* as defined and diagnosed above, but is separated from that species (and by extension, all the others) by having a more strongly purple colouration running through the otherwise brownish dorsum; an upper flank that is dark purple to purple-brown in colour, overlain with numerous evenly spaced, scattered white spots, versus brown with heavy purple peppering at the mid flank in *E. gudjal sp. nov.* and tiny dark specks or peppering on the dorsal surface, versus medium-sized regularly arranged dull spots on the dorsum in *E. gudjal sp. nov.*

Both species have heavily barred purple and white labials.

The morphologically similar, sometimes sympatric species *E. douglasi* (Storr, 1967), with a type locality of Darwin in the Northern Territory, is readily separated from *E. yolngu sp. nov.* by the presence of numerous bold white spots scattered across the flank. The morphologically similar, sometimes sympatric species *E. darwiniensis* (Storr, 1967), with a type locality of Darwin, Northern Territory, is readily separated from *E. yolngu sp. nov.* by the fact that the addressed limbs do not meet and are separated by noticeably more than the length of the forelimb; and 20-22 mid body rows, versus 24 or more in *E. yolngu sp. nov.*

All the preceding mentioned species and subspecies (except for *E. douglasi* and *E. darwiniensis*) are collectively separated from all other species within *Eremiascincus* Greer, 1979 by the following unique combination of characters:

Dorsal scales are smooth and without keels; addressed limbs overlap or almost touch; mid dorsal and ventral scales are subequal; seven supralabials; no solid black dorsolateral stripe without spots or flecks; fourth toe lamellae are strongly keeled and those on the basal quarter are divided, 24 or more midbody rows (modified from Cogger 2014).

For photos of the relevant species and subspecies, refer to the preceding description of *E. gudjal* sp. nov..

Distribution: *E. foresti martu* subsp. nov. is a West Kimberley endemic, also being found as far south along the coast to about Sandfire Flat (Mandora). The nominate subspecies form of *E. foresti* occurs in the east Kimberley district.

Etymology: *E. foresti martu* subsp. nov. is named in honour of the Martu people, being the original native Aboriginal inhabitants of the region this species occurs. Quite a number survived the British invasion of Australia and this region in the 1800's because quite simply there was nothing in the local deserts the British wanted to steal and most white Australians couldn't cope with the heat.

EREMIASCINCUS MUSIVUS OCULORUM SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:AAB12CE9-F25E-49D3-B40F-19722719E652

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R139042 collected from Mandora, Western Australia, Australia, Latitude -19.4830 S., Longitude 121.2750 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R139095 collected from Mandora, Western Australia, Australia, Latitude -19.4844 S., Longitude 121.2825 E.

Diagnosis: The species *E. musivus* Mecke, Doughty and Donnellan, 2009, type locality 20 km east north-east of Karratha, Western Australia occurs in two populations. One, as far as is known is confined to the general area of the type locality and north to near Port Hedland and the second, the new subspecies *E. musivus oculorum* subsp. nov. is found generally north of Goldsworthy and into the western Great Sandy Desert, generally near the coast.

E. musivus oculorum subsp. nov. is separated from *E. musivus* Mecke, Doughty and Donnellan, 2009 by a general reduction in the amount and intensity of black pigment on the back; dark markings on the upper surface of the tail tending to be in the form of spots rather than bands, versus well-defined bands in *E. musivus*.

E. musivus oculorum subsp. nov. has blackish smudges on the top of the head, versus obvious black spots in *E. musivus*.

E. musivus is separated from all other species within *Eremiascincus* Greer, 1979 by the following combination of characters:

"A small, slender *Eremiascincus* (maximum SVL 59.2 mm), distinguished from other members of the genus by the following combination of characters: ground colour reddish to yellowish brown with a characteristic, consistent dorsal pattern of numerous whitish and dark spots often aligning to form short streaks in an irregular, diffuse reticulum; the presence of a pale vertebral stripe running from the neck to the base of tail (occasionally extending to tail); narrow, wavy, dark bands on the tail (~ 35), which are divided medially and interspaces between these dark bands, which consist of dark-edged pale scales in a single row; homogenous, smooth scales on the dorsum and tail; scales along the top of fourth toe with oblique sutures on basal quarter to third of digit, followed by single rows of scales with transverse sutures; 4TLam undivided and only feebly keeled; plantar scales 10-15; small circular ear opening; MBSR 29-34, PVS 52-62; Supralabials usually 7; 3 chin shields and 1 median chin shield."

The preceding was quoted verbatim from Mecke et al. (2009).

The type subspecies of *E. musivus* is depicted in life in Mecke et al. (2009), page 14 in Figure 6, and Wilson and Swan (2021) on page 327 middle left and online at:

<https://www.flickr.com/photos/euprepiosaur/46447971604/>

E. musivus oculorum subsp. nov. is depicted in life in Hoser (1989) on page 113 at top right and online at:

<https://www.flickr.com/photos/124699310@N06/17140026821/>

Distribution: The new subspecies *E. musivus oculorum* subsp. nov. is found generally north of Goldsworthy and into the western Great Sandy Desert, generally near the coast.

The nominate form of *E. musivus* is found south of Port Hedland with a main distribution around Karratha and Dampier.

Etymology: *E. musivus oculorum* subsp. nov. is named in reflection of the Latin word "*oculorum*" which means "*blurred in colouration*".

EREMIASCINCUS PALLIDA FLAVESCENTIBUS SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:9F95A5AA-2630-4618-9576-14E68F079902

Holotype: A preserved male specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R136287 collected from Muggon Station, Western Australia, Australia, Latitude -26.4908 S., Longitude 115.3206 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved male specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R139445 collected from Cane River, Western Australia, Australia, Latitude 22.1555 S., Longitude 115.3519 E.

Diagnosis: The species *E. pallida* (Günther, 1875), with a type locality of Nickol Bay, Western Australia is split into two divergent subspecies, with the south-western form formally named for the first time as *E. pallida flavescens* subsp. nov..

E. pallida flavescens subsp. nov. occurs in the general region from Warramboe southwards to near Canarvon, Western Australia. Nominate *E. pallida* occurs in the Pilbara generally north and west of the type locality to include the majority of the Western Australian interior, extending to western parts of the Northern Territory and South Australia.

E. pallida flavescens subsp. nov. is readily separated from the nominate subspecies by the fact that the purple coloured semi-distinct bands on the flank do not extend well onto the dorsum, versus does so in the type subspecies. The ear of *E. pallida flavescens* subsp. nov. has an obvious yellow marking, versus not so in nominate *E. pallida*.

Both forms of *E. pallida* are readily separated from all other species within *Eremiascincus* Greer, 1979 by the following combination of characters: having narrow bands (not wide ones, or none at all) in some form on the lower part of the flanks that may or may not extend over the dorsum, but if they do extend over the dorsum, this is either not complete or extremely faint on top; last supralabial undivided; no row of subinfralabials present; scales on top of the fourth toe with transverse sutures along distal third to entire digit; there are seven supralabials; one infralabial scale is in contact with postmental scale.

E. pallida flavescens subsp. nov. in life is depicted in Storr, Smith and Johnstone (1981) plate 3, second from bottom on left, Wilson and Swan (2021) on page 327, middle right and online at: https://www.flickr.com/photos/colonel_007/49113064953/ and

https://www.flickr.com/photos/colonel_007/49113064953/

The nominate subspecies of *E. pallida* is depicted in life online at: <https://www.flickr.com/photos/euprepiosaur/46257415665/> and

<https://www.flickr.com/photos/reptileshots/26142379655/>

Distribution: *E. pallida flavescens* subsp. nov. occurs in the general region from Warramboe southwards to near Canarvon, Western Australia. Nominate *E. pallida* occurs in the Pilbara generally north and west of the type locality, Nickol Bay, Western Australia to include the majority of the Western Australian interior, extending to western parts of the Northern Territory and South Australia.

Etymology: *E. pallida flavescens* subsp. nov. uses the Latin word "*flavescens*" which means "*yellowish*" or "*yellowish brown*" in colour in reflection of the typical colour of the adult lizard.

EREMIASCINCUS INTERMEDIUS YUNGMAN SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:B6D897B8-2EDE-4CD7-B87E-5367057B70F2

Holotype: A preserved specimen at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen number R23342 collected from 12 Mile Stock Yards, Eisey National Park, Northern Territory, Australia, Latitude -14.952 S., Longitude 133.219 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Two preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R24144 and R24145, both collected from 6 km south of Larrimah, Northern Territory, Australia, Latitude -15.38 S., Longitude 133.13 E. 2/ A preserved specimen at the Museum and Art Gallery of the

Northern Territory, Darwin, Northern Territory, Australia, specimen number R26938 collected from Maryfield Station, Sturt Plateau, Northern Territory, Australia, Latitude -15.816 S., Longitude 133.2 E.

Diagnosis: *E. intermedia* (Sternfeld, 1919), with a type locality of Hermannsburg Mission, Central Australia, Northern Territory is herein split into two regionally allopatric subspecies.

The nominate form occurs in the region of the central Australian ranges north to Tennant Creek and being found west of there in the Tanami Desert and east of there to at least Freweena Roadhouse, (best known for the highest retail fuel prices in Australia) on the western edge of the Barkly Tableland.

E. intermedia yungman subsp. nov. occurs north of this area in the general region encompassing the southern headwaters of the Roper River system in the Northern Territory, including Elsey National Park in the north and Sturt Plateau in the south, both being effectively along the main north-south Highway, with specimens having been found at least 100 km east and west of this line.

E. intermedia yungman subsp. nov. is readily separated from *E. intermedia* by having 17-19 dorsal body bands, versus 10-16 in the nominate subspecies of *E. intermedia*, as well as a noticeable darkening of the upper surface of the head, versus not so in *E. intermedia*.

E. intermedia yungman subsp. nov. also has noticeably smaller limbs and a smaller ear aperture than specimens of the nominate form.

Both subspecies of *E. intermedia* are readily separated from all other species of *Eremiascincus* Greer, 1979 by the following combination of characters: narrow dark bands on dorsum, encircling it and of full intensity at the vertebral midline as on the flanks and perfectly transverse caudal bands, with the possible exception of some at the anterior part of the tail; no trace of dark or white flecks; last supralabial undivided; no row of subinfralabials present; scales on top of the fourth toe with transverse sutures along distal third to entire digit; 7 supralabials; one infralabial scale in contact with postmental scale.

Distribution: *E. intermedia yungman subsp. nov.* occurs north the driest parts of the Northern Territory (being areas south of Tennant Creek, being known from the general region encompassing the southern headwaters of the Roper River system in the Northern Territory, including Elsey National Park in the north and Sturt Plateau in the south, both being effectively along the main north-south Highway, with specimens having been found at least 100 km east and west of this line.

The nominate form of *E. intermedia* occurs in the region of the central Australian ranges north to Tennant Creek and being found west of there in the Tanami Desert and east of there to at least Freweena Roadhouse on the western edge of the Barkly Tableland.

Etymology: *E. intermedia yungman subsp. nov.* is named in honour of the Yungman tribe of Australian Aboriginals, being the original inhabitants of the area this subspecies occurs. The few who survived the British invasion of the area of the 1800's, fled their lands to avoid being killed and nowadays eke out a miserable existence living under sheets of tin and other rubbish on the outskirts of European settlements in the area.

The formerly pristine lands they inhabited are now mainly overgrazed cattle runs owned by tax-evading, trans-national corporations.

EREMIASCINCUS RICHARDSONII DJARU SUBSP. NOV.

LSIDDurn:lsid:zoobank.org:act:4474FAF1-B7B2-4BC6-B6A0-1F7F57131086

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R3535 collected from Moolabulla Station, East Kimberley District, Western Australia, Australia, Latitude -18.2 S., Longitude 127.5 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R103162 collected from the Bungle Bungle National Park, Western Australia, Australia, Latitude -17.55 S., Longitude 128.25 S.

This government-owned facility allows access to its holdings.

2/ Two preserved specimens at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen

numbers R07041 and R07042 both collected from Turkey Creek, Western Australia, Australia, Latitude -16.9 S., Longitude 128.317 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations. I will not invoke the Kaiser *et al.* (2013) doctrine to attempt to steal "name authority" from scientists who have previously done the hard work to name the relevant taxa.

The ten relevant taxa, all essentially from areas generally near their type localities and/or as otherwise indicated are as follows:

Eremiascincus richardsonii (Gray, 1845) (originally named as *Hinulia richardsonii*) with an alleged type locality of Houtman's Abrolhos, Western Australia, including the putative taxon "*Lygosoma monotropis* Boulenger, 1887" from Champion Bay, Western Australia, being on the proximal coast to the type locality and also found generally also further south and including nearby inland areas.

E. richardsonii ambigua (De Vis, 1888) (originally named as *Hinulia ambigua*) with a type locality of Charleville, south-west, Queensland, occurring throughout south-west Queensland and the adjacent north-west tip of New South Wales, generally west of the Darling River basin;

E. richardsonii djaru subsp. nov. from the East Kimberley district of northern Western Australia, with those from the West Kimberley also tentatively referred to this taxon;

E. richardsonii yindjibarndi subsp. nov. from the North Pilbara district in Western Australia;

E. richardsonii nyiyarparli subsp. nov. from the South Pilbara district in Western Australia;

E. richardsonii baiyungu subsp. nov. from the Cape Range area in Western Australia;

E. richardsonii ngaanyatjarra subsp. nov. from the Warburton Range in eastern central Western Australia;

E. richardsonii neglectas subsp. nov. from the Petermann and Musgrave Ranges, near the borders of South Australia, Western Australia and the Northern Territory;

E. richardsonii pindiini subsp. nov. from the western and central interior of South Australia;

E. richardsonii wiradjuri subsp. nov. from inland southern New South Wales and into the far east of South Australia.

The preceding subspecies are separated from each other by the following unique combinations of characters;

E. richardsonii of the nominate subspecies type form is an insular giant race with smooth or weakly keeled scales in mature specimens and large size (127 mm snout-vent) length.

It is separated from the similarly large Pilbara and Kimberley forms described herein by having proportionately smaller limbs.

Specimens of the same putative subspecies from the nearby mainland of Western Australia, generally found in the region bound by Ajana then south and east to Narragin and Woolgangie are of similar form, but are of the smallest of the subspecies with an average maximum snout-vent length of less than 85 mm. Interparietal is always longer than the frontoparietals.

There are 7-10 dorsal body bands and they are rich purple-brown in colour against a bold light yellow background, being of the same thickness as the light interspaces.

E. richardsonii of the nominate subspecies type form is depicted in life online at:

<https://www.inaturalist.org/observations/36982514>

and

<https://www.flickr.com/photos/23031163@N03/21580364169/>

and
<https://www.inaturalist.org/observations/140042097>
 and

<https://www.inaturalist.org/observations/124194636>

E. richardsonii ambigua is defined and separated from the other taxa by the having 31 to 32 midbody rows, 7-8 upper labials, 6-7 supraciliaries above either eye; 3 supraoculars in contact with frontal, and only 2 secondary temporals; 12-13 dorsal body bands, with interspaces far wider than the darker bands; 22-24 lamellae under the fourth toe.

E. richardsonii ambigua in life is depicted online at:
<https://www.inaturalist.org/observations/22455039>
 and

<https://www.inaturalist.org/observations/103346455>

E. richardsonii djaru subsp. nov., *E. richardsonii yindjibarndi subsp. nov.*, *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* are as a group of four subspecies readily separated from the other subspecies by the following characters: Their large size; snout-vent length exceeds 100 mm regularly, versus never in the other subspecies (with the exception of the insular form of *Eremiascincus richardsonii*); reduced dorsal keeling in adults meaning that the dorsal scales are effectively smooth (except for *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* which by contrast are heavily keeled); few if any nuchals (average of about 0.6, versus 1.1 in the other subspecies); fronto-parietals as long or longer than the interparietal, versus not so in the other subspecies (unless explicitly stated otherwise in the descriptions); 8-9 upper labials, versus 7-8, but never nine in the other subspecies.

E. richardsonii djaru subsp. nov. is separated from *E. richardsonii yindjibarndi subsp. nov.* by having 10-12 body bands, versus 7-9 in *E. richardsonii yindjibarndi subsp. nov.* The lighter bands on the dorsum of *E. richardsonii djaru subsp. nov.* are more beige-yellow than the rich yellow seen in *E. richardsonii yindjibarndi subsp. nov.* Furthermore the darker outer edges of each yellow scale in the dorsum is prominent in *E. richardsonii yindjibarndi subsp. nov.* versus not so in *E. richardsonii djaru subsp. nov.*, giving *E. richardsonii djaru subsp. nov.* a more immaculate appearance.

E. richardsonii yindjibarndi subsp. nov. is unusual in the complex in that there is a slight fading of the posterior edge of each dark dorsal cross-band.

Both *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* are separated from *E. richardsonii djaru subsp. nov.* and *E. richardsonii yindjibarndi subsp. nov.* by having keeled dorsal scales (versus essentially smooth in the other two species).

E. richardsonii nyiyarparli subsp. nov. is readily separated from *E. richardsonii baiyungu subsp. nov.* by having 11-13 body bands, versus 8-10 in *E. richardsonii baiyungu subsp. nov.* The colour of the head, versus the body in *E. richardsonii nyiyarparli subsp. nov.* is not significantly different, versus darker and of a different shade of brown in *E. richardsonii baiyungu subsp. nov.*

E. richardsonii yindjibarndi subsp. nov. is depicted in life in Hoser (1989) page 95 at bottom.

E. richardsonii nyiyarparli subsp. nov. in life is depicted online at:
<https://www.inaturalist.org/observations/10579380>

and
<https://www.inaturalist.org/observations/160274522>
 and

<https://www.inaturalist.org/observations/19878364>

E. richardsonii ngaanyatjarra subsp. nov. is separated from the other subspecies by having rich chocolate brown dorsal bands (9-12 in number) over a light yellow background, each lighter scale also prominently etched with the same chocolate brown, a light orange-brown head; lower numbers of subdigital lamellae under the fourth toe 21-26 (22.8), against averages of 24.0-25.8 in all other subspecies; 29-32 midbody rows and 24-26 caudal bands (original tail) (Storr 1967, 1974).

It is also the only West Australian form in which the dark bands are obviously narrower than the lighter interspaces. In this respect it is like all subspecies found in the NT, South Australia, NSW and Queensland, the two most eastern subspecies having interspaces

roughly double the width of the darker bands..

E. richardsonii ngaanyatjarra subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/65339599>

E. richardsonii neglectas subsp. nov. is separated from the other subspecies by the combination of the following characters, in being essentially similar to *E. richardsonii ngaanyatjarra subsp. nov.* except for differing by having 33-34 midbody rows, 10-14 dorsal bands and 32 caudal bands (original tail).

E. richardsonii neglectas subsp. nov. in life is depicted online at:
<https://www.inaturalist.org/observations/100444376>

E. richardsonii pindiini subsp. nov. is separated from the other subspecies by the high frequency of 2 (rather than 3) supraoculars in contact with frontal (56 %) and numerous lamellae under fourth toe (24-29, average 26.7).

The frequency of specimens with frontal not clearly longer than frontoparietal plus interparietals is high (44 %); and more than half the specimens have the frontoparietal longer than interparietals.

The number of scale rows is extremely low (28-32, average 29.8). Labials 8 (rarely 7); supraciliaries 7-9 (mostly 8); dark dorsal bands 8-11 (av. 9.6) and, as in all populations east of the Western Australian border, are considerably narrower than the interspaces. Upper surface of head is distinctively brown and the body background is yellow. Any darker outline of light scales on the dorsum are effectively absent.

E. richardsonii pindiini subsp. nov. is depicted in life online at:
<https://www.inaturalist.org/observations/145886752>

E. richardsonii wiradjuri subsp. nov. is similar in most respects to both *E. richardsonii ambigua* and

E. richardsonii pindiini subsp. nov. but separated from each by the following character suite: 8-10 dark dorsal bands (versus 11-13 in *E. richardsonii ambigua*); 8 upper labials; 8-9 supraciliaries; 21-23 lamellae under the fourth toe (versus 24-29 in *E. richardsonii pindiini subsp. nov.*); 3 secondary temporals. 32-36 midbody rows 22-29 caudal bands.

E. richardsonii wiradjuri subsp. nov. in life is depicted online at:
<https://www.inaturalist.org/observations/159623531>

and
<https://www.inaturalist.org/observations/38874809>

and
<https://www.inaturalist.org/observations/39033932>

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii djaru subsp. nov.* occurs in the the East Kimberley district of northern Western Australia. Specimens from the west Kimberley are morphologically similar and tentatively referred to this subspecies.

Etymology: The Djaru people are the Aboriginal people (first Australians) of the southern Kimberley district and occupy an area inhabited by this taxon.

EREMIASCINCUS RICHARDSONII YINDJIBARNDI SUBSP. NOV.
LSIDurn:lsid:zoobank.org:act:B1269461-6A94-4269-BC66-7DE892FBE730

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R73528 collected from 8 km east of Woodstock Homestead, Pilbara District, Western Australia, Australia, Latitude -21.616667 S., Longitude 119.033333 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R99360 collected from Woodstock station Pilbara District, Western Australia, Australia, Latitude -21.616667 S., Longitude 118.95 E.

Diagnosis: Until now, most authors have treated *Eremiascincus*

richardsonii (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru subsp. nov.*

E. richardsonii yindjibarndi subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the suite of characters as indicated below.

E. richardsonii djaru subsp. nov. from the East Kimberley district of Western Australia, *E. richardsonii yindjibarndi subsp. nov.* from the Pilbara region of Western Australia, generally north of the Fortescue River, *E. richardsonii baiyungu subsp. nov.* from the Cape Range district in Western Australia and *E. richardsonii nyiyarparli subsp. nov.* from the Pilbara region of Western Australia, south of the Fortescue River, are as a group of four subspecies readily separated from the other subspecies by the following characters: Their large size, snout-vent length exceeds 100 mm regularly, versus never in the other subspecies (with the exception of the insular form of *Eremiascincus richardsonii*); reduced dorsal keeling in adults meaning that the dorsal scales are effectively smooth (except for *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* which by contrast are heavily keeled); few if any nuchals (average of about 0.6, versus 1.1 in the other subspecies); fronto-parietals as long or longer than the interparietal, versus not so in the other subspecies (unless explicitly stated otherwise in the descriptions); 8-9 upper labials, versus 7-8, but never nine in the other subspecies.

E. richardsonii djaru subsp. nov. is separated from *E. richardsonii yindjibarndi subsp. nov.* by having 10-12 body bands, versus 7-9 in *E. richardsonii yindjibarndi subsp. nov.* The lighter bands on the dorsum of *E. richardsonii djaru subsp. nov.* are more beige-yellow than the rich yellow seen in *E. richardsonii yindjibarndi subsp. nov.* Furthermore the darker outer edges of each yellow scale in the dorsum is prominent in *E. richardsonii yindjibarndi subsp. nov.* versus not so in *E. richardsonii djaru subsp. nov.*, giving *E. richardsonii djaru subsp. nov.* a more immaculate appearance.

E. richardsonii yindjibarndi subsp. nov. is unusual in the complex in that there is a slight fading of the posterior edge of each dark dorsal cross-band.

Both *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* are separated from *E. richardsonii djaru subsp. nov.* and *E. richardsonii yindjibarndi subsp. nov.* by having keeled dorsal scales (versus essentially smooth in the other two species).

E. richardsonii nyiyarparli subsp. nov. is readily separated from *E. richardsonii baiyungu subsp. nov.* by having 11-13 body bands, versus 8-10 in *E. richardsonii baiyungu subsp. nov.* The colour of the head, versus the body in *E. richardsonii nyiyarparli subsp. nov.* is not significantly different, versus darker and of a different shade of brown in *E. richardsonii baiyungu subsp. nov.*

E. richardsonii yindjibarndi subsp. nov. is depicted in life in Hoser (1989) page 95 at bottom.

E. richardsonii nyiyarparli subsp. nov. in life is depicted online at: <https://www.inaturalist.org/observations/10579380>

and

<https://www.inaturalist.org/observations/160274522>

and

<https://www.inaturalist.org/observations/19878364>

Separation of the other six subspecies from each other and the ones above are done within the preceding formal description of *E. richardsonii djaru subsp. nov.* which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii yindjibarndi subsp. nov.* occurs in the Pilbara region of Western Australia, generally north of the Fortescue River.

Etymology: The Yindjibarndi people are the original (first Australians) inhabitants and occupiers of the lands where this taxon occurs in the North Pilbara area of Western Australia.

EREMIASCINCUS RICHARDSONII NYIYARPARLI SUBSP. NOV.
LSIDurn:lsid:zoobank.org:act:90D003AF-7487-45C0-95A1-45656B0D3B53

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R73633 collected from the Ophthalmia Range area, Pilbara District, Western Australia, Australia, Latitude -23.283333 S., Longitude 119.133333 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R23990 collected from Mount Newman, Pilbara District, Western Australia, Australia, Latitude -23.2711 S., Longitude 119.5611 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru subsp. nov.*

E. richardsonii nyiyarparli subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the suite of characters as indicated below.

E. richardsonii djaru subsp. nov. from the East Kimberley district of Western Australia, *E. richardsonii yindjibarndi subsp. nov.* from the Pilbara region of Western Australia, generally north of the Fortescue River, *E. richardsonii baiyungu subsp. nov.* from the Cape Range district in Western Australia and *E. richardsonii nyiyarparli subsp. nov.* from the Pilbara region of Western Australia, south of the Fortescue River, are as a group of four subspecies readily separated from the other subspecies by the following characters: Their large size, snout-vent length exceeds 100 mm regularly, versus never in the other subspecies (with the exception of the insular form of *Eremiascincus richardsonii*); reduced dorsal keeling in adults meaning that the dorsal scales are effectively smooth (except for *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* which by contrast are heavily keeled); few if any nuchals (average of about 0.6, versus 1.1 in the other subspecies); fronto-parietals as long or longer than the interparietal, versus not so in the other subspecies (unless explicitly stated otherwise in the descriptions); 8-9 upper labials, versus 7-8, but never nine in the other subspecies.

E. richardsonii djaru subsp. nov. is separated from *E. richardsonii yindjibarndi subsp. nov.* by having 10-12 body bands, versus 7-9 in *E. richardsonii yindjibarndi subsp. nov.* The lighter bands on the dorsum of *E. richardsonii djaru subsp. nov.* are more beige-yellow than the rich yellow seen in *E. richardsonii yindjibarndi subsp. nov.* Furthermore the darker outer edges of each yellow scale in the dorsum is prominent in *E. richardsonii yindjibarndi subsp. nov.*

nov. versus not so in *E. richardsonii djaru subsp. nov.*, giving *E. richardsonii djaru subsp. nov.* a more immaculate appearance. *E. richardsonii yindjibarndi subsp. nov.* is unusual in the complex in that there is a slight fading of the posterior edge of each dark dorsal cross-band.

Both *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* are separated from *E. richardsonii djaru subsp. nov.* and *E. richardsonii yindjibarndi subsp. nov.* by having keeled dorsal scales (versus essentially smooth in the other two species).

E. richardsonii nyiyarparli subsp. nov. is readily separated from *E. richardsonii baiyungu subsp. nov.* by having 11-13 body bands, versus 8-10 in *E. richardsonii baiyungu subsp. nov.*. The colour of the head, versus the body in *E. richardsonii nyiyarparli subsp. nov.* is not significantly different, versus darker and of a different shade of brown in *E. richardsonii baiyungu subsp. nov.*.

E. richardsonii yindjibarndi subsp. nov. is depicted in life in Hoser (1989) page 95 at bottom.

E. richardsonii nyiyarparli subsp. nov. in life is depicted online at: <https://www.inaturalist.org/observations/10579380>

and

<https://www.inaturalist.org/observations/160274522>

and

<https://www.inaturalist.org/observations/19878364>

Separation of the other six subspecies from each other and the ones above are done within the preceding formal description of *E. richardsonii djaru subsp. nov.* which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii nyiyarparli subsp. nov.* occurs in the Pilbara region of Western Australia, generally south of the Fortescue River.

Etymology: The Nyiyarparli people are the original (first Australians) inhabitants and occupiers of the lands where this taxon occurs in the South Pilbara area of Western Australia. Their neighbouring tribe the Puutu Kuntji Kurrma people made international headlines in May 2020, after a tax minimising mining company, Rio Tinto deliberately blew up and destroyed a sacred site near Juukan Gorge, that was over 20K years old. The destruction of the sacred artefacts was not the problem, but rather that the local native inhabitants complained about it and it got international media attention.

EREMIASCINCUS RICHARDSONII BAIYUNGU SUBSP. NOV.

LSIDDurn:lsid:zoobank.org:act:364F5D6C-E427-46FD-9B2F-12F5F2355E1B

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R15127 collected from Yardie Creek, Western Australia, Australia, Latitude -21.5300 S., Longitude 114.0000 E.

This government-owned facility allows access to its holdings.

Paratype: Three preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R8212-8213 and R8232 all collected from Warroora, Western Australia, Australia, Latitude 23.4814 S., Longitude 113.7936 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride et al. 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru subsp. nov.*.

E. richardsonii nyiyarparli subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the suite of characters as indicated below.

E. richardsonii djaru subsp. nov. from the East Kimberley district of Western Australia, *E. richardsonii yindjibarndi subsp. nov.* from the Pilbara region of Western Australia, generally north of the Fortescue River, *E. richardsonii baiyungu subsp. nov.* from the Cape Range district in Western Australia and *E. richardsonii nyiyarparli subsp. nov.* from the Pilbara region of Western Australia, south of the Fortescue River, are as a group of four subspecies readily separated from the other subspecies by the following characters: Their large size, snout-vent length exceeds 100 mm regularly, versus never in the other subspecies (with the exception of the insular form of *Eremiascincus richardsonii*); reduced dorsal keeling in adults meaning that the dorsal scales are effectively smooth (except for *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* which by contrast are heavily keeled); few if any nuchals (average of about 0.6, versus 1.1 in the other subspecies); fronto-parietals as long or longer than the interparietal, versus not so in the other subspecies (unless explicitly stated otherwise in the descriptions); 8-9 upper labials, versus 7-8, but never nine in the other subspecies.

E. richardsonii djaru subsp. nov. is separated from *E. richardsonii yindjibarndi subsp. nov.* by having 10-12 body bands, versus 7-9 in *E. richardsonii yindjibarndi subsp. nov.* The lighter bands on the dorsum of *E. richardsonii djaru subsp. nov.* are more beige-yellow than the rich yellow seen in *E. richardsonii yindjibarndi subsp. nov.* Furthermore the darker outer edges of each yellow scale in the dorsum is prominent in *E. richardsonii yindjibarndi subsp. nov.* versus not so in *E. richardsonii djaru subsp. nov.*, giving *E. richardsonii djaru subsp. nov.* a more immaculate appearance.

E. richardsonii yindjibarndi subsp. nov. is unusual in the complex in that there is a slight fading of the posterior edge of each dark dorsal cross-band.

Both *E. richardsonii baiyungu subsp. nov.* and *E. richardsonii nyiyarparli subsp. nov.* are separated from *E. richardsonii djaru subsp. nov.* and *E. richardsonii yindjibarndi subsp. nov.* by having keeled dorsal scales (versus essentially smooth in the other two species).

E. richardsonii nyiyarparli subsp. nov. is readily separated from *E. richardsonii baiyungu subsp. nov.* by having 11-13 body bands, versus 8-10 in *E. richardsonii baiyungu subsp. nov.*. The colour of the head, versus the body in *E. richardsonii nyiyarparli subsp. nov.* is not significantly different, versus darker and of a different shade of brown in *E. richardsonii baiyungu subsp. nov.*.

E. richardsonii yindjibarndi subsp. nov. is depicted in life in Hoser (1989) page 95 at bottom.

E. richardsonii nyiyarparli subsp. nov. in life is depicted online at: <https://www.inaturalist.org/observations/10579380>

and

<https://www.inaturalist.org/observations/160274522>

and

<https://www.inaturalist.org/observations/19878364>

Separation of the other six subspecies from each other and the ones above are done within the preceding formal description of *E. richardsonii djaru subsp. nov.* which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii baiyungu subsp. nov.* occurs in the

Cape Range area of coastal Western Australia, Australia.

Eymology: The Baiyungu people are the original (first Australians) inhabitants and occupiers of the lands where this taxon occurs in the Cape Range area of Western Australia.

EREMIASCINCUS RICHARDSONII NGAANYATJARRA SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:1CBB92C7-DDB6-4A74-85AB-A06B873A377A

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R20747 collected from the Blackstone Mining Camp, Western Australia, Australia, Latitude -26.016667 S., Longitude 128.366667 E.

This government-owned facility allows access to its holdings.

Paratypes: 14 preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R 14643, 17112, 17745, 17746, 17747, 17855, 22008, 22009, 22010, 22058, 22069, 22070, 22103, 22200, all collected from the Warburton Range in eastern Western Australia, Australia.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru subsp. nov.*

E. richardsonii neglectas subsp. nov. and the closely related and morphologically similar *E. richardsonii ngaanyatjarra subsp. nov.* are separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the following unique combination of characters:

E. richardsonii ngaanyatjarra subsp. nov. is separated from the other subspecies by having rich chocolate brown dorsal bands (9-12 in number) over a light yellow background, each lighter scale also prominently etched with the same chocolate brown, a light orange-brown head; lower numbers of subdigital lamellae under the fourth toe 21-26 (22.8), against averages of 24.0-25.8 in all other subspecies; 29-32 midbody rows and 24-26 caudal bands (original tail) (Storr 1967, 1974).

It is also the only West Australian form in which the dark bands are obviously narrower than the lighter interspaces. In this respect it is like all subspecies found in the NT, South Australia, NSW and Queensland, the two most eastern subspecies having interspaces roughly double the width of the darker bands..

E. richardsonii ngaanyatjarra subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/65339599>

E. richardsonii neglectas subsp. nov. is separated from the other subspecies by the combination of the following characters, in being essentially similar to *E. richardsonii ngaanyatjarra subsp. nov.* except for differing by having 33-34 midbody rows, 10-14 dorsal bands and 32 caudal bands (original tail).

E. richardsonii neglectas subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/100444376>

Separation of the other nine subspecies from each other and the one above (*E. richardsonii ngaanyatjarra subsp. nov.*) are done within the preceding formal description of *E. richardsonii djaru subsp. nov.* which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or

alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii ngaanyatjarra subsp. nov.* occurs in the Warburton Range and nearby Blackstone Range of central eastern Western Australia, Australia.

The closely related *E. richardsonii neglectas subsp. nov.* occur in and near the Petermann and Musgrave Ranges, all situated generally near the borders of South Australia, Western Australia and the Northern Territory.

Eymology: The Ngaanyatjarra people are the original (first Australians) inhabitants and occupiers of the lands where this taxon occurs in central eastern Western Australia, Australia.

EREMIASCINCUS RICHARDSONII NEGLECTAS SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:C0D1E905-6ED7-422C-94E8-FD0A7217299D

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R50195 collected from 14 km south-east of Sentinel Hill, South Australia, Latitude -26.1717 S., Longitude 132.5478 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R51566 collected from 38 km east south-east of Amata, South Australia, Australia, Latitude -26.2872 S., Longitude 131.4917 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru subsp. nov.*

E. richardsonii neglectas subsp. nov. and the closely related and morphologically similar *E. richardsonii ngaanyatjarra subsp. nov.* are separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the following unique combination of characters:

E. richardsonii ngaanyatjarra subsp. nov. is separated from the other subspecies by having rich chocolate brown dorsal bands (9-12 in number) over a light yellow background, each lighter scale also prominently etched with the same chocolate brown, a light orange-brown head; lower numbers of subdigital lamellae under the fourth toe 21-26 (22.8), against averages of 24.0-25.8 in all other subspecies; 29-32 midbody rows and 24-26 caudal bands (original tail) (Storr 1967, 1974).

It is also the only West Australian form in which the dark bands are obviously narrower than the lighter interspaces. In this respect it is like all subspecies found in the NT, South Australia, NSW and Queensland, the two most eastern subspecies having interspaces roughly double the width of the darker bands..

E. richardsonii ngaanyatjarra subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/65339599>

E. richardsonii neglectas subsp. nov. is separated from the other subspecies by the combination of the following characters, in being essentially similar to *E. richardsonii ngaanyatjarra subsp. nov.* except for differing by having 33-34 midbody rows, 10-14 dorsal bands and 32 caudal bands (original tail).

E. richardsonii neglectas subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/100444376>

Separation of the other nine subspecies from each other and the one above (*E. richardsonii neglectas subsp. nov.*) are done within

the preceding formal description of *E. richardsonii djaru* subsp. nov. which is explicitly also relied upon as part of this formal description. All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii neglectas* subsp. nov. occur in and near the Petermann and Musgrave Ranges, all situated generally near the borders of South Australia, Western Australia and the Northern Territory. The closely related *E. richardsonii ngaanyatjarra* subsp. nov. occurs in the Warburton Range and nearby Blackstone Range of central eastern Western Australia, Australia.

Etymology: The subspecies nomen "*neglectas*" comes from the Latin word "*neglectus*" which means overlooked, in reference to the taxon being overlooked by herpetologists in a generally overlooked part of Australia. The spelling has been changed for the nomen to avoid potential homonym issues and therefore should not be changed.

EREMIASCINCUS RICHARDSONII PINDIINI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:61F47094-246F-4DA1-9774-79B8DD84D27B

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R678 collected from Oldea, South Australia, Australia, Latitude -30.45 S., Longitude 131.83 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R9404 collected from Oldea, South Australia, Australia, Latitude -30.45 S., Longitude 131.83 E., 2/ Three preserved specimens at the National Museum of Victoria, Melbourne, Victoria, Australia, specimen numbers D390, 396, 397 all collected from Oldea, South Australia, Australia, Latitude -30.45 S., Longitude 131.83 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride et al. 1999). Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru* subsp. nov..

E. richardsonii pindiini subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the following unique combination of characters:

E. richardsonii pindiini subsp. nov. is separated from the other subspecies by the high frequency of 2 (rather than 3) supraoculars in contact with frontal (56 %) and numerous lamellae under fourth toe (24-29, average 26.7). The frequency of specimens with frontal not clearly longer than frontoparietal plus interparietals is high (44 %); and more than half the specimens have the frontoparietal longer than interparietals. The number of scale rows is extremely low (28-32, average 29.8). Labials 8 (rarely 7); supraciliaries 7-9 (mostly 8); dark dorsal bands 8-11 (av. 9.6) and, as in all populations east of the Western Australian border, are considerably narrower than the interspaces. Upper surface of head is distinctively brown and the body background is yellow. Any darker outline of light scales on the dorsum are effectively absent.

E. richardsonii pindiini subsp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/145886752>

Separation of the other nine subspecies from each other and the

one above are done within the preceding formal description of *E. richardsonii djaru* subsp. nov. which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii pindiini* subsp. nov. occurs in the western and central interior of South Australia, east to the Flinders Ranges and therefore occupies the main part of the State of South Australia.

Etymology: The Pindiini people are the Aboriginal people (first Australians) of the region north of the Nullarbor Plain, which is where this subspecies occurs and after whom the taxon is named. Other than having to deal with nuclear fall-out from the repeated British Atomic Bomb testing at nearby Maralinga, as well as the associated dumping of radioactive wastes on their lands, these peaceful Australian natives have generally been left alone by the British conquerors and had to deal with radiation sickness, cancers, birth defects in children and other health issues without the benefits of western medicine.

EREMIASCINCUS RICHARDSONII WIRADJURI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:DAAE74CB-79FD-4DEF-AA69-4720E50C4276

Holotype: A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number R7276 collected from the Hay Line, Darlington Point, New South Wales, Australia, Latitude -34.566 S., Longitude 146.0 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 R7277 collected from the Hay Line, Darlington Point, New South Wales, Australia, Latitude -34.566 S., Longitude 146.0 E.

Diagnosis: Until now, most authors have treated *Eremiascincus richardsonii* (Gray, 1845) as a single pan-Australian species, without recognition of any local variants as either species or subspecies.

It is almost certainly a complex of multiple species, but in the absence of molecular data, each of ten obviously divergent lineages are herein formally identified as separate subspecies.

For two, including the nominate form, there are available names and these are used in accordance with the requirements of the *International Code of Zoological Nomenclature* (Ride et al. 1999). Names are assigned for the first time in accordance with the *International Code of Zoological Nomenclature* to the other eight divergent populations in this paper.

The ten relevant taxa are all essentially from areas generally near their type localities and/or as otherwise indicated in the preceding description of *E. richardsonii djaru* subsp. nov..

E. richardsonii wiradjuri subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the following unique combination of characters:

E. richardsonii wiradjuri subsp. nov. is similar in most respects to both *E. richardsonii ambigua* and *E. richardsonii pindiini* subsp. nov. but separated from each by the following character suite: 8-10 dark dorsal bands (versus 11-13 in *E. richardsonii ambigua*); 8 upper labials; 8-9 supraciliaries; 21-23 lamellae under the fourth toe (versus 24-29 in *E. richardsonii pindiini* subsp. nov.); 3 secondary temporals. 32-36 midbody rows 22-29 caudal bands.

E. richardsonii wiradjuri subsp. nov. in life is depicted online at:

<https://www.inaturalist.org/observations/159623531>

and

<https://www.inaturalist.org/observations/38874809>

and

<https://www.inaturalist.org/observations/39033932>

E. richardsonii ambigua is defined and separated from the other

taxa by the having 31 to 32 midbody rows, 7-8 upper labials, 6-7 supraciliaries above either eye; 3 supraoculars in contact with frontal, and only 2 secondary temporals; 12-13 dorsal body bands; 22-24 lamellae under the fourth toe.

E. richardsonii ambigua in life is depicted online at: <https://www.inaturalist.org/observations/22455039>

and

<https://www.inaturalist.org/observations/103346455>

E. richardsonii pindiini subsp. nov. is separated from other subspecies within the *Eremiascincus richardsonii* (Gray, 1845) complex by the following unique combination of characters:

E. richardsonii pindiini subsp. nov. is separated from the other subspecies by the high frequency of 2 (rather than 3) supraoculars in contact with frontal (56 %) and numerous lamellae under fourth toe (24-29, average 26.7).

The frequency of specimens with frontal not clearly longer than frontoparietal plus interparietals is high (44 %); and more than half the specimens have the frontoparietal longer than interparietals.

The number of scale rows is extremely low (28-32, average 29.8). Labials 8 (rarely 7); supraciliaries 7-9 (mostly 8); dark dorsal bands 8-11 (av. 9.6) and, as in all populations east of the Western Australian border, are considerably narrower than the interspaces. Upper surface of head is distinctively brown and the body background is yellow. Any darker outline of light scales on the dorsum are effectively absent.

E. richardsonii pindiini subsp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/145886752>

Separation of the other subspecies in the *E. richardsonii* species group from each other and the one above (*E. richardsonii wiradjuri* subsp. nov.) are done within the preceding formal description of *E. richardsonii djaru* subsp. nov. which is explicitly also relied upon as part of this formal description.

All the preceding subspecies of *E. richardsonii* (Gray, 1845) are separated from all other species within the genus *Eremiascincus* Greer, 1979 by the presence of dorsal scales that are keeled or with central ridges, especially on the rump and base of the tail, or alternatively, if keeling is very weak or absent, a large adult size in excess of a snout-vent length of over 90 mm; 32 or less tail bands; 14 or less dark bands on the body; body bands distinct, unbroken and of same intensity on the back as the flanks.

Distribution: *E. richardsonii wiradjuri* subsp. nov. occurs in southern inland southern New South Wales and extending into the far east of South Australia near the Victorian border.

Etymology: The subspecies is named in recognition of the Wiradjuri who are the original native Australian (first nations) inhabitants of the region this subspecies occurs. Their most valuable artefacts, including burial sites over 20K years old, were stolen and ended up in the British Museum. In passing I mention that "Ayers Rock" otherwise known as Uluru from central Australia was not taken back to the UK, because the British invaders realized it was too big to fit inside the British Museum.

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CONFLICT OF INTEREST

None.

