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Sliding into scientific reality. Taxonomic changes to the Australian skink genus *Lerista* Bell, 1833 *sensu lato*, including the erection of 8 new genera, 19 new species and 5 new subspecies.

LSIDURN:LSID:ZOOBANK.ORG:PUB:57925CE2-5AEC-4B3F-A1CA-6BBF72B56442

RAYMOND T. HOSER

LSIDURN:LSID:ZOOBANK.ORG:AUTHOR:F9D74EB5-CFB5-49A0-8C7C-9F993B8504AE 488 Park Road, Park Orchards, Victoria, 3134, Australia. *Phone*: +61 3 9812 3322 *Fax*: 9812 3355 *E-mail*: snakeman (at) snakeman.com.au

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ABSTRACT

A review of the Australian skink genus *Lerista* Bell, 1833 *sensu lato* has resulted in the following changes. Division into 24 genera is formally proposed. Eight, including the most divergent clade are formally named for the first time.

The arrangement of the definitive work of Wells (2012) is largely, but not entirely, correct.

This paper makes appropriate changes, including the merging of three Wells (2012) recognized genera into others and reassigns some species from the genus-level placements of Wells (2012).

19 species and 5 subspecies are also formally named for the first time.

In order to stabilize the taxonomy of the putative species "*Lygosoma walkeri* Boulenger, 1891", I do within this paper designate a Lectotype in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) ("the Code").

The southern population of that putative taxon is formally named herein as a new species within the genus *Marrunisauria* Wells, 2012.

In a peer reviewed in name only (PRINO) online "journal" *Zootoxa* an amateur herpetologist Glenn Shea alleged that a number of genus names proposed by Cope in 1892 relevant to *Lerista sensu lato* were available for nomenclatural purposes. Besides contradicting the better judgment of herpetological icons Emmett Reid Dunn and Merle Taylor Dunn in Dunn and Dunn (1940), Shea used a series of very tenuous mental gymnastics to infer type species for generic names proposed by Cope.

Because Shea's conclusions are ambiguous (he has second guessed what Cope was thinking over 100 years earlier), based on a claim two published genus-level keys were identical when they were in fact quite different to one another, Shea's conclusions, taxonomy and nomenclature fall foul of Article 11.4.3 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), making the relevant Cope (1892) names unavailable.

Furthermore, Cope's names and Shea's paper also fall well outside of Articles 12., 12.1 and 12.2.7 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), making them wholly and irretrievably unavailable, even if Shea's century plus retrospective mind-reading exercise of Cope was vaguely accurate.

The overall effect of this paper is to unambiguously stabilize the taxonomy and nomenclature of this large group of well over 100 species by bringing the genus-level classification and divisions in line with that of other Australian lizard groups Clades generally 10 MYA or more divergent are placed in separate genera making 24 in all.

At the species level, it is important that all Australian species of lizard are formally identified and named as soon as practicable. Furthermore, by naming an obvious overhang of 19 previously unnamed species along with 5 more subspecies, this objective is being completed in a timely manner.

In the absence of discovery and identification, governments, NGO's and other stakeholders cannot possibly conserve or manage the relevant entities.

Keywords: Taxonomy; nomenclature; lizard; skink; Australia; Cope; Wells, Wellington; Shea; taxonomic vandalism; *Lerista; Miculia; Rhodona; Nodorha; Phanoropis; Soridia; Brachystopus; Furcillus; Ollochirus; Oncopus; Tridentulus; Telchinoscincus; Gavisus; Xynoscincus; Alcisius; Aphroditia; Cybelia; Gaia; Goldneyia; Krishna; Lokisaurus; Marrunisauria; Spectrascincus; Tychismia; Wondjinia; new genus; Aaah; Ah; Oh; Tism; Acdc; Labi; Go; Get; new species; luxflavo; ruficauda; oomph; arrente; kunja; pitjantjatjara; wam; thingi; hit; wellsei; valentici; ha; kay; know; phuk; sheet; yes; it; intoit; new subspecies; gurindji; ngarinyin; asgicondi; skink; ngandatha.*

INTRODUCTION

The genus *Lerista* Bell, 1833 as originally conceived was a genus of Australian skinks.

All are fossorial in nature, small in size and as a rule have limbs that are reduced in some form and an elongate body form as befits species that burrow in loose ground.

By end 2024, the genus as recognized by most Australian herpetologists has just under or just over 100 recognized species occurring across Australia.

They vary greatly in form and even when convergent in key characteristics, repeated molecular studies have commonly shown taxa at times to be quite distantly related.

Phylogenies published have all shown *Lerista* Bell, 1833 as a "monophyletic group", but within this assemblage, divergence of many major stems happened between 10 and 15 million years ago.

With this in mind and relying mainly on morphological traits rather than genetic data, Wells (2012) produced a massive 361-page monograph on the genus *Lerista sensu lato*, in which he erected 11 new genera. This was in addition to the three others created by Wells and Wellington (1984 and 1988) and another 5 resurrected from synonymy, meaning 19 in total for the group, meaning an average of just over 5 species per genus and noting the existence of further undescribed forms.

This gave the following generic arrangement.

Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005, Wondjinia Wells 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) with various

morphologically alike species being placed in the relevant groups.

The response to the meticulous and detailed 361-page work of Wells (2012) was swift.

The Wolfgang Wüster gang of thieves, published a diatribe and circulated globally by way of SPAM email.

It was originally known as Wüster (2012) but later rebadged and published in hard copy.

This became known as Kaiser *et al.* (2013) as cited herein, although the real authorship was Wüster.

We know this because when shopping the same document for authors in 2012, Kaiser in his SPAM email pointed out that he played no part in authoring the document.

Without a shred of evidence or any direct knowledge of the

relevant species (versus a lifetime's work on them by Richard Wells and his collaborators), Wüster (2012) advocated 1/ Non-use of any Wells (2012) names and 2/ Further urged readers inclined to agree with any of the scientific findings of Wells to simply steal his work, rename the very same entities in breach of Copyright laws and the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) and to then 3/ Claim "name authority" for the same discoveries.

Kaiser *et al.* (2013) later mutated into a number of updated publications, ultimately settling on Rhodin *et al.* (2016), which was a petition to the International Commission on Zoological Nomenclature (ICZN) to formally squash the names of myself, Raymond Hoser in all my scientific publications post-dating year 2000 and also scooping up the Wells papers postdating year 2000 at the same time.

This clearly included Wells (2012) and all the names proposed therein.

Wüster and his gang through the website they control, Peter Uetz's "The Reptile Database" made it known that the Wells (2012) names should not be used and if the taxonomy was actually ever agreed to, then the names were to be overwritten with the Wüster gang's names.

Ultimately the attempt of the Wüster gang to rewrite history failed and in terms of *Lerista*, the taxonomy and nomenclature of the somewhat oversized putative genus has in effect languished in effective suspended animation since.

On the Wüster gang-controlled website, Peter Uetz's "The reptile database" at:

https://reptile-database.reptarium.cz/species?genus=Lerista& species=lineata&search_param=%28%28search%3D%27Ler ista%27%29%29

Is written:

"Synonymy: Kaiser et al. 2013 considered the generic names Alcisius Wells 2012, Aphroditia Wells 2012, Cybelia Wells 2012, Gaia Wells 2012, Goldneyia Wells 2012, Krishna Wells 2012, Lokisaurus Wells 2012, Marrunisauria Wells 2012, Spectrascincus Wells 2012, Tychismia Wells 2012, Wondjinia Wells 2012 invalid and rejected their use instead of Lerista."

Of course, there was not a shred of scientific evidence to counter the 361 pages of hard evidence published by Wells (2012). This is not really out of the ordinary as neither Uetz, Kaiser or Wüster or anyone else in their gang of thieves are actually scientists or people who use the scientific method.

They are better described as conmen and thieves.

Two of them live in the USA and Wüster rarely ventures beyond foggy, wet Wales, where he spends most of his time being a keyboard warrior trolling others on platforms like Facebook and Twitter.

In other words the trio are about as far removed from continental Australia and skinks in *Lerista* Bell, 1833 *sensu lato* as could possibly be

To get a good idea as to what this gang of thieves do in their spare time on the internet see Mackay (2024) or Hoser (2024b).

Wells (2012) did also sum up all that is known about each and every recognized species of putative *Lerista* in Australia as of year 2012, including diagnoses, distributions, synonymies and obvious species groups.

Based on the evidence before him at the time, Wells (2012) grouped like species and placed them in what he thought were appropriate genera.

He resurrected from synonymy old and available names as is the correct ICZN rules and in the majority of cases, where no names were available, he erected new genera, which is also in accordance with the legally binding rules of scientific zoological nomenclature.

As part of an audit of Australia's herpetofauna, the genus *Lerista sensu lato* came under scrutiny by myself in the period post-dating Wells (2012).

This included a review of the relevant literature, including all that preceded and post-dated Wells (2012) as well as inspection of living and dead specimens of the relevant taxa.

As part of this review, Hoser (2023) published a review of the Nodorha bougainvillii

(AKA *Lerista bougainvillii*) *sensu lato* species complex, including formal descriptions of five new species and a new subspecies.

That is an essentially south-east Australian assemblage.

Other potentially unnamed species and genera within *Lerista sensu lato* had came to light previously and in the absence of any indications of anyone else seeking to inspect or name these taxa, they became the subject of this study.

MATERIALS AND METHODS

Preceding this paper and as a methodology, all the relevant published literature, including as cited in detail in Wells (2012) was reviewed to:

1/ Confirm that the previously named taxa in *Lerista sensu lato* were valid species.

2/ Confirm the correct genus-level assignment of each form, and by validating that they:

A/ Conformed to an obvious species group and that, B/ Based on publicly available sequence data they had diverged less than 10 MYA from their other nearest common ancestor and,

3/ In light of the preceding things to flag any potentially unnamed forms at genus or species levels, including subgenera or subspecies.

This was backed up by way of inspection of specimens, alive, dead, in photos and preserved in museums.

Inspection of specimens from the relevant areas was done to confirm what was mooted by way of literature review and the unnamed taxa flagged in any available relatively recent molecular studies.

Publicly available sequences available at Genbank were downloaded and analysed using Mega11 (Tamura *et al.* 2021) and checked against previously published phylogenies using the same data.

Similar to the methodology employed by Colgan *et al.* (2009) and Sadlier *et al.* (2019), MEGA version 11 (Tamura *et al.* 2021) was downloaded from the web and used to calculate Kimura 2-parameter (K2P) genetic distances with pairwise deletion of missing data and assuming a discrete approximation to the gamma distribution for modelling rate variation between sites (a shape parameter set to 1.0). Standard errors of the distances were estimated by a bootstrap analysis with 500 replicates.

The upper limit of the divergence rate generally assumed for substitution in cytochrome b in reptiles is 2.5% per million years (Crochet *et al.* 2004).

Assuming this rate as correct, as was done by Colgan *et al.* (2009), it was decided that where *Lerista* clades had apparently diverged beyond 1.75 MYA, the relevant lizard groups were assessed to see whether or not they were: 1/ Morphologically diagnosable as separate species and 2/ If a likely or logical biogeographic factor causing isolation of populations could be identified.

The latter may be:

A/ Habitat barrier/s (e.g. soil type, vegetation type, rock type, etc),

B/ Competing or predatory species in an area or C/ Presumed past climatic events that may have facilitated either of the prior types of factor.

Where applicable, if a case for separation of populations was made out, due to morphological divergence, but date of divergence was not believed to be great, then I opted to make the relevant taxa subspecies.

Alternatively, where no sequence data was available, but other factors such as significant morphological divergence had occurred, especially if connected to a well-known or obvious biogeographical barrier, then the decision would be made to determine the relevant form as a separate species.

Publications relevant to the taxonomy and nomenclature of the species within *Lerista sensu lato* and the final decisions made herein are listed below.

Wells (2012), includes a vast number of *"Lerista*" related references not included herein or relied upon in terms of the taxonomic or nomenclatural decisions herein.

Those relate to other aspects of the relevant species not required for taxonomic assessment or are in the genre of field surveys and reports of taxa in which *"Lerista"* species were mentioned as caught in a given place, but with little if any meaningful information beyond that.

Alternatively a lot of the references cited by Wells (2012) not cited herein merely duplicate the material and or findings of the publications cited herein.

As much as possible, I have tried to rely on the original sources of information rather than secondary materials.

To that end, I read every single formal description of every putative species within the *Lerista sensu lato* group and all are cited below.

In terms of genus-level assignments, relevant published phylogenies were reviewed, including Skinner *et al.* (2008) and Pyron *et al.* (2013), the latter of which I note post-dated Wells (2012).

Publications relevant to the taxonomic conclusions made within this paper included the following: Ahl (1935), Amey and Couper (2009), Amey et al. (2005, 2019a, 2019b), Anonymous (1969), Aplin and Smith (2001), Bamford (1988) Bauer et al. (2003), Bell (1833a, 1833b), Blackburn (1999), Boehm (1943), Boulenger (1887, 1891, 1896), Bradshaw (1988), Brandle (2010), Brandley et al. (2008), Brown (2014). Burbidge and McKenzie (1983), Ceriaco et al. (2023), Chapman and Dell (1985), Cogger (1979, 2014), Cogger et al. (1983), Colgan et al. (2009), Cope (1892), Cotton (2014), Crochet et al. (2004), Couper and Amey (2009, 2017), Couper and Ingram (1992), Couper et al. (2006, 2016), Covacevich (1971), Covacevich et al. (1997), Daudin (1802), De Vis (1888, 1889), Dubois et al. (2019), Duméril and Bibron (1839), Dunn and Dunn (1940), Ehmann (1992), Fairbairn et al. (1988), Farguhar et al. (2014), Fischer (1882), Fitzinger (1843), Ford (1963, 1965), Fry (1914), Fuhn (1969), Gaikhorst (2002), Glauert (1960, 1961, 1962), Gray (1830, 1839, 1841, 1845, 1864, 1865, 1867), Greer (1967, 1970, 1974, 1979a, 1979b, 1980, 1983, 1986, 1987, 1989, 1990a, 1990b, 1991), Greer et al. (1983, 1991), Grimm-Seyfarth et al. (2019), Günther (1867, 1876), Hawkeswood (2021), Horner (1991), Hoser (1989, 2007, 2014a, 2013b, 2016, 2018a, 2018b, 2018c, 2018d, 2019a, 2019c, 2019d, 2019e, 2019f, 2020a, 2020b, 2021, 2022a, 2022b, 2022c, 2023a, 2023b, 2023c, 2023d, 2023e, 2023f, 2024a, 2024b), Hutchinson (2008), Hutchinson and Donnellan (1993), ICZN (1991, 2001, 2012, 2021), James and Shine (2000), Jörger and Schrödl (2013), Kay and Keogh (2012), Kohlsdorf and Wagner (2006), Lande (1978), Longman (1937), Loveridge (1933, 1934), Lucas and Frost (1895, 1896), Marx and Hosmer (1959), Maryan (1993,

1996, 1998, 2006), Maryan and Reinhold (2010), Maryan and Robinson (1997), McCoy (1881), Mitchell (1955), Mittleman (1952), Mosyakin (2022), Müller (1880), Parker (1926a, 1926b), Pianka (1972), Prates et al. (2021, 2022a, 2022b, 2023), Pyron et al. (2013), Rabosky et al. (2007), Ride et al. (1999), Schluter and Hallermann (1997), Shea (1991a, 1991b, 1993, 2021), Shea and Sadlier (1999), Skinner (2007a, 2007b, 2010), Skinner and Lee (2009), Skinner et al. (2008), Smith (1849), Smith (1996), Smith and Adams (2007), Smith (1937), Sternfeld (1919), Stirling and Zietz (1893), Storr (1964a, 1964b, 1971, 1976, 1978, 1979, 1980, 1982, 1984a, 1984b, 1985a, 1985b, 1986a, 1986b, 1990a, 1990b, 1991a, 1991b, 1991c, 1991d, 1991e, 1991f), Storr and Harold (1978, 1984, 1985), Storr et al. (1981, 1983, 1999), Swan et al. (2022), Waite (1900), Wellington (2016), Wells (2012), Wells and Wellington (1984, 1985, 1988), Werner (1903), White (1976), Wiens (2009), Wiens and Slingluff (2001), Wiens et al. (2006), Wilson (2022), Wilson and Knowles (1988), Wilson and Swan (2010, 2021), Zietz (1920) and sources cited therein.

RESULTS

Following both literature review, including reviewing the available published molecular data as outlined above, and direct inspection of relevant specimens, it was deemed appropriate to recognize a total of 24 genera.

This included all the 5 genera in addition to *Lerista* Bell, 1833 that were resurrected from synonymy by Wells (2012).

In line with the publication of Shea (2021) taken on face value, I made in the first draft of this paper, other relevant taxonomic actions.

These included recognition of *Furcillus* Cope, 1892, for which the (alleged, according to Shea, 2021) type species is *"Rhodona punctatovittata* Günther 1867", *Ollochirus* Cope, 1892 for which the (alleged, according to Shea, 2021) type species is *"Rhodona bipes* Fischer, 1882", and *Tridentulus* Cope, 1892, the (alleged, according to Shea, 2021) type species *Rhodona fragilis* Günther, 1876, which incidentally matched *Krishna* Wells, 2012.

On the face of it, the earlier Cope (1892) names as defined as "accepted" by Shea (2021) took priority over any of Wells (2012).

More on all these names below.

It was also deemed appropriate to recognise most of the genera proposed by Wells and Wellington (1984, 1988) and Wells (2012), these being Wells and Wellington (1984) (as in both 2), one by Wells and Wellington (1988) and most of the 11 formally proposed by Wells (2012) (3 were subjectively merged with other genera herein).

As first revisor, I take the following action. Lokisaurus Wells, 2012 (Type Species: Ablepharus timidus De Vis, 1888) is subsumed within *Phaneropis* Fischer. 1881 (Type species: Phaneropis muelleri Fischer, 1881); Alcisius Wells, 2012 (Type species: Lerista vermicularis Storr 1982) is subsumed within Gaia Wells, 2012 (Type Species: Rhodona bipes Fischer, 1882), and in the original draft of this paper I in turn subsumed this within Ollochirus Cope, 1892, based on the paper of Shea (2021) and his statements that the Cope names were available and correctly applied (by him) (see later in this section); Krishna Wells, 2012 (Type Species: Rhodona fragilis Günther, 1876)) is subsumed within Tychismia Wells, 2012 (Type Species: Lerista chordae Amey, Kutt and Hutchinson 2005), which was in turn in my original draft of this paper subsumed into Tridentulus Cope, 1892 with the same (alleged, according to Shea, 2021) type species.

The priority in terms of the Wells named genera for the same species groups was given by way of page priority for the

deemed duplicate genera and formed the only basis for my name choices as first reviser.

These subsumed above Wells (2012) names remain available for nomenclature and should be used if and when anyone decides that the species group identified by the relevant type species should be split off as a separate genus from the genera (species group) I have placed them within or perhaps as a subgenus grouping.

I have simply merged those genera as defined by Wells (2012) on the basis of an estimated divergence between the relevant groups of less than 10 MYA and this wholly ignores what is clearly divergence at some level between the groups in question and the fact that Wells (2012) has named defined species groups that he quite forcefully suggested should be placed in their own unique genera.

It has been suggested by 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, Wüster *et al.* 2021) that names proposed by Edward Drinker Cope (July 28, 1840 - April 12, 1897) should never be used and instead overwritten, because Cope was according to them an evil racist pig.

Even allowing the claim to be true, it is a violation of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) that underpins the integrity of the biological sciences and so I refuse to engage in taxonomic vandalism by overwriting legitimately proposed Cope names (assuming they are legitimately proposed) as urged in the strongest possible terms by Dubois *et al.* (2019) Ceriaco *et al.* (2023) and others.

(Cope has named hundreds of reptile taxa and including many iconic and well-known species, with his names widely used by others and myself and those names are not in contention or dispute in terms of availability).

I should note here that I made the following comments in my draft of this paper prior to peer review and noting the comments at that stage of the publishing process, have left the text below (in italics).

"I have taken the assessment of Shea (2021) in terms of the relevant Cope names being available as correct on his word only.

Shea may not be correct and if his allegations with respect of the Cope names are incorrect, then the relevant Wells names are the next available ones."

At peer review, the comment came back to refuse publication of this paper until I had taken time to properly read Shea's 2021 paper, with reference to Cope's paper of 1982 (on hand), the relevant cited (by Shea 2021) current *International Code of Zoological Nomenclature* (Ride *et al.* 1991) and all other relevant publications (including for example Boulenger 1887 as referred to extensively by Shea 2021), so that I could make a proper and informed decision in terms of the Shea paper, the validity or otherwise of the Cope (1892) names and wholly incorporate that into the final published copy of this paper.

This was to ensure that the taxonomy and nomenclature would be properly stabilized in this paper and so that there would not be need to change genus names again in the future, or at least minimize that risk if an assessment of Shea's conclusions later on found him in error.

In other words, I was asked to test Shea's conclusions about the Cope (1892) names separately to him to confirm that he was correct or otherwise.

The reviewer noted that Shea's past form with regards to

taxonomic and nomenclatural judgements was woeful and that it was too great a leap of "faith" to simply take his claims on his word.

Taking the reviewer's comments on board and mindful of producing the best possible paper I did the requested exercise.

It turned out that Shea's published conclusions with respect of the Cope names from 1892 were incorrect (see below), validating the peer reviewer's recommendations to refuse publication at the first instance.

In summary and as a result of the reviewer's suggestions I can say with certainty that none of the relevant Cope (1892) names as applied by Shea (2021) to species within *Lerista sensu lato* were available, because both Cope (1892) and Shea (2021) had fallen foul of Article 11.4.3 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999)

This meant that where relevant, the Wells and Wellington (1984, 1988) or Wells (2012) names were in effect the first available.

Alternatively, in the case of one group of species, the *"Rhodona punctatovittata* Günther 1867" group, no name was available.

Shea (2021) had found that *Furcillus* Cope, 1892, had an alleged type species is "*Rhodona punctatovittata* Günther 1867" making the name *Furcillus* in effect available for that group.

Significantly, there had been undue haste by both Shea and others in the Wolfgang Wüster gang cohort (e.g. Peter Uetz on his "the reptile database" website), and I have to admit, even including myself, to rush to sink Wells names in priority of others (any others!), when it simply was not the proper thing to do.

While there was no ulterior motive on my part, the original error I made was believing a publication of another "herpetologist, viz Shea (2021) without going through the proper scientific method and checking it and verifying (if possible) the relevant claims myself.

In terms of other genus level groupings made by Wells (2012), some conflict in parts quite sharply from the phylogenies published to date including Skinner *et al.* (2008) and Pyron *et al.* (2013).

Recognising the divergences of the relevant species involved, I have chosen to erect a total of 8 new genera to accommodate the relevant divergent species that cannot be properly accommodated in existing genus groups for which there are already available names.

Which species are in those genera is self-evident in the descriptions themselves and stated accordingly.

The exact groupings are also summarized below and also formally listed at the end of this paper.

This in effect would mean that my concept of *Lerista sensu lato* would now include some 24 genera. This translates at about 5 species per genus group, noting that further identification and naming of forms will tend to expand this number further in turn making relevant genera more speciose.

It is not a case of over-splitting a genus, but rather the logical dismemberment of a group that is clearly diverse and as currently conceived by most herpetologists at present includes over 100 quite diverse species.

It is worth noting here that Richard Wells in particular has long been accused of over-splitting taxa, but in the case of *Lerista sensu lato*, if allowing for his inadvertent naming of closely related taxa and omitting to name other divergent groups, noting he had access to far less information all those years ago, his taxonomy and nomenclature were remarkably accurate and far superior to that of any of his contemporaries.

Based on crude numbers and my own interpretations here, it appears that if Wells (2012) did commit any crime, it was most likely failing to split *Lerista sensu lato* enough!

Significantly the erection of eight new genera, including one for the most divergent clade within *Lerista sensu lato* will stabilize the nomenclature of the group for future herpetologists.

At the species and subspecies level a number of potentially unnamed forms were identified.

Some, but not all are formally named as new species herein. This includes 18 new species and 5 new subspecies.

Because species in the new genera have been taken from other putative genera and the Wells (2012) arrangement has been shown to be at variance with more recent phylogenies, I have created a list of genera and species at the end of this paper.

The placement of species within the genera, I think is accurate.

All relevant component species seem to match their groups based on morphology, distribution and molecular divergence. This list should be used as a template for others working on *Lerista sensu lato*, even if not wishing to use the relevant genus names, as the list has properly arranged the relevant species groups.

Use as subgenera for the species groups will I am sure be more palatable to the "lumpers" in the science of herpetology. I should also mention that since the publication of Wells (2012) ten new species have been formally named.

Hoser (2013c) named five additional species from south-east Australia, all within the genus *Nodorha* Mittleman, 1952.

The other five are all from north Queensland and all within the genus *Gavisius* Wells, 2012 as defined by Wells (2012).

Those ten species and the 19 new species described herein are also included in the genus and species list at the end of this paper, making it the most comprehensive treatment of the *Lerista sensu lato* group to date.

It is also the first proper assessment of the group on a broad and inclusive scale since the landmark 361 page publication of Wells (2012), which was 12 years ago.

LECTOTYPE DESIGNATION FOR THE TAXON "LYGOSOMA WALKERI BOULENGER, 1891"

In order to stabilize the taxonomy of the putative species "Lygosoma walkeri Boulenger, 1891", I do within this paper designate a Lectotype in accordance with the rules of the International Code of Zoological Nomenclature (Ride et al. 1999) ("the Code").

In order to comply with all of 74.7. (1, 2 and 3) in the Code, I make the following known.

74.7.1. A lectotype for *Lygosoma walkeri* Boulenger, 1891 a taxon from the West Kimberley district in Australia is being designated from a series of two syntypes of *Lygosoma walkeri* Boulenger, 1891.

74.7.3. In terms of the putative taxon, *"Lygosoma walkeri* Boulenger, 1891", there were two Syntypes.

Based on collection localities, taken at face value, there must be two species involved.

However, no specimens of the species commonly known as *"Lerista walkeri*" have since been found that far south in the West Kimberley (Roebuck Bay) (syntype 2), but they have been found on islands adjacent to Condillac Island, Northwest Australia (syntype 1).

Molecular evidence (e.g. Farquhar *et al.* 2024) and morphological evidence shows that there are two species currently identified as "*Lerista walkeri*" in the West Kimberley region, with a division of the two species being in the vicinity of the Prince Regent River itself, a location n between the two purported collection sites of the syntypes.

To stabilize the nomenclature for the species *Lygosoma walkeri* Boulenger, 1891 as currently understood by herpetologists in Australia and elsewhere,

74.7.2. I hereby designate as a Lectotype, specimen number 1946.8.15.59 at the Natural History Museum London, UK, as the Lectotype for the species. The specimen was collected from Condillac Island, North-west Australia by J. J. Walker.

SHEA (2021) AND THE NAMES PROPOSED BY COPE 1892

Cope (1892) proposed a series of generic names including some which according to amateur herpetologist Glenn Shea in Shea (2021) were potentially applicable to species within *Lerista sensu lato*.

Emmett Reid Dunn and Merle Taylor Dunn, a husband and wife team of American herpetological icons had in Dunn and Dunn (1940) already decided that the relevant Cope (1892) names of *Furcillus*, *Ollochirus*, *Oncopus* and *Tridentulus* were unavailable for zoological nomenclature.

That was because Cope (1892) failed to publish the generic names in company with any included species.

This in effect made them "nomen nudem" (see later).

Dunn and Dunn (1940) had written:

"Present rules state that a generic name without a designated type is invalid. Twenty-nine of Cope's generic names are in this category. We list all of these. For twelve genera of scincid lizards, and for two genera of teiid lizards there is given a diagnosis but no idea of the content, and for one genus in each family we have been unable to find any species that fits the generic diagnosis. These fourteen genera have never been used by other herpetologists and we do nothing to validate them."

In a peer reviewed in name only publication (PRINO) calling itself *Zootoxic* Glenn Shea in Shea (2021) alleged that a number of genus names proposed by Cope in 1892 relevant to *Lerista sensu lato* previously deemed invalid by Dunn and Dunn (1940) were available for nomenclatural purposes. Besides contradicting the better judgment of Dunn and Dunn (1940), Shea used a series of mental gymnastics to infer type species for generic names proposed by Cope.

He did this by asserting that Cope had copied an earlier key from Boulenger (1887) in his own document and therefore must have been referring to the same taxa as Boulenger.

Shea (2021) quoted from the Cope key extensively, but did not directly publish or cross match the Boulenger (1887) key, which I did.

As that document was very different to that of the Cope key, it is in fact a big stretch of the imagination to accept Shea's

thesis that Cope's key was: 1/ A direct copy and

2/ Cope explicitly had named the relevant type species by referring to or copying Boulenger.

The latter contention is the important one here although I should note that neither claim stacked up on analysis.

In justifying the availability of the Cope (1892) names, Shea (2021) wrote:

"This key and the names therein were republished in Cope (1900) and were listed by Dunn & Dunn (1940), who did not consider the names valid as they were not originally published with any included species. However, under the current Code

of Zoological Nomenclature generic names proposed without included species are validly published and available (Article 11.4.1), and their application awaits nomination of type species (Article 67.2.2)."

Because Shea's conclusions are ambiguous, in that he has second guessed what Cope was thinking or doing over 100 years earlier, Shea's conclusions, taxonomy and nomenclature fall foul of Article 11.4.3 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), ignored by Shea (2021) but making the relevant Cope (1892) names unavailable.

11.4.3 reads as follows:

"11.4.3. An index published before 1931 in a work that is not consistently binominal is acceptable itself as a work consistent with the Principle of Binominal Nomenclature provided that the Principle is consistently applied to scientific names in the index; thus a scientific name published in such an index is available if the name satisfies the other provisions of this Chapter and of Articles 4, 5 and 6, and if there is an unambiguous link between the entry in the index and the description, illustration, or indication in the text."

Therefore because there is no "*unambiguous link*" between the Cope name and a taxon, the names proposed by Cope (1892) are unavailable.

Furthermore, Cope's names and Shea's paper also fall well outside of Articles 12., 12.1 and 12.2.7 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), making them wholly and irretrievably unavailable, even if Shea's century plus retrospective mind-reading exercise of Cope was accurate.

The relevant articles read:

"Article 12. Names published before 1931.

12.1. Requirements. To be available, every new name published before 1931 must satisfy the provisions of Article 11 and must be accompanied by a description or a definition of the taxon that it denotes, or by an indication." and

"12.2.7. the proposal of a new genus-group name or of a new species-group name in association with an illustration of the taxon being named, or with a bibliographic reference to such an illustration, even if the illustration is contained in a work published before 1758, or in one that is not consistently binominal, or in one that has been suppressed by the Commission (unless the Commission has ruled that the work is to be treated as not having been published [Art. 8.7]);"

Because the Cope (1892) names do not comply with Articles 11.4.3, 12, 12.1 and 12.2.7, his names are each "*Nomen nudem*" which is defined in the Code as follows:

"nomen nudum (pl. nomina nuda), n.

A Latin term referring to a name that, if published before 1931, fails to conform to Article 12;"

See above for "Article 12".

Because the Cope (1892) names are quite clearly unavailable for zoological nomenclature, the first later available names for the relevant generic groupings within *Lerista sensu lato* are herein used as correct.

Now just so it is not missed by anyone, the Cope (1892) key to genera and the corresponding key of Boulenger (1887) which Shea (2021) alleged Cope was relying on explicitly are in fact two very different documents.

Had Shea (2021) actually published the two keys (Boulenger's and Cope's) side by side, it would be obvious that Shea's allegation Cope was explicitly referring to given species of Boulenger's key was not tenable, thereby meaning his names were not being within Article 11.4.3, 12, 12.1 and

12.2.7, of the Code.

In other words the relevant Cope (1892) names were unavailable under the Code for zoological nomenclature in 1940, still unavailable under the currently in force Code, that being the 1999 edition (Ride *et al.* 1999), and no amount of cherry picking of sections of the 1999 Code to the exclusion of relevant others, invoking retrospectivity or hypothetical mind-reading of a man's thoughts more than a century ago by Glenn Shea in Shea (2021) will make the Cope (1892) names available.

Glenn Shea would do well as a dodgy lawyer bending rules and facts to get guilty as sin murderers off on criminal charges by rambling on with alleged rules and facts to create a completely false picture of reality!

So, in summary, for each group to which Shea (2021) assigned Cope names to, there are Wells and Wellington or Wells names available, except for one clade.

That clade is one of the eight formally named herein as a new genus.

The conclusion that the Cope (1892) names cannot be applied to any taxa within *Lerista sensu lato* did involve a serious overhaul of the first final draft of this paper to correct the mistaken use of Cope (1892) names to instead use the alternative available names and/or to create the new name for the unnamed clade.

What should not be ignored however is how or why an alleged "peer reviewed" publication like *Zootaxa* managed to allow a rubbish paper like Shea (2021) to be published at all?

However, I should add that the prior form for publishing egregious taxonomic vandalism at *Zootaxa* is well known (Hoser 2012a, 2012b, 2013, 2014, 2015a-f, 2019a-b).

Finally, I should mention the allocation of types for the names of Cope that were made by Shea (2021) just so that the full picture is completed.

Oncopus Cope, 1892 with an alleged type species of Soridia miopus Günther, 1867.

Tridentulus Cope, 1892 with an alleged type species of *Rhodona fragilis* Günther, 1876.

Furcillus Cope, 1892 with an alleged type species of *Rhodona punctatovittata* Günther, 1867.

Ollochirus Cope, 1892 with an alleged type species of *Rhodona bipes* Fischer, 1882.

GLENN SHEA'S ULTERIOR MOTIVE FOR TRYING TO MAKE THE COPE (1892) NAMES AVAILABLE

Wells (2012) when published, did as already mentioned, make shockwaves throughout the herpetological community.

Had Wells (2012) made idiot taxonomic and nomenclatural judgments, his new names could easily be dealt with by way of synonymisation as is done for all poorly conceived taxonomic concepts and associated names.

However, it was quite obvious to anyone who actually read the detailed 361-page Wells (2012) work that the taxonomic and nomenclatural actions by Wells were based on a body of evidence.

Furthermore, he made scientific conclusions on that evidence, that his taxonomy and nomenclature were sensible and likely to be widely accepted in the absence of a campaign to the contrary.

Likewise, for anyone with a cursory knowledge of the assemblage grouped within *Lerista sensu lato*.

That of course was the real problem.

Since the 1980's Glenn Shea and other members of the Wolfgang Wüster cohort have been trying to have Wells and

his publications suppressed, so that they can then steal his works and steal his ICZN "name authority".

At least twice, Shea has petitioned the ICZN to formally suppress Wells names (Shea 1987, Shea *et al.* 2021). Shea and others in the Wolfgang Wüster cohort have stolen works of others and engaged in taxonomic vandalism by renaming the same species or genera and then marketing their own junior synonyms as the correct ICZN names.

They have gone further and claimed "discovery" of the taxa to scam millions of dollars in government grants and handouts to enable them to keep going with their scams and generally lavish lifestyle's.

Noting that Dunn and Dunn (1940), two respected herpetologists of their time had properly dealt with and disposed of the relevant Cope names, one must ask why did Glenn Shea take it upon himself to write a rambling diatribe involving metaphorical smoke and mirrors in an attempt to resurrect the Cope (1892) names.

The obvious target was none other than the relevant names coined by Wells (2012) for the same clades within *Lerista sensu lato*.

The only significant outcome of the resurrection of the Cope names by Shea (2021) was the ultimate overwriting of the Wells (2012) names before they became widely used and accepted.

This for Glenn Shea would be a victory for him in his very personal multi-decade war against herpetologist Richard Wells.

SOME OF GLENN SHEA'S OTHER ACTS OF MISCHEIF WITH REGARDS TO TAXONOMY AND NOMENCLATURE

In 2014 I commenced writing a series of papers on the taxonomy of the so-called *Sphenomorphus* group of skinks.

That series of papers was pretty much done by mid-2015.

Several important and informative phylogenies had been published, including that of Pyron *et al.* (2013), which flagged most of the main species groups within *Sphenomorphus* Fitzinger, 1843 *sensu lato*.

However on 9 July 2015, I received an unsolicited email from Glenn Shea in Sydney asking me not to publish on the group until he published "his" big work on the complex, which he said he expected to be by end of that year.

Miffed that Glenn Shea was asking me to effectively ditch my own work, I did the ethical thing and agreed to Shea's request.

This was due to his stated basis that he said he was about to name some 50 species and several new genera, which in terms of the species at least, indicated he had made significantly greater progress on this group than myself at the same time.

Taking Shea's claims on face value I therefore quite appropriately thought he should have priority in opportunity to name the relevant taxa.

Shea wrote of his imminent paper that:

"About 50 new species and several new genera will result from this work."

My own investigations that far had also shown well over 50 species unnamed in this assemblage and at least a 12-way split of *Sphenomorphus sensu lato* and so Shea's claim was plausible to me and I accepted it on face value.

Being a reasonable person, I immediately replied by email on the same day and then in a later email, even went so far as to tell him I'd give him 2 years to get his act into gear and publish, after which, I'd return to my manuscript and publish names for those he either missed or if he did not publish at

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all, the lot of them.

By 2019, it was clear that Shea's alleged 50 species and several new genera were not going to materialize, even though in my reply email of 2015, I also noted that I was about to name several genera within that very assemblage.

In 2015, I'd emailed him saying:

"I had already looked at Sphenomorphus and see it being split more than 12 ways (including resurrecting a few synonyms) ... and that's before dealing with associated genera..."

By 2019, being four years later, it was self-evident that Shea's alleged paper was not going to happen.

I noted in 2019 that Shea had been able to spend vast amounts of time trawling and trolling Facebook and harassing people, in what was largely time-wasting activities.

Unexpectedly he had also published a few rambling papers dealing with matters way out of his depth, including his unsolicited incursion into the world of turtle taxonomy (Shea *et al.* 2020), which is an area he has never had any professed expertise in.

This is significant as in 2015, he'd given me a list of the taxa he was ostensibly working on, so I would keep my hands off them and not publish on them. Turtles of any kind were not on his long list.

His first taxonomic act in the area of turtles was a diatribe of a "paper" that served no purpose other than to rename *Supremechelys* Hoser, 2014 as *Chelydera* Shea, Thomson and Georges, 2020.

It was simply an act of egregious taxonomic vandalism that created (by his own stated taxonomy) a junior (subjective) synonym to clutter up reptile synonyms lists for years to come.

In fairness to Glenn Shea, he was probably roped into that effort of taxonomic vandalism by listed co-authors Scott Thomson and Arthur Georges, who had by that stage developed a reputation of trying to rename species or genera to steal "name authority" from the earlier authors.

Think for example about the genus *Wollumbinia* Wells, 2007, (see also Wells 2009) and the illegally coined objective junior synonym *Myuchelys* Thomson and Georges, 2009, that they published in that notorious online (PRINO = peer reviewed in name only) "journal" *Zootaxa*.

Since then, the same cohort have been illegally plastering their *Myuchelys* name all over the world-wide-web (of deceit?)!

Shea also published a rubbish paper in the same notorious online (PRINO = peer reviewed in name only) "journal" *Zootoxic* (Shea 2020) that served no effective purpose but to disparage my own earlier reclassification of the Acontinae (Hoser, 2015g).

Again, this is one group of reptiles that Shea has no prior known history or expertise in.

Without a shred of evidence, he asserted that most, if not all the names I'd proposed in that massive 128 page two volume monograph (Hoser, 2015g), that had followed extensive fieldwork in Africa and North America (which is where these reptiles actually occur ... they are not in Australia) were unavailable according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (ICZN 2012).

That claim was subsequently systematically destroyed by the ICZN in their formal ruling dated 30 April 2021 (ICZN 2021).

In the same 2020 paper Shea had also declared, most, if not all names proposed by myself were "synonyms" without stating whether they were "objective" (then they would be unavailable) or "subjective", which meant they were synonyms in his opinion only.

Of course, the latter was the correct situation, meaning the entire ramble was a complete waste of time and space, because he'd not presented a shred of evidence to support his allegations or taxonomic decisions.

That was of course at variance to my original work that was largely based on peer reviewed studies, molecular phylogenies and the like and therefore was a sound scientific work backed by a verifiable body of evidence.

In other words Shea's 2020 paper made no meaningful contribution to herpetology.

But calling Shea's previously referred to "paper" a "paper" is also a bit of a stretch of the imagination.

After all, it was as far as can be ascertained only published online in the notorious PRINO online "journal" *Zootaxa*.

At least means no trees were killed to produce that "work". Now I don't want to disparage Glenn Shea too much.

He has published some excellent herpetological works in his time and he has definitely made a contribution to herpetology. This even includes with respect of *Sphenomorphus* Fitzinger,

1843 sensu lato. As of 2023, he had named two species within

Sphenomorphus Fitzinger, 1843 *sensu lato* since 2015, that is, just two of his purported 50 species, which I had made a point of not interfering with for no less than 8 years.

He also named two others prior to 2015.

For the record these four taxa were,

"Sphenomorphus capitolythos Shea and Michaels, 2008" "Sphenomorphus dekkerae Shea, 2017"

"Sphenomorphus fuscolineatus Greer and Shea, 2004" "Sphenomorphus wau Shea and Allison, 2021"

All were ultimately placed in Ofilllabiireatum Hoser, 2023.

That is of course a useful contribution to herpetology and cannot be denied.

I used his papers when preparing this and related works on Australian reptiles, cite them appropriately (see for example the formal descriptions of *Longumdigitos* Hoser, 2023 and *Invalueruntscincus* Hoser, 2023) and in Hoser (2023b) I even named a species in his honour in recognition of his works in herpetology.

This is the second such species in *Sphenomorphus* Fitzinger, 1843 *sensu lato* formally named in his honour.

Please note that I used Shea's first and last names as the species name, to avoid creating a potential homonym with the earlier named form.

In recognition of Glenn Shea's contributions to herpetology, I have also quite appropriately previously named three other reptiles in his honour, being:

Cacophis sheai Hoser, 2014.

Tiliqua glennsheai Hoser, 2014.

Extensusdigituscolotes glennsheai Hoser, 2018.

I also noted that Shea's apparent abandonment of the idea he was going to do a large-scale genus splitting, is not altogether unexpected.

Splitting genera is never a way to win friends and influence people in zoology as Richard Wells and Ross Wellington learnt the hard way in 1985 after they split dozens of overloaded Australian genera (Wells and Wellington, 1984, 1985).

They copped a case before the ICZN, brought on by the envious Richard Shine (Shine 1987), who with the equally envious Glenn Shea (Shea 1987) as Australians in the Uetz,

Kaiser or Wüster gang led the charge and separately asked the ICZN to squash their works in another of his long winded diatribes.

That diatribe was published in the ICZN's own *Bulletin of Zoological Nomenclature* (BZN) (Shea 1987).

Shea ended his rant with: "I therefore support the proposal (1) (b) in BZN 44:121) to suppress Wells & Wellington (1985) for nomenclatural purposes."

Much to Shea's disgust, Wells and Wellington ultimately won the case (ICZN 1991) because contrary to the claims of Shine, Shea, the notorious Wolfgang Wüster and others in the cohort, the majority of scientists actually accepted the validity of most of the taxonomy and nomenclature of Wells and Wellington (1984, 1985) as well as the fact that the rules should not be dispensed with to allow the Shine, Shea, Wüster cohort to burn the historical record and claim for themselves the discoveries of Wells and Wellington.

The ICZN made similar rulings against the Shine, Shea, Wüster cohort again in 2001 and 2021 (ICZN 2001, 2021).

As a result of the first of three ICZN rulings against the Shine, Shea and Wüster cohort in 1991, Wells and Wellington "names" now appear in all contemporary books and relevant papers on Australian reptiles (e.g. *Antaresia*, *Carinascincus*, *Intellagama*, *Acritoscincus*, etc).

But this current position was not before Wells and Wellington lost a lot of friends and their reputations were completely and utterly trashed by jealous "herpetologists" within Australia (Gans 1985, Grigg and Shine 1985, Heatwole 1985, King and Miller 1985, Hawkeswood 2010, Martin *et al.* 1986, Monteith 1985).

Glenn Shea had another go at getting the dozens of Wells and Wellington genus and species names squashed as far as herpetology was concerned when he published Shea and Sadlier (1999) in a non peer reviewed publication. In that document, the most important part was another alleged forensic assessment by him of a prior herpetological publication.

This time he was supposedly looking at the works of Wells and Wellington (1984, 1985) over and above that analysis he sent to the ICZN in 1987 (Shea 1987).

This time he misquoted bits and pieces of the rules of the *International Code of Zoological Nomenclature* to declare that most of the hundreds of Wells and Wellington names from Wells and Wellington (1984, 1985) as:

"probably a *nomen nudem*".

However when I was forced in later years to check the relevant names and scientific descriptions against the prevailing second, third or fourth editions of the *International Code of Zoological Nomenclature* they simply were not *nomen nudem.* The Wells and Wellington names were in every case valid and did not fit the definition within each code of the words "*nomen nudem*" as defined by the ICZN themselves (see above in this paper).

Surely Shea could have eliminated any element of doubt with respect of the works of Wells and Wellington and making it clear whether or not the names were or were not, *nomen nudem* as I ended up doing, before deciding whether or not to use them as valid.

The exercise of doing so is not hard in that it merely involved lining up the works of Wells and Wellington with the relevant edition/s of the *International Code of Zoological Nomenclature*.

For the record, the publications of Wells and Wellington (1984, 1985) do have shortcomings and while most of the genera and species named by them for the first time are valid and properly named, some are not.

I have dealt with those errors, oversights and the like in other papers.

In this paper and relying on evidence that Wells did not have in 2012, I have chosen to effectively squash some of his generic groupings that he named as already outlined above. It is not to be held against Wells and Wellington that some of their taxonomic decisions and even nomenclature are in error, noting the sheer size and scale of their works.

No one is perfect!

However, one thing is abundantly clear.

The ambit claim that most of their names were "probably nomen nudem" is patently false.

Glenn Shea also engaged in reckless taxonomic vandalism by synonymising the species "*Cannia weigeli* Wells and Wellington, 1987" with the very different *Cannia australis* (Gray, 1842) immediately after the pair had formally described the very divergent species from north-west Australia (Shea *et al.* 1987).

Shea did this with the very unscientific argument that the two purported species were of the same general size and therefore the same thing.

Using the same warped logic, one could treat a large dog and a human as the same species.

Notwithstanding Shea's act of egregious taxonomic vandalism, the Wells and Wellington species "*Cannia weigeli* Wells and Wellington, 1987" has been recognized as distinct for years (see for example Hoser, 2001a-b, the first to publish the validity of the taxon), has long since been validated with numerous molecular studies (e.g. Kuch *et al.* 2005, Maddock *et al.* 2016) and is seen in all contemporary books on Australian venomous snakes including for example Cogger (2014).

For further detail of these actions by Shea with respect of *"Cannia weigeli*", see in Hoser (2023), under the etymology for *Brunneisstellio glennshei sp. nov.*

More recently, Shea *et al.* (2011) engaged in yet more taxonomic vandalism against Wells and Wellington, by overwriting "*Cyrtodactylus abrae* Wells, 2002" by naming it *Cyrtodactylus hoskini* Shea, Couper, Wilmer and Amey, 2011.

Perhaps not by coincidence, they significantly named the taxon in honour of a notorious copyright infringing liar and taxonomic vandal known as Con Man Conrad Hoskin, from Queensland, Australia.

The action was in breach of numerous mandatory parts of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), the non-mandatory ethical guidelines of the same code as well as the Australian Copyright Act 1968.

In sequence, the details of the action with regards to "*Cyrtodactylus abrae* Wells, 2002" was played out via the publications of Wells and Wellington (1984, 1985), Shine (1987), Shea (1987), ICZN (1991), Shea and Sadlier (1999), ICZN (2001), Wells (2002), Couper *et al.* (2004), Shea *et al.* (2011) all distilled in summary form in Hoser (2021) on pages 9-10.

Conrad Hoskin, better-known as Con Man Conrad, is the guy who most recently (2023) got himself onto the Australian Broadcasting Corporation (ABC) online in a fake news story at:

https://www.abc.net.au/news/science/2023-05-08/geckodavid-attenborough-oedura-monilis-wells-wellingtonaffair/101509040

claiming to have discovered a new species of gecko in southern Queensland.

In fact his Oedura elegans Hoskin, 2019 was an illegally coined junior synonym of Marlenegecko (Marlenegecko)

shireenhoserae Hoser, 2017 also known as "*Oedura shireenhoserae* (Hoser, 2017)".

I sent the female "journalist" an email and asked her to call me.

On the phone she said:

1/ She would not alter or delete the "news" story,

2/ She would not do as I asked, because she was "*not going to be told what to do by a man*", and

3/ "We are the National Broadcaster and no one tells us what to do!"

She also claimed "Kaiser *et al.* 2013" as her basis for attempting to rewrite history in favour of Con Man Conrad Hoskin.

I issued legal proceedings against the ABC for Copyright violation under "Moral Rights" and knowing they could not defend their case (they had misused my intellectual property to appropriate it to Hoskin), the heads at the ABC agreed to pay me cash and to delete their fake news story.

So it will not be found on the link published above and repeated here:

https://www.abc.net.au/news/science/2023-05-08/geckodavid-attenborough-oedura-monilis-wells-wellingtonaffair/101509040

The fact that a large part of the Con Man Conrad Hoskin fake news story included an unprovoked Hoskin initiated barrage of unsubstantiated invective against Wells and Wellington, including labelling them as a pair of "terrorists" wasn't relevant to the reason the fake news story was ultimately removed.

It was removed only because it violated my copyright!

I note also that even as of 2022 and 2023, Shea was not averse to ongoing acts of taxonomic vandalism in direct breach of the rules of the *International Code of Zoological Nomenclature*.

In Shea's cowritten book "A Field Guide to Reptiles of New South Wales" (Fourth edition), (Swan, Sadlier and Shea 2022), included was Oedura shireenhoserae (Hoser, 2017).

However Shea and coauthors deliberately listed the species incorrectly as "*Oedura elegans*" on pages 37 and 335, which besides being incorrect, is significant as publicly when disparaging my works, Shea had repeatedly publicly stated that he'd use "Hoser names" if and when he accepted the taxonomy and the "Hoser names" had date priority over any others.

The deliberate use of the junior synonym of his mate Con Man Conrad Hoskin, instead of the correct ICZN name *Oedura shireenhoserae* (Hoser, 2017) confirms the ongoing contempt for the rules of the ICZN by Glenn Shea.

Recently as curator of a so-called "List of official names for Australian reptiles and frogs" that Shea has co-published online under the auspices of a group he controls calling itself "Australian Society of Herpetologists" (as distinct from the older and more respected "Australian Herpetological Society"), Shea has overseen the large-scale overwriting of dozens of correct ICZN names with illegally coined junior synonyms.

He has deliberately made things worse by pretending that the correct ICZN names do not even exist!

Shine, Shea and the notorious Wolfgang Wüster have done the same nefarious taxonomic vandalism to lists of scientific names in a variety of places including "Wikipedia", and Peter Uetz's so-called "Reptile Database", where I relevantly note that Shea (2021) and his resurrection of the *nomen nudem* Cope (1892) names is plastered across the nearly 100 "*Lerista*" species relevant entries. That web domain marketing itself is a complete repository of reptile scientific names, synonyms and papers has thousands of missing and incorrect entries in what is perhaps the most serious attempt at taxonomic vandalism and attempt to rewrite history in herpetology ever perpetrated.

Most recently in 2022, webmaster Peter Uetz, permanently deleted over 1,000 names and papers on the basis that they were authored by Russians.

This was done in protest at the Russian invasion of Ukraine in 2022, not that the relevant scientists and their works, had anything to do with the Russian government's decision to invade Ukraine in 2022.

Uetz described the removal of non-Russian co-authors works and names as mere "collateral damage".

I think he stole the term "collateral damage" from Americans taking out all the alleged "weapons of mass destruction" held in Iraq post "9/11" in 2001.

Self-evidently, shortly after Glenn Shea sent his email to me in 2015, Shea probably abandoned the idea of a big split of *Sphenomorphus* Fitzinger, 1843 *sensu lato* into multiple genera, and the mass naming of unnamed species.

The reason was probably simply that he did not want to put in the work to publish the paper he'd mooted.

However, he may have also been worried about getting a number of his associates offside, noting that this included the same cohort who led the charge against Wells and Wellington three decades ago.

One may recall that his good friends, Wolfgang Wüster and Hinrich Kaiser, responded to my earlier works of splitting up snake genera in 2012, creating dozens more and naming what they thought was too many species by publishing various versions of Wüster (2012), later rebadged as Kaiser *et al.* (2013) (as cited herein), Kaiser (2014), Rhodin *et al.* (2015) and so on.

These widely circulated manifesto's all sought to simply synonymise genera and species I'd erected or named. This often included moving the relevant taxa into completely unrelated groups into which the species had never been placed previously. They did all this without having or needing any proper scientific reason to do so.

When questioned on these egregious acts of taxonomic vandalism, Hinrich Kaiser later admitted in writing that he had no direct knowledge of most of the taxa involved.

So in the face of the preceding and a host of other time competing matters, in 2019, I recommenced working on the reclassification of *Sphenomorphus* Fitzinger, 1843 *sensu lato*, including a series of papers on similar and associated genera.

This included the following four major papers, all of which were published in succession in 2019.

Hoser (2019c) reclassified *Emoia* Gray, 1845 *sensu lato* naming 8 new genera and 45 new species.

Hoser (2019d) reclassified *Tropidophorus* Duméril and Bibron, 1839 *sensu lato* naming 4 new genera and 3 new species, noting that quite a few component species had been moved in and out of *Sphenomorphus* by various authors over previous decades.

Hoser (2019e) reclassified *Scincella* Mittleman, 1950 *sensu lato* naming 4 new genera and 6 new species.

Hoser (2019f) reclassified *Lipinia* Gray, 1845, *sensu lato* naming 6 new genera and 27 new species.

You will see that from those four papers alone, and that if ignoring the formally resurrected names, I was able to formally name for the first time ever, 22 new genera and 81 new species. This is also noting that I chose not to name many other species.

Furthermore, this was before I even dealt with the core of *Sphenomorphus* Fitzinger, 1843 *sensu lato* (Hoser 2023b), to which I added another 22 genera and 21 species (totals now being 44 and 102 for the cluster). This is noted to clearly show that Shea's 2015 claims of being about to name several genera and about 50 new species was on the face of it, completely within reason and believable.

However, the final part of that project, that is, being to deal with that core of species still placed in *Sphenomorphus* as of 2019, ended up taking far longer than expected.

This was in the face of countless competing matters, including unexpected police raids and seizures of relevant materials, which were initiated by business competitors in our wildlife displays domain who sought to attack our successful business to shore up their own enterprises of lower standard.

A barrage of bizarre court proceedings initiated by some business competitors, resulted in long months on end dealing with gruelling civil trials, many still ongoing as of 2024.

A business rival also got almost the entirety of the Australian media to defame me, in print, on TV and online with claims including I had killed people (I have not), raped ex-wives (I have no ex-wives to rape), had numerous people die at wildlife displays from venomoid (devenomized) snakes regenerating venom and then biting them (never happened or possible), I was planting dangerous snakes in people's homes to get them to call me to catch them and get paid and then admitted to the scam (neither in fact happened), I was a court convicted paedophile (not so) and so on.

That caused no fewer than 4 extremely long, civil defamation matters, involving dozens of publications and the cases spanned 4 years.

All those cases settled in my favour in 2023 in which I was paid cash, apologies published and more importantly the relevant "news" reports were removed from the world-wide web.

This settlement with multiple media outlets included the removal from the internet of fake news stories initiated by members of the Shine, Shea and Wüster cohort claiming to have discovered and named new species or genera, when in fact they had not. All they had done was cut and pasted from my earlier papers or those of others and rebadged the earlier discoveries as their own in online "papers", usually appearing in the notorious online PRINO "journal" *Zootaxa*.

Zootoxic is a preferred vehicle of publication by the Shine, Shea and Wüster cohort because it allows them to bypass any credible form of peer review which would otherwise block their material from publication.

In terms of many genera and species, there are also conservation implications for them if they are not properly identified.

Without knowing the relevant species exist, relevant governments cannot manage them (*sensu* Hoser 2019a, 2019b).

Without correct genus-level assignment of species, governments are less able to make informed choices as to what species have greater conservation value, if and when competing interests, such as a lack of funds or resources mean only some can be saved from extinction.

A SUMMARY OF THE RESULTS, INCLUDING TAXONOMIC AND NOMENCLATURAL ACTS IN FURTHER DETAIL

LYGOSOMA PRAEPEDITUM BOULENGER, 1887

Until now the putative taxon *Lygosoma praepeditum* Boulenger, 1887, now most widely known as *Lerista praepedita* (Boulenger, 1887), has been treated as a species ranging from Perth in the south-west of Western Australia, generally along the coast and hinterland north to the Cape Range. Until now, no one other than myself had considered whether or not more than one species were involved.

Scrutiny of both preserved specimens and publicly available molecular data showed that there were two species involved, with the biogeographic break just south of Shark Bay.

While Boulenger (1887) only gave a type locality for his species as "Australia" the inclusion in his description of the words " two small supraoculars ...two series of dark brown dots along the middle of the back" clearly indicates it as being of the southern form.

Hence it is the northern taxon that is formally named herein as a new species.

The phylogeny of Skinner *et al.* (2008) confirms placement of both taxa within the genus *Soridia* Gray, 1839 as correctly done by Wells (2012).

The name of the new species is Soridia luxflavo sp. nov..

ABLEPHARUS DISTINGUENDUS WERNER, 1910

Until now *Ablepharus distinguendus* Werner, 1910 has been treated as a pan Australian species.

It is best placed in the genus *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845, that being a closely related taxon.

Again I note that Wells (2012) was alone among contemporary herpetologists in correctly assigning the species to the genus.

Eyre Peninsula specimens of putative "*Lerista distinguendus*' are both morphologically divergent and allopatric to the type form with a type locality of Fremantle, Western Australia. The Nullarbor, as a major biogeographic barrier separates the populations.

M. ruficauda sp. nov. as named herein is essentially confined to the northern two thirds of the Eyre Peninsula in South Australia.

RHODONA BIPES FISCHER, 1882 AND ASSOCIATED TAXA

Shea (2021) asserted that *Ollochirus* Cope, 1892 had a type species of *"Rhodona bipes* Fischer, 1882". However that contention is incorrect (see earlier).

It is a divergent group worthy of genus-level recognition.

The first and only ICZN available name for the group is *Gaia* Wells, 2012.

That is therefore the name for the relevant taxa in this paper. There are a number of taxa in the group that are undescribed.

The species originally described as *Lerista greeri* Storr, 1982 is one of a cluster of closely related species from the Kimberley and nearby parts of Northwest Australia.

All are best placed in the genus *Gaia* Wells, 2012 based on the published phylogeny of Skinner (2008) as is done herein. *Gaia greeri*, with a type locality of 8 km south southeast of Derby, Western Australia, Australia, (Latitude -17.22 S., Longitude 123.40 E.) has until now included specimens from the southwest, south and east Kimberley regions, including the Tanami Desert area to the immediate south-east.

However, as the south-eastern and north-eastern specimens of putative *G. greeri* are morphologically and genetically divergent from the type form of *G. greeri*, or the closely



related taxa, *G. robusta* (Storr, 1990), *G. vermicularis* (Storr, 1982), *G. labialis* Storr (1971) or *G. simillima* Storr, 1984, it is herein formally named as a new species being *Gaia oomph sp. nov.*.

See for example the relevant sequence data published in Skinner *et al.* (2008) and Farquhar *et al.* (2024).

The species "*Lerista griffini* Storr, 1982" has populations that are divergent at the subspecies level.

Gaia griffini asgicondi subsp. nov. is the easternmost population of the taxon "*Lerista griffini* Storr, 1982" with a type locality of Kununurra, Western Australia, (Latitude 15.47 S., 128.44 E.).

The species is placed in the genus *Gaia* Wells, 2012 following on from the phylogeny of Skinner et *al.* (2008).

The Kimberley population (both east and west Kimberley) are of the type subspecies.

Until now, putative *Gaia bipes* (Fischer, 1882), more commonly known as "*Lerista bipes*" with a type locality of Nickol Bay, Western Australia, has been treated as a species occupying the sand dune and associated rocky hill areas of north-west and central Australia, extending east just into Western Queensland.

Other than *Gaia labialis* (Storr, 1971) and associated taxa, being *G. rolloi* and *G. pitjantjatjara sp. nov.* which as a group are also found across most of Australia, *Gaia arrente sp. nov.* and *G. kunja sp. nov.* are the only putative species of the genus *Gaia* Wells, 2012 that have a distribution extending beyond the perimeter of north-west Australia.

As far back as 1971, Storr (1971) recognized consistent differences between the nominate form of *Gaia bipes* and the populations to the east in the interior of Western Australia, Northern Territory and northern South Australia.

Herein *G. bipes* occupies the Pilbara and adjacent areas, in particular near coastal areas to the immediate south.

Gaia arrernte sp. nov. in turn occupies the region from the interior of Western Australia and east, to eastern South Australia and far western Queensland and including most of the Northern Territory except for the tropical north and flat

black soil areas. *G. kunja sp. nov*. another newly named and divergent form

is apparently confined to a small area in far south-west Queensland and potentially adjacent habitat in north-west South Australia.

Until the present time, most Australian herpetologists have treated *Gaia labialis* (Storr, 1971) with a type locality of Poonda, Pilbara District, Western Australia, Australia (Latitude -22.53 S., Longitude 119.42 E) as a taxon occurring across most of arid Australia in areas of heavy soils, generally occurring where the dune inhabiting taxon *G. bipes* (Fischer, 1882) and associated species *O. arrernte sp. nov.* and *G. kunja sp. nov.* does not.

Contrary to this, Wells and Wellington (1985) and Wells (2012) have regarded the putative taxon as a comprising more than one species.

G. rolloi (Wells and Wellington, 1985), with a type locality of 10 km north of Sandringham's Station Homestead, 60 km northwest of Bedourie, Queensland, Australia (Latitude 23.58 S., Longitude 139.02 E.) has been taken by Wells (2012) to include putative *O. labialis* from the Cooper's Creek drainage basin, including the nearby Upper Darling system. This is broadly agreed here.

However, with separation of about 1,000 km between the type population of from the Pilbara region and those specimens further east, at the eastern border area of Western Australia,

separated from one another by unsuitable dune habitat in eastern Western Australia, combined with significant morphological divergence, it is not tenable to regard the two forms as conspecific.

Wells (2012) regarded those specimens as being *O. labialis* and quantified the differences between these and his own taxon, *G. rolloi*.

Hence these specimens from the north west of South Australia and nearby Northern Territory are formally named as *Gaia pitjantjatjara sp. nov.*.being the third morphologically diagnosable species in the complex.

MARRUNISAURIA WELLS, 2012

The genus *Marrunisauria* Wells 2012 with a type species of *"Lerista borealis* Storr, 1971" is a divergent assemblage and recognised herein as a genus and using the first ICZN Code compliant available name.

Another species "*Lygosoma walkeri* Boulenger, 1891" more recently known as "*Lerista walkeri*" is best placed in the genus *Marrunisauria* Wells 2012 based on the published phylogenies of Skinner *et al.* (2008) and Pyron *et al.* (2013). Putative "*Lerista walkeri*" of the west Kimberley actually comprises two species. These are one to the north and the other to the court.

To stabilize the nomenclature of the two taxa a lectotype for "Lygosoma walkeri Boulenger, 1891" has been designated in accordance with the rules of the International Code of Zoological Nomenclature (Ride et al. 1999) ("the Code"), Article 74.7.

As the lectotype is of the northern population, the morphologically divergent southern population requires formal description and naming.

It is herein called Marrunisauria wam sp. nov..

The type species for *Marrunisauria*, being "*Lerista borealis* Storr, 1971" is morphologically divergent and genetically distinct across three populations.

With a type locality of Thompson Spring, East Kimberley district, Western Australia, Australia (Latitude 16.02 S., Longitude 128.57 E), the nominate subspecies of *M. borealis* is effectively confined to the East Kimberley District of Western Australia.

Populations east and west of the East Kimberley are divergent and herein formally named as subspecies.

In the Victoria River District of the Northern Territory (including the Keep River ranges) one now finds *Marrunisauria borealis gurindji subsp. nov.*

In the west Kimberley one now finds the subspecies *M. borealis ngarinyin subsp. nov..*

SPECTRASCINCUS WELLS, 2012

For many years the putative species "*Miculia orientalis* De Vis, 1889" now most widely known as "*Lerista orientalis*" was treated as a taxon occurring from north-east Queensland across most of the tropical north of Australia, just entering north-east Western Australia.

Storr (1991) identified and named two species in addition to "*Lerista orientalis*", being "*Lerista zonulata*" and "*Lerista ingrami*" both taxa from north-east Queensland.

Putative *"Lerista orientalis"* had a type locality of Gregory Downs, Barkly Tableland, Queensland, Australia (Latitude 18.6514 S., Longitude 139.2529 E.). Populations assigned to this species from the top end of the Northern Territory and into Western Australia assigned to this species are morphologically quite divergent.

They are also allopatrically separated by known biogeographical barriers, known to be occupied by competing

species and so the separation of populations is not likely to be an artifact of non-collection in these places.

Therefore, I have had no hesitation in formally naming each relevant population as new species.

All the preceding referred to species are also placed in the genus *Spectrascincus* Wells, 2012, exactly as conceived by Wells (2012). That genus had a type species of *Lerista ingrami* Storr, 1991, which has been shown in phylogenies to also be a closely related taxon.

Spectrascincus orientalis is now confined to the elevated areas to the south of the Gulf of Carpentaria and west of the Leichhardt River.

S. thingi sp. nov. is only known from the type locality and so is effectively confined to that area at the present time. This is Sturt Creek, 10 km north of Gordon Downs Homestead, Western Australia, Australia, (Latitude -18.666667 S. Longitude 128.583333 E.).

S. hit sp. nov. is found in the tropical north of the Northern Territory, generally west of the Gulf of Carpentaria.

Two related species, *S. ingrami* and *S. zonulata* (Storr, 1991) are similar in most respects, with both occurring in East Queensland (see Storr 1991 for details).

TYCHISMIA WELLS, 2012

Within the genus *Tychisma* as defined by the inclusion of *Krishna* Wells, 2012 is the species "*Tychismia fragilis* (Günther, 1876)".

It was originally named as "*Rhodona fragilis*", but has been shunted between various genera, although as of 2024, most herpetologists place the putative taxon in the genus *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833.

In the recent past, the only herpetologist with the good sense to remove the putative taxon from *Lerista* was Wells (2012), placing it in his monotypic genus *Krishna* Wells (2012).

As already noted and in line with the comments earlier in this paper, *Krishna* Wells (2012) has been subsumed and synonymised within *Tychismia* Wells (2012), with a type species of *Lerista chordae* Amey, Kutt and Hutchinson, 2005.

I note that the concept of *Tychismia* by Wells in 2012 does not match the phylogeny of Skinner *et al.* (2008) in that both groups are not genus-level divergent and I have accepted the phylogenetic placements of the latter authors in terms of species placements within genera, while utilising available genus names, including those of Wells (2012).

Also contrary to other Australian herpetologists to the present date (2024), Wells (2012) was alone in openly suggesting that putative *"Tychismia fragilis"* (as I am identifying it herein) was likely to be a number of species, rather than just one.

Examination of the morphological and biogeographical evidence by myself made the Wells (2012) conclusion in effect a statement of the obvious.

To that end, the two most divergent forms of putative *T. fragilis* are herein formally named as new species.

T. fragilis with a type locality of Peak Downs, north-east Queensland (Latitude 22.2549 S., Longitude 148.1797 E.) is found generally along the drier parts of the coast, ranges and nearby western hinterland, south of the tropics, in Queensland, extending south to the south-east corner of Queensland.

T. wellsei sp. nov. is named in honour of Australia's foremost expert on Australian "*Lerista*" skinks, skinks, Richard W. Wells. It is an outlying western population, until now treated as *T. fragilis*, but morphologically very divergent. It is a native of the Selywn Ranges, generally in the region between Cloncurry and Mount Isa, north-west Queensland, but quite likely throughout that region where suitable habitat occurs. *T. valentici sp. nov.* is found in the cooler but drier parts of south-east Queensland generally in the triangle between the Sunshine coast, the south border of Queensland and the western part of the Darling Downs.

THE "LERISTA EDWARDSAE" SPECIES GROUP

This is one of the eight unnamed divergent groups of species herein formally named as a new genus.

As mentioned already, the genera were named on the basis of morphological and ecological differences combined with a likely divergence in excess of 10 MYA from nearest relatives.

This assemblage is herein named Aaah gen. nov..

The species within this new genus (all previously within *Lerista*) are as follows: *Aaah edwardsae* (Storr, 1982), *A. baynesi* (Storr, 1972) and *A. picturata* (Fry, 1914).

The species known as "*Lerista edwardsae*" with a type locality of Streaky Bay. South Australia, Australia (Latitude -32.50 S., Longitude 134.15 E.), being on the western edge of the Eyre Peninsula has a morphologically divergent population to the east of the Spencer Gulf.

It is herein formally named as *Aaah edwardsae skink subsp. nov.*.

A. baynesi (Storr, 1972), better known as "*Lerista baynesi*" with a type locality of Eucla, Western Australia, Australia, (Latitude 31.43 S., Longitude 128.53 E.), has a divergent population further west.

It is formally named herein as Aaah baynesi ngandatha subsp. nov..

THE "LERISTA CHRISTINAE" SPECIES GROUP.

Putative *"Lerista christinae* Storr, 1979" is only known from the area of the type locality at Badgingarra, Western Australia, about 160 km north of Perth and a small number of nearby locations, generally on or near the adjacent coastline and to the south to include north Perth and Rottnest Island.

Within this small distribution is an obvious gap between the southern and northern populations, each of which are also very different morphologically. As a result of this, I have no hesitation at all in formally naming the southern (Perth) population as a separate species.

Furthermore, as a pair, neither are closely related to any other "Lerista" and there is no available genus for them.

The new genus erected to accommodate the pair of species is named *Ah gen. nov.* and the new species is named "ha", or more fully, *Ah ha sp. nov.*

THE "LERISTA DORSALIS" SPECIES GROUP

Putative *"Lerista dorsalis* Storr, 1985" of southern Australia and the associated *"Lygosoma frosti* Zietz, 1920" of southern Australia have been neglected taxonomically.

Placement within species groups of one or other putative species has varied over the years.

The most recently published phylogenies indicate that the two putative species are not closely related to any others. In the absence of available names, the new genus *Oh gen. nov.* is erected to accommodate them.

"Lerista dorsalis Storr, 1985" has also long been known to be composite and for reasons unknown no one has sought to name the very divergent forms.

Wells (2012) depicted multiple forms in photos and wrote: "Variation in morphology suggests that this species may be composite."

Wilson and Swan (2021) depicted three obviously different forms as the same species "*Lerista dorsalis*".

With no one anywhere indicating a desire to formally name

the divergent forms, I do so within this paper. They are as follows:

Oh kay sp. nov. (type species for the genus *Oh gen. nov.*), *O. know sp. nov.*, *O. phuk sp. nov.*, *O. sheet sp. nov.* and *O. yes sp. nov.*.

O. *dorsalis* is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not north or south of these areas, in inland South Australia.

O. yes sp. nov. is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) is from the central Australian ranges of the Northern Territory.

"LERISTA KALUMBURU STORR, 1976"

This unusual taxon is not closely related to any other in *Lerista sensu lato*. There is no available genus for it and so it is formally placed in its own genus *Tism gen. nov.* named in honour of the classic Melbourne rock band TISM.

THE "LERISTA FLAMMICAUDA" STORR, 1985 GROUP

Two closely related north-west Australian species "*Lerista flammicauda* Storr, 1985" and "*Lerista zietzi* Wells and Wellington, 1985" have been shown in phylogenies to be closely related as a pair, but in turn not close to any other species in *Lerista sensu lato*.

Wells (2012), placed them into his genus *Tychismia* Wells 2012, type species *Lerista chordae* Amey, Kutt and Hutchinson 2005, but that species is not closely related

to either of species "*Lerista flammicauda* Storr, 1985" and "*Lerista zietzi* Wells and Wellington, 1985".

In the absence of any available genus names for the pair, a new genus is erected form them.

This is Acdc gen. nov. named in honour of the iconic

Australian heavy metal rock band AC/DC.

The name *Lerista chalybura* is a junior objective synonym of *Lerista zietzi* Wells and Wellington, 1985, as in it has the exact same type specimen. Therefore it cannot be legally or correctly used as a scientific name under any circumstance.

MOCOA MICROTIS GRAY, 1845

The southern Australian species *Mocoa microtis* Gray, 1845, sometimes treated as being a complex of up to four closely related species, all found along the southern Australian coast in south and western Australia has also been shown in phylogenies to not be particularly closely related to any other group.

Again, in the absence of any available names it has been placed in a newly erected genus *Labi gen. nov.* in which three closely related species, all with available names are tentatively recognized.

RHODONA PUNCTATO-VITTA GÜNTHER, 1867

"Rhodona punctatovittata Günther 1867" is from the Murray / Darling basin.

An associated species "*Lerista emmotti* Ingram, Couper and Donnellan, 1993" with a type locality of 140 km south of Longreach, Queensland, Australia, is of the Coopers Creek drainage system.

A third species *G. colliveri* (Couper and Ingram, 1992) from north-east Queensland, is found mainly around the east flowing Burdekin drainage basin.

All were at one time treated as populations of "*Lerista punctatovittata*".

They form an obvious species group and are so divergent from all other *Lerista sensu lato*, it was a no-brainer to put them in their own genus.

That the molecular data of Skinner *et al.* (2008) would corroborate this contention was also seen as a statement of the obvious.

Furcillus Cope, 1892, for which the (alleged, according to Shea, 2021) type species is *"Rhodona punctatovittata* Günther 1867" is not an available name as originally found by Dunn and Dunn (1940), because no type species was explicitly connected with the genus.

Furthermore, *Furcillus* Cope, 1892 falls foul of Article 11.4.3 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), making this and all other relevant Cope (1892) names unavailable.

In addition, Cope's names and Shea's paper (Shea 2021) also fall well outside of Articles 12., 12.1 and 12.2.7 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), making the Cope (1892) names wholly and irretrievably unavailable, even if Glenn Shea's miraculous century plus retrospective mind-reading exercise of Edward Drinker Cope's thought processes was vaguely accurate.

With no name available for the "*Rhodona punctatovittata* Günther 1867" group of species, all are herein placed into the new genus *Go gen. nov.*.

RHODONA STYLIS MITCHELL, 1955 AND ALLIED TAXA Four Northern territory species, being:

1/ "Rhodona stylis Mitchell, 1955",

2/ An Arnhem Land population of putative "*Rhodona karlschmidti* Marx and Hosmer, 1959", that species with a north Queensland type locality of about 23 miles south of Townsville, with the Arnhem Land endemic form herein formally named as a new species and

3-4/ Putative "*Lerista carpentariae* Greer, 1983", herein split two ways into two species, have all been placed by herpetologists in the so-called "*wilkinsi* group" for many years.

Since 2012 that has been formally named *Gavisus* Wells and Wellington, 1984, type species: *Lygosoma* (*Rhodona*) *wilkinsi* Parker, 1926.

While morphologically similar, the four just mentioned Northern Territory species are morphologically divergent from the other species in the genus *Gavisus* all of which are notably from north Queensland.

The genetic evidence of Skinner *et al.* (2008) also confirms genus-level divergence of three of the four relevant Northern Territory taxa, with species four not sampled.

In line with the above it has been noted that specimens of putative *Gavisus carpentariae* (Greer, 1983) from Groote Eylandt, Northern Territory are significantly morphologically divergent from the type form from Centre Island in the Sir Edward Pellew Islands, Gulf of Carpentaria, Northern Territory.

Therefore, it is formally named as a new species and placed in a newly erected genus to accommodate all four species. As type species for the genus *Get gen. nov.* it is herein formally named as *Get it sp. nov.*

Thus, the genus *Get gen. nov.* contains four Northern Territory endemics, being *Get it sp. nov.*, *Get carpentariae* (Greer, 1983), *Get intoit sp. nov.* and *Get stylis* (Mitchell, 1955).

Get intoit sp. nov. is the name herein assigned to the Northern Territory population of putative *Gavius karlschmidti* (Marx and Hosmer, 1959), being the second newly named species in this paper assigned to the genus *Get gen. nov.*.

The species *Gavius karlschmidti* is herein confined to the area of the type locality, being about 23 miles south of Townsville in northeast Queensland and herein regarded as being very closely related to the geographically proximal *Gavisus wilkinsi* (Parker, 1926) or *Gavisus allanae* (Longman, 1937).

G wilkinsi (Parker, 1926) has two digits on the hind leg, versus one in *G. karlschmidti* and *G allanae* but recently published phylogenies have shown that this trait is more fluid between closely related species than had previously been thought.

A further important fact worth noting is that when revisiting all "*Lerista*" sequences at Genbank, it became apparent that those four listed sequences as being from "*Lerista karlschmidti*" were not in fact from that taxon.

They were from a Northern Territory specimen of the species herein formally named as *Get intoit sp. nov.*.

This fact underscores why it is:

1/ Important to check the source of the purported genetic samples being tested and

2/ Never have complete faith in genetic results when making taxonomic decisions and/or

3/ Not to rely exclusively on genetic results when making taxonomic decisions.

I should also note the following important and relevant facts. The contention of Amey and Couper (2017) that the type material and type locality for the original specimens of *G. karlschmidti* being Woodstock, some 23 km south of Townsville in Queensland was in error is not agreed herein.

In their paper, Amey and Couper (2017) wrote:

"We found no reason to doubt the collection data associated with the type series as it was supported by interviews with the late William (Bill) Hosmer (co-author of the type description) and Alex Johnson, the collector's son. Further, we found the type series to be composite with one paratype (FMNH17741) assignable to L. cinerca Greer, McDonald & Fawrie, 1983 (cited as L. cf. storri Greer. McDonald & Fawrie, 1983, in Couper & Amey, 2009; see Couper et al. 2016), a narrowly endemic Queensland species occurring in close proximity to Woodstock."

Based on these facts and the morphological similarity of the holotype of *G. karlschmidti* to the proximally distributed *Gavisus wilkinsi* (Parker, 1926) and a number of other morphologically divergent, but closely related, range restricted taxa in the same genus, I believe that any rejection of the type locality for *G. karlschmidti* should be resisted and hence my decision to formally name Northern Territory specimens assigned to that species as a new and separate species.

In deciding to reject the given type locality of *G. karlschmidti* Amey and Couper (2017) went on to say:

"Despite these facts supporting a Woodstock origin for the remaining two specimens, the possibility that a transcription error or some other problem occurred with this material cannot be excluded.

This would explain why repeated attempts to find this species in Queensland have failed."

As one who has spent more time than I should with government employed biologists, I note that their apparent blindness and inability to find specimens of species they are ostensibly looking for is well known. Contrary to the assertions of Amey and Couper (2017) I believe that it is likely that more specimens of *G. karlschmidti* could possibly be located at or near the type locality, if a proper and coordinated effort was made and with full regard to seasonal issues that make such species near impossible to find at certain times of year or weather conditions.

Alternatively, to also get an idea as to how or why no specimens of *G. karlschmidti* have turned up in Queensland in the decades since it was formally described in 1959, one may also look at the morphologically similar, closely related and geographically close species *Gavisus allanae* (Longman, 1937).

G. allanae also seems to be almost impossible to find (Covacevich 2000).

According to a Queensland Government conservation advice written in 2008 (not cited herein), that species was still only known from a total of 13 specimens from a total of just three locations!

G. allanae had been named 71 years prior!

Cited by Amey and Couper (2017) as justification for their rejection of the Queensland type locality for

G. karlschmidti were the allegedly unique traits of both type *G. karlschmidti* from Queensland and the same putative species from the Northern Territory, which in their view made them conspecific.

These were the fusion of the second loreal with the prefrontal and the loss of supraciliaries.

However, each of those traits is known from at least 8 other widely scattered *Lerista sensu lato* species, clearly establishing that convergence of such traits is common in the assemblage.

Furthermore, in justifying their theory that the type material for *G. karlschmidti* came from the Northern Territory and not the type locality given in North Queensland, Amey and Couper (2017) said:

"That Arnold Johnson had not visited the Northern Territory prior to the collection of the type series by no means precludes the possibility that they were given to him by a third party who had."

The likelihood of the scenario postulated is so remote that as mere speculation and without a shred of evidence to support the claim, it cannot form a logical basis to refuse a type locality on the available evidence so far.

After all, had the type series in fact come from the Northern Territory as speculated, or not been caught by the collector Arnold Johnson, this would have been recorded at the time the specimens were originally lodged in the relevant museum and the formal description published by Marx and Hosmer (1959).

In other words, my contention is that the allegation by Amey and Couper (2017) that the Northern Territory specimens similar to the type specimens of *G. karlschmidti* are conspecific is incorrect and/or premature.

Therefore, the Northern Territory population of putative *G. karlschmidti* are herein described as the new species *Get intoit sp. nov.*

THE CLADES AND THEIR NAMES

Notwithstanding the preceding statements about genetic data it is foolish to ignore it.

This is especially when it matches both morphological and biogeographic evidence.

To that end, I have reproduced in this paper on page 63, a copy of a phylogeny published by Skinner *at al.* (2008) for the genus *Lerista* Bell, 1833 *sensu lato* which incorporated

a large number of recognized species, but not all that were known at the time.

On top of this image, I have superimposed the relevant genus names for the relevant stems.

This is done so that the taxonomy and nomenclature that underpins the final result of this paper is seen in perspective. It shows the logical basis for it.

It also allows cross matching with the genus and species list at the end of this paper so that readers of this paper can visualise the end result, what goes where and the basis for it.

INFORMATION RELEVANT TO THE FORMAL 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 of names 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* (Ride *et al.* 1999 and ICZN 2012).

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 2 May 2024, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

Obviously the online defamatory fake news report involving Con Man Conrad Hoskin faking claims about discovering a gecko species has been deleted and that copied link will not go to the stated content.

Unless otherwise stated explicitly, colour descriptions apply to living adult male specimens of generally good health, with an original tail (not shed or regenerated) and not under any form of stress by means such as excessive cool, heat, dehydration

or abnormal skin reaction to chemical or other input.

Readers should be mindful of the fact that specimens presloughing skin may have dulled or obscured markings, juveniles often may have brighter or different markings to adults and regenerated tails as a rule lack the pattern or markings of original ones.

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

Material within descriptions may be repeated from others in this paper in order to ensure compliance with the *International Code of Zoological Nomenclature* as amended (Ride *et al.* 1999 and ICZN 2012).

If more than one taxon described herein is considered to be of the same species, then the name to be used in preference by a first reviser is that in terms of page priority herein as seen in the abstract keywords.

Material, items or references cited herein merely as "online" without a URL, can be easily found by copying and pasting the name or detail into a search engine such as "Google" and it will appear either as the first result or in the first page of results on a computer desktop screen.

It should be noted that as of 2024, almost all species discussed within this paper would have until now been treated by most publishing authors in the previous 25 years as being within the genus *Lerista* Bell, 1833.

SORIDIA LUXFLAVO SP. NOV.

LSIDurn:Isid:zoobank.org:act:B747925E-6496-4563-B3B8-59560C30D158

Holotype: A preserved adult specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R110657 collected from North-west Cape, Western Australia, Australia, Latitude -22.4025 S., Longitude 113.843333 E.

Paratype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R120372 collected from 6 km north northeast of Cape Cuvier, Western Australia, Australia, Latitude -24.193056 S., Longitude 113.455278 E.

Diagnosis: Until now *Soridia luxflavo sp. nov.* has been treated as a population of *Soridia praepedita* (Boulenger, 1887), with a type locality of "Australia".

Until now the putative taxon *Lygosoma praepeditum* Boulenger, 1887, now most widely known as *Lerista praepedita* (Boulenger, 1887), has been treated as a species ranging from Perth in the south-west of Western Australia, generally along the coast and hinterland north to the Cape Range. Until now, no one had considered whether or not more than one species were involved.

Scrutiny of both preserved specimens and publicly available molecular data showed that there were two species involved, with the biogeographic break just south of Shark Bay.

While Boulenger (1887) only gave a type locality for his species as "Australia" the inclusion in his description of the words " two small supraoculars ...two series of dark brown dots along the middle of the back" clearly indicates it as being of the southern form.

Hence it is the northern taxon that is formally named herein as a new species.

The phylogeny of Skinner *et al.* (2008) confirms placement of both taxa within the genus *Soridia* Gray, 1839 as correctly done by Wells (2012).

Soridia luxflavo sp. nov. occurs along the West Australian Coast between Shark Bay in the south and Cape Range in the north inclusive. S. *praepedita* Boulenger, 1887 occurs south of here, along the coast and hinterland to Perth.

S. luxflavo sp. nov. is readily separated from *S. praepedita* by a reduction in the "two series of dark brown dots along the middle of the back" seen in *S. praepedita* to either be absent, reduced in extent or extremely feint. As a rule, *S. luxflavo sp. nov.* has three supraoculars, versus 2 in *S. praepedita*.

Some specimens of *S. luxflavo sp. nov.* will have two series of brown spots along the middle of the upper surface of the tail, but these are not bold, distinct and contrasting as seen in *S. praepedita.*

S. luxflavo sp. nov. also differs from *S. praepedita* by the nature of the upper border of the dark-brown to black upper-lateral stripe on the body.

In *S. luxflavo sp. nov.* there are numerous dark extensions onto the upper surface making the outline not straight when viewed close up, or alternatively not sharp and distinct when viewed at a distance.

By contrast these extensions are either absent or blunted in *S. praepedita* giving it an effectively straight and sharp upper edge of the dark upper lateral stripe.

S. luxflavo sp. nov. and *S. praepedita* are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1839,

type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Small, very slender species with digits 0 + 0. a movable eyelid, no prefrontals.

Frontoparietals and interparietal normally fused. A single loreal and a dark venter. No trace of a fore-limb (including groove). Hind-limb is stylar. Snout-vent length up to 65 mm, but rarely over 60 mm. Tail is 63-93 percent of snout-vent length (average about 80 percent).

Nasals in short to moderately long contact. Frontoparietals and interparietal usually fused (occasionally frontoparietals are free, very widely separated and very much smaller than interparietal). 1-4 nuchals. 2 or 3 supraoculars, usually first two (if three) in contact with the frontal.

No supraciliaries. 5 upper labials. Upper secondary temporal is the largest by far, lower secondary temporal is by far the smallest. 14-17 (usually 16) midbody rows.

Dorsal colour is a very pale yellowish beige colour usually with two series of blackish-brown dots, each located on the mid-anterior edge of a paravertebral scale, these sometimes reduced in size so as to be effectively invisible or absent, or alternatively only present on one part of the upper surface (usually being the anterior part of the tail). A blackish-brown stripe runs from the nasal through the orbit to the end of tail, running along the dorsal part of the lateral edge, but ill-defined on the head. Ventrolaterals, ventrals and subcaudals are a greyish white, anteriorly edged with blackish brown. Enlarged preanals are whitish, contrasting with the dark adjacent scales.

Soridia luxflavo sp. nov. is depicted in life online at: https://www.flickr.com/photos/171250498@ N08/52503194398/

and

https://www.inaturalist.org/observations/170554773 and

https://www.flickr.com/photos/58349528@N02/52247443210/ and

https://www.flickr.com/photos/julesfarquhar/52682212693/

S. praepedita is depicted in life in Cogger (2014) on page 619 bottom right, Storr *et al.* (1981) on plate 14, photo 7, bottom left, Wilson and Swan (2021) on page 381 top right and online

at:

https://www.flickr.com/photos/euprepiosaur/11521964095/ and

https://www.flickr.com/photos/reptileshots/15345273401/ and

https://www.flickr.com/photos/benjaminhicks/52214080887/ and

https://www.flickr.com/photos/reptileshots/15161925187/

Distribution: *Soridia luxflavo sp. nov.* occurs along the West Australian Coast between Shark Bay in the south and Cape Range in the north inclusive. S. *praepedita* Boulenger, 1887 occurs south of here, along the coast and hinterland to Perth.

Etymology: The species name "luxflavo" comes from the Latin words "lux flavo" meaning light yellow, in reflection of the colouration of the dorsum of the lizard.

MICULIA RUFICAUDA SP. NOV.

LSIDurn:lsid:zoobank.org:act:23A1EA0A-C0A1-47A0-9BE3-DEA985A392BB

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R57693 collected from 11.5 km west southwest of Pinkawillinie, South Australia, Australia, Latitude -33.1033 S., Longitude 136.0636 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the South Australian Museum, Adelaide, South Australia, Australia, specimen numbers R58494, R58495 and R58496 all collected 16.7 km east northeast of Lock, South Australia, Australia, Latitude -33.4953 S., Longitude 135.9144.

Diagnosis: Until now *Miculia ruficauda sp. nov.* has been treated as an east Australian population of "*Ablepharus distinguendus* Werner, 1910", better known as "*Lerista distinguendus*", with a type locality of Freemantle, Western Australia.

Both preceding species are best placed in the genus *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845, being a closely related taxon.

Miculia ruficauda sp. nov. and *Miculia distinguendus* are morphologically very similar to one another which explains why they have been treated as the same species until now.

However, a close examination of dozens of specimens of each relevant population yielded consistent differences and allopatry across a significant biogeographical barrier, being the more arid parts of the Great Australian Bight.

Therefore, I have had no hesitation in formally naming *Miculia ruficauda sp. nov.* as a new species.

Miculia distinguendus is herein confined to south-west Western Australia, along the coast and nearby hinterland from about Northampton on the mid-west Australian coast, south then east along the coast to the eastern edge of the Nullarbor.

M. ruficauda sp. nov. is essentially confined to the northern two thirds of the Eyre Peninsula in South Australia.

M. ruficauda sp. nov. is readily separated from *M. distinguendus* by the fact that the black dots on the scales that form the two lines running on either side of the vertebral line of the back are evenly spaced in forming the lines, versus not evenly spaced in *M. distinguendus.* Furthermore, in *M. ruficauda sp. nov.* the thick black line running along the upper flank is shrunken slightly as compared to the same line in *M. distinguendus*, with a consequence being a slight bleeding of brown, onto the white on the lower edge. The upper surfaces of the limbs are both dark and light in *M. ruficauda sp. nov.*, versus mainly dark in *M. distinguendus*.

The two species *M. ruficauda sp. nov.*, and *M. distinguendus* are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A small slender species with four digits on each limb, 6 supralabials; 3-4 supraciliaries and a fixed eyelid. They are separated from the closely related *Miculia elegans* Gray, 1845 by having separated nasals (versus nasals joined to form a median suture) and more numerous midbody scale-rows (18 versus 16).

M. ruficauda sp. nov. is depicted in life in Brandle (2020) on page 85 at bottom right and online at:

https://www.flickr.com/photos/68921296@N06/12098953783/

M. distinguendus is depicted in life in Wilson and Swan page 363 at top left, Storr *et al.* (1981) on plate 13, image 6, second up from bottom right and online at:

https://www.flickr.com/photos/moloch05/45610322564/ and

https://www.flickr.com/photos/27897324@N07/29598372370/

Distribution: *M. ruficauda sp. nov.* is essentially confined to the northern two thirds of the Eyre Peninsula in South Australia.

Etymology: The species is named in reflection of its reddishorange tail and the relevant Latin words "rufi cauda" meaning orange or reddish tail.

GAIA OOMPH SP. NOV.

LSIDurn:Isid:zoobank.org:act:4CA072EF-B6ED-4D3B-9500-E90EA7D6355A

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R110908 collected from 116 km north north-west of the Tanami Downs Homestead, Western Australia, Australia, Latitude -19.898889 S., Longitude 128.865833 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved adult female specimen at the Western Australian Museum, Perth, Western Australia, Australia,

Australian Museum, Perth, Western Australia, Australia specimen number R157470 collected from the Tanami

Desert, Western Australia, Australia, Latitude -19.866389 S., Longitude 128.846111 E.

Diagnosis: The species originally described as *Lerista greeri* Storr, 1982 is one of a cluster of closely related species from the Kimberley and nearby parts of Northwest Australia.

All are best placed in the genus *Gaia* Wells, 2012 based on the published phylogeny of Skinner (2008) as is done herein.

Gaia greeri, with a type locality of 8 km south southeast of Derby, Western Australia, Australia, (Latitude -17.22 S., Longitude 123.40 E.) has until now included specimens from the southwest, south and east Kimberley regions, including the Tanami Desert area to the immediate south-east.

However, as the south-eastern and north-eastern specimens of putative *G. greeri* are morphologically and genetically divergent from the type form of *G. greeri*, or the closely related taxa, *G. robusta* (Storr, 1990), *G. vermicularis* (Storr, 1982), *G. labialis* Storr (1971) or *G. simillima* (Storr, 1984), it is herein formally named as a new species. See for example the relevant sequence data published in Skinner *et al.* (2008) and Farquhar *et al.* (2024).

Gaia oomph sp. nov. is readily separated from the previously named species as follows:

G. greeri, *G. labialis* and *G. simillima* are lizards with a bold dark lateral band that is either black, very dark brown and with a sharp upper and lower edge.

G. vermicularis is lizard with an orange red dorsal surface, including to the snout and with white on the mid and lower flanks. The white of the under surface extends about half-way up the side of the flank.

G. robusta is the most similar species to *G. oomph sp. nov.*. The dorsal colour is orange on top. There is brown stripe on the upper lateral surface, reasonably sharply defined top and bottom and this occupies most of the side of the flank. The white from below only encroaches the lower edge of the flank. The distal end of the tail is grey.

A more distantly related species within *Gaia* Wells, 2012 is *G. ips* (Storr, 1980), that is separated from the other species by having a moderately to well-defined and wide mid-vertebral line that is yellow in colour on a dorsum that is otherwise orange, with a moderately well-defined orange upper lateral line extending about halfway down the side of the flank. Most of the tail is ghost white.

G. oomph sp. nov. in contrast to all the preceding species is separated from them and defined as follows:

It has a dorsum that is a light beige-brown colour, extending along the tail.

The snout and back of head is whitish, darkening on the neck, lightening on the rear body and then intensifying on the anterior tail before becoming near white at the distal end.

The dorsal colouration extends over the dorsolateral edge where a boundary of darker brown occurs.

This is formed by one or two scale rows having the main part of each scale a darker brown colour.

Below this line that is poorly defined above and well-defined below is the white of the majority of the flank that extends to the white belly.

On the anterior half of the tail, the dark band of the upper lateral edge, remains 2 scales wide and becomes well defined on top as well as below, with sharper contrast in colour, giving the anterior tail a well-defined striped appearance. These colours reduce to become white or white with flecks at the distal end.

G. oomph sp. nov. and G. greeri are separated from all other members of Lerista sensu lato this including all other species

within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

No trace of a forelimb or forelimb groove; two toes; no prefrontals; nasals usually separated; 6 upper labials, 20 midbody rows, 2 supraoculars in contact with the frontal and 1-2 supraciliaries.

A detailed description of the type form of *G. greeri* is in Wells (2012) on pages 198-199.

Other than the colouration description, the rest applies to *G. oomph. sp. nov.*

G. oomph. sp. nov. is depicted in life online at:

https://www.flickr.com/photos/euprepiosaur/23152932282/

G. greeri is depicted in life in Wells (2012) on page 199, Wilson and Swan (2021) on page 367 at top and online at: https://www.flickr.com/photos/brian_busho/14270539460/ and

https://www.naturepl.com/stock-photo-skink-lerista-greericable-beach-western-australia-image01193752.html

Distribution: *G. oomph. sp. nov.* is a taxon known from the northern Tanami Desert, Western Australia and East Kimberley district in the Ord River basin.

G. greeri is confined to the southern West Kimberley district and adjacent dry areas to the south.

Etymology: I recall the noise fellow herpetologist Charles Acheson made when he heaved over a log near the type locality for this taxon to locate a specimen in 1983. It was one great "oomph".

GAIA GRIFFINI ASGICONDI SUBSP. NOV.

LSIDurn:lsid:zoobank.org:act:205CD3A7-6B5B-4C6E-AD33-BBCE562A0265

Holotype: A preserved specimen at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen number R27102 collected from Donkey Hole, 4.5 km east of the gate to the Roper River, Northern Territory, Australia, Latitude -14.841 S., Longitude 133.138 E. This government-owned facility allows access to its holdings.

Paratypes: Two preserved specimens at the Museum and Art

Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen numbers R27355 and R27330 collected from Elsey Station, Northern Territory, Australia, Latitude -14.283 S., Longitude 133.317 E.

Diagnosis: *Gaia griffini asgicondi subsp. nov.* is the easternmost population of the taxon "*Lerista griffini* Storr, 1982" with a type locality of Kununurra, Western Australia, (Latitude 15.47 S., 128.44 E.).

The species is placed in the genus *Gaia* Wells, 2012 following on from the phylogeny of Skinner et al. (2008).

The Kimberley population (both east and west Kimberley) are of the type subspecies.

Gaia griffini asgicondi subsp. nov. has a centre of distribution on the Sturt Plateau bioregion of the north central Northern Territory including nearby hilly areas, such as the uplands near the south-west Gulf of Carpentaria.

G. griffini asgicondi subsp. nov. is separated from nominate *Gaia griffini* by having a brownish tinge to the dorsum versus slightly reddish in *G. griffini.* It is further separated by the second loreal which is narrow and triangular in shape, versus squarish in *G. griffini.*

The narrowing is caused by the scales above pushing their boundaries lower and the expansion at the lower edge of the first loreal. The 2-3 postoculars present in *G. griffini* are also reduced or absent in *G. griffini* asgicondi subsp. nov.

G. griffini of both subspecies are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A movable eyelid, two toes and no trace of a forelimb (including groove). Stout in build, snout vent to 70 mm, tail is nearly as long as the body, or rarely slightly longer; relatively dark in body colouration including with well-defined paravertebral stripes dorsally and a well-defined dark band on the dorsolateral edge; no prefrontals; nasal usually separated; a relatively low flat-topped second loreal (especially in the subspecies *G. griffini asgicondi subsp. nov.*), that is significantly larger than the first; no preocular and digits 0 + 2. *G. griffini asgicondi subsp. nov.* is depicted in life online at:

https://www.flickr.com/photos/zimny_anders/51599000858/ and

https://www.flickr.com/photos/58349528@N02/50227974482/ and

https://www.flickr.com/photos/zimny_anders/51599000748/

G. griffini of the type subspecies is depicted in Horner (1992) on page 103, second from top, Wilson and Swan (2021) on page 367 second from top on left, Wells (2012) on page 201 and online at:

https://www.flickr.com/photos/27897324@N07/14184138187/ and

https://www.flickr.com/photos/euprepiosaur/22634917318/ and

https://www.flickr.com/photos/121210153@ N05/37960292761/

and

https://www.flickr.com/photos/euprepiosaur/24770205518/ and

https://www.flickr.com/photos/colonel_007/49124446681/ and

https://www.flickr.com/photos/ianbool/50643553561/ and

https://www.flickr.com/photos/58349528@N02/52655204336/ and

https://www.flickr.com/photos/58349528@N02/52322281585/

Distribution: *Gaia griffini asgicondi subsp. nov.* has a centre of distribution on the Sturt Plateau bioregion of the north central Northern Territory including nearby hilly areas, such as the uplands near the south-west Gulf of Carpentaria.

Etymology: *G. griffini asgicondi subsp. nov.* is named after the Asgicondi people being the original native Aboriginal Australian inhabitants where this taxon occurs. After the genocide of the 1800's at the hands of British invaders, the descendants of the survivors now eke out a miserable existence on the edges of towns in the region scavenging among rubbish when not dodging bullets from racist murdering State police as detailed in Hoser (1994, 1999a and 1999b).

GAIA ARRERNTE SP. NOV.

LSIDurn:Isid:zoobank.org:act:56B775D3-D3ED-4253-B501-2BB1A13BEBEC

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R24318 collected 42 km southwest of Wauchope, Northern Territory, Australia, Latitude -21.016667 S., Longitude 134.2 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 R24190 collected from Elliott, Northern Territory, Australia, Latitude -17.55 S., Longitude 133.533333 E., 2/ Two preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R24319 and R24320 both collected 42 km southwest of Wauchope, Northern Territory, Australia, Latitude -21.016667 S., Longitude 134.2 E.

Diagnosis: Until now, putative *Gaia bipes* (Fischer, 1882), more commonly known as "*Lerista bipes*" with a type locality of Nickol Bay, Western Australia, has been treated as a species occupying the sand dune and associated rocky hill areas of north-west and central Australia, extending east just into Western Queensland. Other than *Gaia labialis* (Storr, 1971) and associated taxa, being *G. rolloi* and *G. pitjantjatjara sp. nov.* which as a group are also found across most of Australia, *Gaia arrente sp. nov.* and *G. kunja sp. nov.* are the only putative species of the genus *Gaia* Wells, 2012 that have a distribution extending beyond the perimeter of north-west Australia.

As far back as 1971, Storr (1971) recognized consistent differences between the nominate form of *Gaia bipes* and the populations to the east in the interior of Western Australia, Northern Territory and northern South Australia.

Herein *G. bipes* occupies the Pilbara and adjacent areas, in particular near coastal areas to the immediate south.

G. arrente sp. nov. in turn occupies the region from the interior of Western Australia and east, to eastern South Australia and far western Queensland and including most of the Northern Territory except for the tropical north and flat black soil areas.

G. kunja sp. nov. is apparently confined to a small area in far south-west Queensland and potentially adjacent habitat in north-west South Australia.

Gaia arrente sp. nov. is separated from *O. bipes* by having a dark yellow or yellow-brown dorsum versus yellow or whitish yellow in *O. bipes*, a sharp and well-defined dorsal pattern, versus weak in *O. bipes*, 3-4, instead of 1-2 nuchals in *O. bipes*, 3 instead of usually 2, supraoculars in *O. bipes*, 11-15 versus 9-12 lamellae under the longer toe in *O. bipes*, combined with a longer average length of limbs.

G. kunja sp. nov. is similar in most respects to *G. arrente sp. nov.* as just described, but is separated from that taxon by having 2 supraoculars (versus 3) and a dorsal pattern that is only moderately well-defined.

The three species Gaia arrente sp. nov., G. kunja sp. nov. and G. bipes are separated from all other species within the putative genera Lerista Bell, 1833, type species Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A small slender species with digits 0 + 2; snout depressed, very sharp in profile, extending well beyond the mouth; a moveable eyelid; frontoparietals and interparietal fused: no prefrontals (separating these species from the closely related, morphologically similar *O. nichollsi* (Loveridge, 1933) of the Gascoyne region in Western Australia, which has prefrontals); no trace of fore-limbs (including groove); 0 + 1 or 2 supraciliaries; two or three supraoculars in contact with the frontal (in contrast to the morphologically similar and closely related *O. labialis* (Storr, 1971) where they are not in contact. Length of appendages (percentage of snout-vent length): hind-leg 12.9-21.8: tail 67-106.

Nasals narrowly separated (occasionally just touching, very rarely in short contact or widely separated). No prefrontals. 0-4 nuchals. 5 or rarely 6 upper labials. Primary and upper secondary temporals subequal, lower secondary much smaller. 18-20 midbody rows. 7-12 lamellae under the longer toe. Dorsally light yellowish to brown, often reddish.

There is usually a line of brown dots through the centre of paravertebral scales from the nape nearly to the end of the tail; less frequently there is an additional but fainter series of dorsal dots between the middle rows and the lateral edge. A dark-brown stripe runs from the nasal through the orbit nearly to the end of the tail. Lips, lower flanks and belly are whitish.

Gaia arrente sp. nov. is depicted in life in Wells (2012) on pages 197 and 198, Wilson (2022) on page 171 on right and online at:

https://www.inaturalist.org/observations/1252001 and

https://www.inaturalist.org/observations/204918707

G. bipes is depicted in life in Storr *et al.* (1981) in plate 14, photo 3, second from top on left, Cogger (2014) on page 596 at top and online at:

https://www.flickr.com/photos/58349528@N02/52321038837/ and

https://www.flickr.com/photos/jaricornelis/52933294539/ and

https://www.flickr.com/photos/euprepiosaur/7224423960/ and

https://www.flickr.com/photos/54876436@N08/5532019924/ and

https://www.flickr.com/photos/julesfarquhar/52382226809/

Distribution: *Gaia arrente sp. nov.* occupies the region from the interior of Western Australia and east, to eastern South Australia and the northern part of far western Queensland (Simpson Desert area) and including most of the Northern Territory except for the tropical north and flat black soil areas.

G. bipes occupies the Pilbara and adjacent areas, in particular near coastal areas to the immediate south.

Gaia kunja sp. nov. is found in a restricted part of far southwest Queensland.

Etymology: The species *Gaia arrente sp. nov.* is named after the Arrente tribe who are the original native Aboriginal inhabitants of the Centralian region that this taxon occurs. The survivors of the British genocide of the 1800's now eke out a miserable existence in so-called "settlements" placed a long way away from "civilisation" on economically worthless desert land.

When tribe members are caught by police loitering around townships like Alice Springs they are arrested or shot by heavily armed local police "on His Majesty's Service" for breaching "Curfew laws".

GAIA KUNJA SP. NOV.

LSIDurn:lsid:zoobank.org:act:3B8401AA-376A-4C80-98FA-A49D0D3372C6

Holotype: A preserved female specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number

J48492 collected from Naccowlah, 36 km west northwest of Jackson, Queensland, Australia, Latitude -27.566667 S., Longitude 142.05 E.

This government-owned facility allows access to its holdings. **Paratype:** A preserved female specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J48533 collected from Naccowlah, 36 km west northwest of Jackson, Queensland, Australia, Latitude -27.566667 S., Longitude 142.05 E.

Diagnosis: Until now, putative *Gaia bipes* (Fischer, 1882), more commonly known as "*Lerista bipes*" with a type locality of Nickol Bay, Western Australia, has been treated as a species occupying the sand dune and associated rocky hill areas of north-west and central Australia, extending east just into Western Queensland.

Other than *Gaia labialis* (Storr, 1971) and associated taxa, being *G. rolloi* and *G. pitjantjatjara sp. nov.* which as a group are also found across most of Australia, *Gaia arrente sp. nov.* and *G. kunja sp. nov.* are the only putative species of the genus *Gaia* Wells, 2012 that have a distribution extending beyond the perimeter of north-west Australia.

As far back as 1971, Storr (1971) recognized consistent differences between the nominate form of *Gaia bipes* and the populations to the east in the interior of Western Australia, Northern Territory and northern South Australia.

Herein *G. bipes* occupies the Pilbara and adjacent areas, in particular near coastal areas to the immediate south.

Gaia arrente sp. nov. in turn occupies the region from the interior of Western Australia and east, to eastern South Australia and far western Queensland and including most of the Northern Territory except for the tropical north and flat black soil areas.

G. kunja sp. nov. is apparently confined to a small area in far south-west Queensland and potentially adjacent habitat in north-west South Australia.

Gaia arrente sp. nov. is separated from *G. bipes* by having a dark yellow or yellow-brown dorsum versus yellow or whitish yellow in *G. bipes*, a sharp and well-defined dorsal pattern, versus weak in *G. bipes*, 3-4, instead of 1-2 nuchals in *G. bipes*, 3 instead of usually 2, supraoculars in *G. bipes*, 11-15 versus 9-12 lamellae under the longer toe in *G. bipes*, combined with a longer average length of limbs.

G. kunja sp. nov. is similar in most respects to *G. arrente sp. nov.* as just described but is separated from that taxon by having 2 supraoculars (versus 3) and a dorsal pattern that is only moderately well-defined.

The three species Gaia arrente sp. nov., G. kunja sp. nov. and G. bipes are separated from all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and

Frost, 1902, *Krishna* Wells, 2012, type species *Rhodona fragilis* Günther, 1876, *Lokisaurus* Wells, 2012, type species: *Ablepharus timidus* De Vis, 1888, *Marrunisauria* Wells, 2012, type species, *Lerista borealis* Storr, 1971, *Spectrascincus* Wells, 2012, type species, *Lerista ingrami* Storr, 1991, *Tychismia* Wells, 2012, type species *Lerista chordae* Amey, Kutt and Hutchinson 2005 and *Wondjinia* Wells, 2012, type species, *Lerista apoda* Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A small slender species with digits 0 + 2; snout depressed, very sharp in profile, extending well beyond the mouth;.a moveable eyelid; frontoparietals and interparietal fused: no prefrontals (separating these species from the closely related, morphologically similar *G. nichollsi* (Loveridge, 1933) of the Gascoyne region in Western Australia, which has prefrontals) no trace of fore-limbs (including groove), 0 + 1 or 2 supraciliaries; two or three supraoculars in contact with the frontal (in contrast to the morphologically similar and closely related *G. labialis* (Storr, 1971) where they are not in contact. Length of appendages (percentage of snout-vent length): hind-leg 12.9-21.8: tail 67-106.

Nasals narrowly separated (occasionally just touching, very rarely in short contact or widely separated). No prefrontals. 0-4 nuchals. 5 or rarely 6 upper labials. Primary and upper secondary temporals subequal, lower secondary much smaller. 18-20 midbody rows. 7-12 lamellae under the longer toe. Dorsally light yellowish to brown, often reddish.

There is usually a line of brown dots through the centre of paravertebral scales from the nape nearly to the end of the tail; less frequently there is an additional but fainter series of dorsal dots between the middle rows and the lateral edge. A dark-brown stripe runs from the nasal through the orbit nearly to the end of the tail. Lips, lower flanks and belly are whitish.

Gaia arrernte sp. nov. is depicted in life in Wells (2012) on pages 197 and 198, Wilson (2022) on page 171 on right and online at:

https://www.inaturalist.org/observations/1252001 and

https://www.inaturalist.org/observations/204918707

G. bipes is depicted in life in Storr *et al.* (1981) in plate 14, photo 3, second from top on left, Cogger (2014) on page 596 at top and online at:

https://www.flickr.com/photos/58349528@N02/52321038837/ and

https://www.flickr.com/photos/jaricornelis/52933294539/ and

https://www.flickr.com/photos/euprepiosaur/7224423960/ and

https://www.flickr.com/photos/54876436@N08/5532019924/ and

https://www.flickr.com/photos/julesfarquhar/52382226809/

Distribution: *Gaia kunja sp. nov.* is found in a restricted part of far south-west Queensland.

Gaia arrente sp. nov. occupies the region from the interior of Western Australia and east, to eastern South Australia and the northern part of far western Queensland (Simpson Desert area) and including most of the Northern Territory except for the tropical north and flat black soil areas.

G. bipes occupies the Pilbara and adjacent areas, in particular near coastal areas to the immediate south.

Etymology: The species *Gaia kunja sp. nov.* is named after the Kunja tribe who are the original native Aboriginal

inhabitants of the south-west Queensland region that this taxon occurs. The survivors of the British genocide of the 1800's now eke out a miserable existence in so-called "settlements" placed a long way away from "civilisation" on economically worthless desert land.

When tribe members are caught by police loitering around townships like Charleville they are arrested or shot by heavily armed local police "on His Majesty's Service" for breaching "gathering", "loitering" or "consorting" laws.

GAIA PITJANTJATJARA SP. NOV.

LSIDurn:lsid:zoobank.org:act:C8E26502-BD59-4368-8694-2A33F5B5FE54

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R34530 collected from 35 miles east of Serpentine Lakes, South Australia, Australia, Latitude -28.516667 S., Longitude 129.55 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R20774, R20775 and R20776 all collected from Chernside River, Northern Territory, Australia, Latitude -25.066667 S., Longitude 129.633333 E.

This government-owned facility allows access to its holdings.

Diagnosis: Until the present time, most Australian herpetologists have treated *Gaia labialis* (Storr, 1971) with a type locality of Poonda, Pilbara District, Western Australia, Australia (Latitude -22.53 S., Longitude 119.42 E) as a taxon occurring across most of arid Australia in areas of heavy soils, generally occurring where the dune inhabiting taxon *G. bipes* (Fischer, 1882) and associated species *G. arrente sp. nov.* and *G. kunja sp. nov.* does not.

Contrary to this, Wells and Wellington (1985) and Wells (2012) have regarded the putative taxon as a comprising more than one species.

G. rolloi (Wells and Wellington, 1985), with a type locality of 10 km north of Sandringham's Station Homestead, 60 km northwest of Bedourie, Queensland, Australia (Latitude 23.58 S., Longitude 139.02 E.) has been taken by Wells (2012) to include putative *G. labialis* from the Cooper's Creek drainage basin, including the nearby Upper Darling system.

This is broadly agreed here.

However, with separation of about 1,000 km between the type population of from the Pilbara region and those specimens further east, at the eastern border area of Western Australia, separated from one another by unsuitable dune habitat in eastern Western Australia, combined with significant morphological divergence, it is not tenable to regard the two forms as conspecific.

Wells (2012) regarded those specimens as being *O. labialis* and quantified the differences between these and his own taxon, *G. rolloi*.

Hence these specimens from the north west of South Australia and nearby Northern Territory are formally named as *Gaia pitjantjatjara sp. nov.*.

Gaia pitjantjatjara sp. nov. is separated from both *G. labialis* and *G. rolloi* by having 18 or 19 midbody rows, versus 20 in the other two species.

G. rolloi differs from *G. labialis* in its much paler colouration and almost total absence of darker paravertebral lines (faint to non-existent in *G. rolloi*), and an overall smaller maximum length in *G. rolloi* (adult snout-vent of 60 mm versus 70 mm in the other two species).

Like G. rolloi, G. pitjantjatjara sp. nov. is of paler colour than

G. labialis, but instead has defined paravertebral lines. Furthermore *G. labialis* is reddish on the dorsum, versus more yellowish in colour for both *G. rolloi* and *G. pitjantjatjara sp. nov.*

Gaia pitjantjatjara sp. nov. (as well as *G. rolloi* and *G. labialis*) is separated from the morphologically similar species *G. bipes*, *G. arrente sp. nov.* and *G. kunja sp. nov.* all of which have 18 midbody rows, by having six upper labials (instead of 5) and 2 supraoculars (instead of 3).

All of G. bipes, G. arrernte sp. nov., G. kunia sp. nov., G. rolloi, G. labialis and G. pitjantjatjara sp. nov. are separated from all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xvnoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Small, slender species with snout depressed, very sharp in profile, extending well beyond mouth. with digits 0 + 2 with no indication of any forelimb, movable eyelid, no prefrontals; frontoparietals and interparietal fused, and no fore-limb groove. With or without supraciliaries. 5-6 supralabials; 18-20 midbody rows; 2-3 supralabials. Adult snout-vent is 70 mm or less.

Gaia labialis of the type form is depicted in life in Wells (2012) on page 204 at bottom and online at:

https://www.flickr.com/photos/27897324@N07/7675187698/ *G. rolloi* is depicted in life online at:

https://www.flickr.com/photos/smacdonald/1463340848/

and

https://www.flickr.com/photos/127392361@ N04/53189661017/

and

https://www.inaturalist.org/observations/63792493 and

https://www.inaturalist.org/observations/171165314

Distribution: *Gaia pitjantjatjara sp. nov.* is a taxon from the northwest of South Australia and nearby Northern Territory.

Etymology: *G. pitjantjatjara sp. nov.* is named after the Pitjantjatjara people, the original Aboriginal inhabitants of north-west South Australia. Those that weren't killed directly by the British invaders in the 1800's or the diseases they

brought with them, lingered on to the 1900's.

In the 1950's the descendants of the survivors had to endure clouds of radioactive dust on their camps as the British tested their atomic bombs on their lands (at Maralinga).

Any remaining descendants of the survivors, long ago pushed to the most remote areas, now have to eke out an existence while dealing with radiation-linked diseases and birth defects.

MARRUNISAURIA WAM SP. NOV.

LSIDurn:lsid:zoobank.org:act:3351C5B2-F6D0-45DA-8440-979FF24F0608

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R171601 collected from Storr Island, Western Australia, Australia, Latitude -15.949722 S., Longitude 124.560833 E.

This government-owned facility allows access to its holdings.

Paratypes: Two preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R41299 and R171042 collected from Augustus Island, Bonaparte Archipelago, West Kimberley District, Western Australia, Australia, approximate Latitude -15.39 S., Longitude 124.593056 E.

Diagnosis: The species "*Lygosoma walkeri* Boulenger, 1891" more recently known as "*Lerista walkeri*" is best placed in the genus *Marrunisauria* Wells, 2012 based on the published phylogenies of Skinner *et al.* (2008) and Pyron *et al.* (2013).

Marrunisauria wam sp. nov. is separated from the closely related nominate form of *M. walkeri* from further north in the West Kimberley district by having shorter limbs (foreleg 4 percent and hindleg are 7 percent of snout-vent length, versus foreleg 5-8 percent and hindleg 10 to 15 percent of snout-vent length) and a brownish rather than a greyish dorsum.

Both *Marrunisauria wam sp. nov.* and *M. walkeri* are separated from other member of the genus *Marrunisauria* Wells, 2012, being *M. borealis* (Storr, 1971) including the subspecies *M. borealis gurindji subso. nov.* and *M. ngarinyin subsp. nov.* by the small last supraciliary (much smaller than the third and fourth), a long suture between nasals (versus not so), a dark and spotted coloration, greater size (average 60 mm, versus 50 mm), shorter hind limbs (less than 15 percent versus 16-18 percent and fewer subdigital lamellae (6-10 versus 10-13).

All species within the genus Marrunisauria Wells, 2012 as defined herein are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge. 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species:

Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, *Tychismia* Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Digits 2+2 or 2+3; fingers 0-2 and usually less numerous than the toes; eyelid movable; 20-22 midbody rows; no ventrolateral keel; temporals 1+2; prefrontals widely separated. Frontoparietals forming a short to long median suture; shorter than interparietal; no stripes or lines on the dorsum, dorsolateral line or flank.

The nominate form of *M. walkeri* is in this description is taken to be the specimens described by Boulenger (1891) and Storr (1976) from the Prince Regent River region in Western Australia, actually being north of the Prince Regent River and extending north to include the north-east Kimberley islands of Condillac Island and the nearby Fenelon island, as per the Lectotype designation for *M. walkeri* (as *Lygosoma walkeri* Boulenger, 1891) made earlier and repeated below.

Distribution: *Marrunisauria wam sp. nov.* is only effectively known from the type locality, Storr Island and nearby Augustus Island, Bonaparte Archipelago, West Kimberley District, Western Australia, Australia. However, it is presumed to have a range in the adjacent south-west Kimberley district of Western Australia, generally on and near the coast in the west Kimberley, south of the Prince Regent River.

Etymology: "WAM" is the acronym for the specimen collection at the Western Australian Museum, which is from where the holotype is held. It is a simple, short and easy to remember name for the taxon.

The spelling should not be changed or latinised in any way. LECTOTYPE DESIGNATION FOR THE TAXON "LYGOSOMA WALKER! BOULENGER, 1891"

In order to stabilize the taxonomy of the putative species "Lygosoma walkeri Boulenger, 1891", I do within this paper designate a Lectotype in accordance with the rules of the International Code of Zoological Nomenclature (Ride et al. 1999) ("the Code").

In order to comply with all of 74.7. (1, 2 and 3) in the Code, I publish and make the following known.

74.7.1. A lectotype for *Lygosoma walkeri* Boulenger, 1891 a taxon from the West Kimberley district in Australia is being designated from a series of two syntypes of *Lygosoma walkeri* Boulenger, 1891.

74.7.3. In terms of the putative taxon, *"Lygosoma walkeri* Boulenger, 1891", there were two Syntypes.

Based on collection localities, taken at face value, there must be two species involved.

However, no specimens of the species commonly known as *"Lerista walkeri*" have since been found that far south in the West Kimberley (Roebuck Bay) (syntype 2), but they have been found on islands adjacent to Condillac Island, Northwest Australia (syntype 1).

Molecular evidence (e.g. Farquhar *et al.* 2024) and morphological evidence, shows that there are two species currently identified as "*Lerista walkeri*" (Boulenger, 1891) in the West Kimberley region, with a division of the two species being in the vicinity of the Prince Regent River itself, a location between the two purported collection sites of the syntypes.

To stabilize the nomenclature for the species Lygosoma

walkeri Boulenger, 1891 as currently understood by herpetologists in Australia and elsewhere,

74.7.2. I hereby designate as a Lectotype, specimen number 1946.8.15.59 at the Natural History Museum London, UK, as the Lectotype for the species. The specimen was collected from Condillac Island, North-west Australia by J. J. Walker.

MARRUNISAURIA BOREALIS GURINDJI SUBSP. NOV. LSIDurn:lsid:zoobank.org:act:A44290ED-DD2A-4040-97FA-CE20EDF211CB

Holotype: A preserved specimen at the Museum and Art Gallery of the Northern Territory (NTM), Darwin, Northern Territory, Australia, specimen number R22469 collected at Jasper Gorge, Judbarra/Gregory National Park, Northern Territory, Australia, Latitude -16.023 S., Longitude 130.769 E. This government-owned facility allows access to its holdings.

Paratypes: Six preserved specimens at the Museum and Art Gallery of the Northern Territory (NTM), Darwin, Northern Territory, Australia, being 1/ Specimen number R18325 collected from Kidman Springs, Victoria River Region, Northern Territory, Australia, Latitude -16.133 S., Longitude 130.95 E., 2/ Specimen number R02132 collected from the Victoria River Downs Homestead, Victoria River Region, Northern Territory, Australia, Latitude -16.4 S., Longitude 131.017 E., 3/ Specimen numbers R09476, R09475, R09477 and R09478 all collected from Victoria River Bridge, 2 km west of, Judbarra/Gregory National Park, Victoria River Region, Northern Territory, Australia, Latitude -15.617 S., Longitude 131.083 E.

Diagnosis: Until now, *Marrunisauria borealis gurindji subsp. nov.* and *M. borealis ngarinyin subsp. nov.* have been treated as western and eastern populations of *Marrunisauria borealis* (Storr, 1971), currently more widely known as "*Lerista borealis*".

With a type locality of Thompson Spring, East Kimberley district, Western Australia, Australia (Latitude 16.02 S., Longitude 128.57 E), the nominate subspecies of *M. borealis* is effectively confined to the East Kimberley District of Western Australia.

Populations east and west of the East Kimberley are divergent and herein formally named as subspecies.

In the Victoria River District of the Northern Territory (including the Keep River ranges) one finds *Marrunisauria borealis gurindji subsp. nov.*

In the west Kimberley one finds the subspecies *M. borealis* ngarinyin subsp. nov.

The three taxa are separated from one another as follows: Nominate *M. borealis* is a lizard with a light to medium brown dorsum and thinly barred upper labials.

There is a very slight reddish tinge on the lower back. Tail is brown.

M. borealis gurindji subsp. nov. has an obvious greyish sheen, especially on the flank as well as thickly barred upper labials making the dark (blackish) equal or exceed the light (whitish). It also has a quite distinctive orange patch in the auricular region. Tail is greyish.

M. borealis ngarinyin subsp. nov. is a chocolate brown lizard with very faint longitudinal stripes formed from dots on the anterior part of the body running indistinctly along the upper flank. There is no slight reddish tinge on the lower back.

The closely related species *Marrunisauria wam sp. nov.* and *M. walkeri* (Boulenger, 1891) are separated from the other member of the genus *Marrunisauria* Wells, 2012, being *M. borealis* (Storr, 1971) including the subspecies *M. borealis gurindji subsp. nov.* and *M. ngarinyin subsp. nov.* by the small

last supraciliary (much smaller than the third and fourth), a long suture between the nasals (versus not so), a dark and spotted coloration, greater size (average 60 mm, versus 50 mm), shorter hind limbs, being less than 15 percent of snoutvent length, versus 6-18 percent of snout-vent length, and fewer subdigital lamellae (6-10 versus 10-13).

All species within the genus Marrunisauria Wells, 2012 as defined herein are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Digits 2+2 or 2+3; fingers 0-2 and usually less numerous than the toes; eyelid movable; 20-22 midbody rows; no ventrolateral keel; temporals 1+2; prefrontals widely separated. Frontoparietals forming a short to long median suture; shorter than the interparietal; no stripes or lines on the dorsum, dorsolateral line or flank.

M. borealis gurindji subsp. nov. is depicted in life in Cogger (2014) on page 597 top left and online at:

https://www.flickr.com/photos/58349528@N02/51733597794/ and

https://www.flickr.com/photos/58349528@N02/52033103975/ and

https://www.inaturalist.org/observations/109448155 and

https://www.flickr.com/photos/zimny_anders/51731357979/

Nominate *M. borealis* is depicted in life in Storr *et al.* (1981) on plate 16 photo 2 at top right Wilson *et al.* (2021) on page 359 at top and online at:

https://www.flickr.com/photos/pokerchampdaniel/5823212879/ and

https://www.flickr.com/photos/stephenmahony/7541090746/

Distribution: *Marrunisauria borealis gurindji subsp. nov.*. occurs in the Victoria River District of the Northern Territory (including the Keep River ranges).

Etymology: *Marrunisauria borealis gurindji subsp. nov.* is named after the Gurindji people, being the original native Aboriginal inhabitants of the Victoria River district. All their

useful land was stolen by British invaders who now run cattle over the land, trampling and degrading native habitat through continual overgrazing. The descendants of the Gurindji people who survived the associated genocide, now eke out a miserable existence on peripheral land with zero economic utility.

The spelling of the subspecies name should not be changed. MARRUNISAURIA BOREALIS NGARINYIN SUBSP. NOV. LSIDurn:Isid:zoobank.org:act:0214B8D6-5AD4-4BE1-B90B-6F9A313B09DF

Holotype: A preserved adult male specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R169932 collected from the Synnot Range, West Kimberley District, Western Australia, Australia, Latitude -16.449722 S., Longitude 125.313889 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.140329 collected from Manning Gorge, Mount Barnett Station, West Kimberley District, Western Australia, Australia, Latitude -16.65861 S., Longitude 125.92693 E.

Diagnosis: Until now, *Marrunisauria borealis gurindji subsp. nov.* and *M. borealis ngarinyin subsp. nov.* have been treated as western and eastern populations of *Marrunisauria borealis* (Storr, 1971), currently more widely known as "*Lerista borealis*".

With a type locality of Thompson Spring, East Kimberley district, Western Australia, Australia (Latitude 16.02 S., Longitude 128.57 E), the nominate subspecies of *M. borealis* is effectively confined to the East Kimberley District of Western Australia.

Populations east and west of the East Kimberley are divergent and herein formally named as subspecies.

In the Victoria River District of the Northern Territory (including the Keep River ranges) one finds *Marrunisauria borealis gurindji subsp. nov.*

In the west Kimberley one finds the subspecies *M. borealis ngarinyin subsp. nov..*

The three taxa are separated from one another as follows: Nominate *M. borealis* is a lizard with a light to medium brown dorsum and thinly barred upper labials.

There is a very slight reddish tinge on the lower back. Tail is brown.

M. borealis gurindji subsp. nov. has an obvious greyish sheen especially on the flank as well as thickly barred upper labials making the dark (blackish) equal or exceed the light (whitish). It also has a quite distinctive orange patch in the auricular region. Tail is greyish.

M. borealis ngarinyin subsp. nov. is a chocolate brown lizard with very faint longitudinal stripes formed from dots on the anterior part of the body running indistinctly along the upper flank. There is no slight reddish tinge on the lower back.

The closely related species *Marrunisauria wam sp. nov.* and *M. walkeri* (Boulenger, 1891) are separated from the other member of the genus *Marrunisauria* Wells 2012, being *M. borealis* (Storr, 1971) including the subspecies *M. borealis gurindji subso. nov.* and *M. ngarinyin subsp. nov.* by the small last supraciliary (much smaller than the third and fourth), a long suture between nasals (versus not so), a dark and spotted coloration, greater size (average 60 mm, versus 50), shorter hind limbs (less than 15 percent versus 16-18 percent and fewer subdigital lamellae (6-10 versus 10-13). All species within the genus *Marrunisauria* Wells 2012 as defined herein are separated from all other members of

Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Digits 2+2 or 2+3; fingers 0-2 and usually less numerous than the toes; eyelid movable; 20-22 midbody rows; no ventrolateral keel; temporals 1+2; prefrontals widely separated. Frontoparietals forming a short to long median suture; shorter than interparietal; no stripes or lines on the dorsum, dorsolateral line or flank.

Distribution: *M. borealis ngarinyin subsp. nov.* occurs in the West Kimberley district of Western Australia.

Etymology: *Marrunisauria borealis ngarinyin subsp. nov.* is named after the Ngarinyin people, being the original native Aboriginal inhabitants of the West Kimberley district. All their useful land was stolen by British invaders who now run cattle over most of that land, trampling and degrading native habitat through continual overgrazing. The descendants of the Ngarinyin people who survived the associated genocide, now eke out a miserable existence on peripheral land with zero economic utility.

The spelling of the subspecies name should not be changed. **SPECTRASCINCUS THINGI SP. NOV.**

LSIDurn:lsid:zoobank.org:act:150FC524-52AD-44E9-BC8C-B38BFD0F3743

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number WAM R108738 collected from Sturt Creek, 10 km north of Gordon Downs Homestead, Western Australia, Australia, Latitude -18.6666667 S. Longitude 128.583333 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 WAM R108739 collected from Sturt Creek, 10 km north of Gordon Downs Homestead, Western Australia, Australia, Latitude -18.666667 S. Longitude 128.583333 E.

Diagnosis: For many years the putative species "*Miculia* orientalis De Vis, 1889" now most widely known as "*Lerista* orientalis" was treated as a taxon occurring from north-east Queensland across most of the tropical north of Australia, just

entering north-east Western Australia.

Storr (1991) identified and named two species in addition to "*Lerista orientalis*", being "*Lerista zonulata*" and "*Lerista ingrami*" both taxa from north-east Queensland.

Putative *"Lerista orientalis"* had a type locality of Gregory Downs, Barkly Tableland, Queensland, Australia (Latitude 18.6514 S., Longitude 139.2529 E.). Populations assigned to this species from the top end of the Northern Territory and into Western Australia are morphologically quite divergent.

They are also allopatrically separated by known biogeographical barriers, known to be occupied by competing species and so the apparent separation of populations is not likely to be an artifact of non-collection in these places.

Therefore, I have no hesitation in formally naming each relevant population as new species.

All the preceding referred to species are also placed in the genus *Spectrascincus* Wells, 2012, exactly as conceived by Wells (2012).

Spectrascincus orientalis is confined to the elevated areas to the south of the Gulf of Carpentaria and west of the Leichhardt River.

Spectrascincus thingi sp. nov. is only known from the type locality and so is effectively confined to that area at the present time.

S. hit sp. nov. is found in the tropical north of the Northern Territory, generally west of the Gulf of Carpentaria.

Both *S. ingrami* and *S. zonulata* are similar to the preceding species in most respects, with both occurring in East Queensland (see Storr 1991 for details and diagnosis separating the last two taxa).

The five preceding species are separated from one another by the following characters:

S. orientalis is a brownish coloured lizard with a broad dark diffuse upper lateral zone with more or less a definite upper edge but no definite lower edge.

By contrast each of *S. hit sp. nov.*, *S. ingrami* and *S. zonulata* have a sharp-edged dark upper lateral stripe, which is well defined top and bottom.

S. hit sp. nov. is separated from both *S. ingrami* and *S. zonulata* in that the area below the upper lateral stripe is whitish grey rather than white. *S. hit sp. nov.* is further separated from both *S. ingrami* and *S. zonulata* by having black etching between the scales on the upper surface of the head. *S. ingrami* and *S. zonulata* have spots and blotches instead.

Tiny black spots on the scales of the back form semi-distinct lines in both *S. ingrami* and *S. zonulata* but this is not the case in *S. hit sp. nov.*.

S. thingi sp. nov. is a light grey-brown coloured lizard, with an upper-lateral band that is thin in that it is less than half the flank in width and also very diffuse. A reasonably welldefined black bar commences at the snout, extends through the orbit and then diffuses between the back of the head and the anterior of the body. The diffused line breaks up along the lower edge as it runs down the body, while the upper edge sharpens to become a thin dark line running to the top of the back leg. The tail lacks obvious markings and the distal two thirds is bright yellow in colour (with numerous dark flecks or spots), versus brown or orange at the distal end of the tail in the other four species.

The top of the head is light brown with dark blackish coloured spots and flecks (not etching).

S. zonulata separated from *S. ingrami* by having ventral surfaces that are brownish white often peppered or spotted

with dark brown, versus white without darker pigment in *S. ingrami.*

The five preceding species, being S. orientalis, S. thingi sp. nov., S. hit sp. nov., S. ingrami and S. zonulata are all separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A small slender skink with 4 fingers, 4 toes; immovable eyelid (a spectacle); a dorsolateral line of some form that has the top being the top of an upper lateral dark zone or stripe, in some form, that may be either distinct or indistinct, at either upper or lower edge or both. To 50 mm snout-vent maximum.

Length of appendages, etc as percent of snout-vent length is: foreleg 8-13, hindleg 17-25, tail 105-143, snout to foreleg 25.5-33. Nasals in very short to long contact. Prefrontals widely separated. Frontoparietals in moderately short to long contact, or rarely very short to short contact, about as large as the interparietal. Nuchals 0-3 on each side. Supraoculars 3, first two in contact with the frontal. 5 supraciliaries, second and fifth smallest, first occasionally as large as the third and fourth; 18-20 midbody rows. 2 loreals, second smaller. 2 presuboculars, second much smaller than the first. 6 upper labials. 11-15 lamellae under the longest toe, with or without a fine weak keel.

Colour of upper surface is a pale to moderately dark olive grey, olive brown or reddish brown, becoming paler and more reddish, orange or yellow on the tail, and marked with blackish brown or dark brown in some form: spotting and flecks or scale etching on the head, sometimes quite heavy and 4 rows of dots (sometimes faint or effectively absent, especially the outer pair) passing through the centre of dorsal scales. Upper lateral zone back to the base of the tail is a blackish brown (dark pigment is sometimes confined to a broad edge of scales at the upper edge roughly at the dorsolateral line), usually fairly sharp-edged at the upper edge but may or may not be sharply defined at the lower edge, and if not sharp then gradually merging inferiorly with lower lateral zone. This line extends forward as a stripe through orbit, lore and nasal before becoming paler, narrowing, curving down and meeting the opposite number at the tip of the snout.

Labials with well-defined thick dark bars.

Lower surfaces pale brown to brownish white, with or without flecks; lower laterals and sometimes the ventrals are finely dark-edged. (Modified and amended from Storr 1981 and Wells 2012).

Spectrascincus thingi sp. nov. is depicted in life in Wilson and Swan (2021) on page 377 bottom.

S. hit sp. nov. is depicted in life in Horner (1991) page 110 in Fig. 97, second from bottom and online at:

https://www.flickr.com/photos/reptileshots/51559979561/ and

https://www.flickr.com/photos/reptileshots/52087904776/ and

https://www.flickr.com/photos/58349528@N02/50227108358/ and

https://www.flickr.com/photos/euprepiosaur/7531640612/ and

https://www.flickr.com/photos/58349528@N02/49027622541/ S. orientalis is depicted in life in Wilson (2022) on page 174 on right, and online at:

https://www.flickr.com/photos/zimny_anders/32574525663/ and

https://www.flickr.com/photos/smacdonald/4509191092/

S. zonulata is depicted in life in Wilson (2022) on page 177 top right, Cogger (2014) on page 632 top, Wilson and Swan (2021), page 391 bottom right and online at:

https://www.flickr.com/photos/114192916@N07/52189264042/ and

https://www.flickr.com/photos/114192916@N07/52190759675/

S. ingrami is depicted in life in Wilson and Swan (2021) on page 369 top, Wilson (2022) on page 174 top left and online at:

https://www.flickr.com/photos/colonel_007/44164138091/

Distribution: *S. thingi sp. nov.* is only known from the type locality being from Sturt Creek, 10 km north of Gordon Downs Homestead, Western Australia, Australia, (Latitude -18.666667 S., Longitude 128.583333 E.).

Etymology: I collected in the area the species occurs in 1983 with fellow herpetologist Charles Acheson. We got assistance from the local Gidja tribe Aboriginal children pretending to help me find the lizards.

They weren't good at the job, but I'd promised to pay them for lizards they caught.

The kids simply called them "thingi's".

Hence the scientific name "thingi" which appears to be the Gidja word for the taxon.

SPECTRASCINCUS HIT SP. NOV.

LSIDurn:lsid:zoobank.org:act:9838A1A5-9FF0-4E92-86AA-39EA238079AE

Holotype: A preserved specimen at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen number R21731 collected from the Tjaynera Falls Area, Litchfield National Park, Northern Territory, Australia, Latitude -13.252 S., Longitude 130.74 E. This government-owned facility allows access to its holdings

Paratypes: Nine preserved specimens at the Museum and Art Gallery of the Northern Territory, Darwin, Northern Territory, Australia, specimen numbers R08665, R08742, R08744, R08747, R21793, R21994, R22000, R23404 and R23405 all collected from the Litchfield National Park, Northern Territory, Australia, Latitude -13.25 S., Longitude 130.74 E.

Diagnosis: For many years the putative species "*Miculia* orientalis De Vis, 1889" now most widely known as "*Lerista* orientalis" was treated as a taxon occurring from north-east Queensland across most of the tropical north of Australia, just entering north-east Western Australia.

Storr (1991) identified and named two species in addition to *"Lerista orientalis"*, being *"Lerista zonulata"* and *"Lerista ingrami"* with both taxa from north-east Queensland.

Putative "*Lerista orientalis*" had a type locality of Gregory Downs, Barkly Tableland, Queensland, Australia (Latitude 18.6514 S., Longitude 139.2529 E.).

Populations assigned to this species from the top end of the Northern Territory and into Western Australia assigned to this species are morphologically quite divergent.

They are also allopatrically separated by known biogeographical barriers, known to be occupied by competing species and so the apparent separation of populations is not likely to be an artifact of non-collection in these places.

Therefore, I have no hesitation in formally naming each relevant population as new species.

All the preceding referred to species are also placed in the genus *Spectrascincus* Wells, 2012, exactly as conceived by Wells (2012).

Spectrascincus orientalis is confined to the elevated areas to the south of the Gulf of Carpentaria and west of the Leichhardt River.

S. thingi sp. nov. is only known from the type locality and so is effectively confined to that area at the present time.

S. hit sp. nov. is found in the tropical north of the Northern Territory, generally west of the Gulf of Carpentaria.

Both *S. ingrami* and *S. zonulata* are similar in most respects, to the preceding species, with both occurring in East Queensland (see Storr 1991 for details).

The five preceding species are separated from one another by the following characters:

S. orientalis is a brownish coloured lizard with a broad dark diffuse upper lateral zone with more or less a definite upper edge but no definite lower edge.

By contrast each of *S. hit sp. nov.*, *S. ingrami* and *S. zonulata* have a sharp-edged dark upper lateral stripe, which is well defined top and bottom.

S. hit sp. nov. is separated from both *S. ingrami* and *S. zonulata* in that the area below the upper lateral stripe is whitish grey rather than white. *S. hit sp. nov.* is further separated from both *S. ingrami* and *S. zonulata* by having black etching between the scales on the upper surface of the head. *S. ingrami* and *S. zonulata* have spots and blotches instead.

Tiny black spots on the scales of the back form semi-distinct lines in both *S. ingrami* and *S. zonulata* but this is not the case in *S. hit sp. nov.*.

S. thingi sp. nov. is a light grey-brown coloured lizard, with an upper-lateral band that is thin in that it is less than half the flank in width and also very diffuse. A reasonably welldefined black bar commences at the snout, extends through the orbit and then diffuses between the back of the head and the anterior of the body. The diffused line breaks up along the lower edge as it runs down the body, while the upper edge sharpens to become a thin dark line running to the top of the back leg. The tail lacks obvious markings and the distal two thirds is bright yellow in colour (with numerous dark flecks or spots), versus brown or orange at the distal end of the tail in the other four species.

The top of the head is light brown with dark blackish coloured

spots and flecks (not etching).

S. zonulata separated from *S. ingrami* by having ventral surfaces that are brownish white and peppered or spotted with dark brown, versus white without darker pigment in *S. ingrami.*

The five preceding species, being S. orientalis, S. thingi sp. nov., S. hit sp. nov., S. ingrami and S. zonulata are all separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A small slender skink with 4 fingers, 4 toes; immovable eyelid (a spectacle) a dorsolateral line of some form that is the top being the top of an upper lateral dark zone or stripe, in some form, that may be either distinct or indistinct, at either upper or lower edge or both.

To 50 mm snout-vent maximum.

Length of appendages, etc as percent of snout-vent is: foreleg 8-13, hindleg 17-25, tail 105-143, snout to foreleg 25.5-33.

Nasals in very short to long contact. Prefrontals widely separated. Frontoparietals in moderately short to long contact or rarely very short to short contact, being about as large as the interparietal. 0-3 nuchals 0-3 on each side. 3 supraoculars, first two in contact with the frontal. 5 supraciliaries, second and fifth smallest, first occasionally as large as the third and fourth; 18-20 midbody rows. 2 loreals, second smaller. 2 presuboculars, second much smaller than first. 6 upper labials. 11-15 lamellae under the longest toe, with or without a fine weak keel.

Colour of upper surface is a pale to moderately dark olive grey, olive brown or reddish brown,

becoming paler and more reddish, orange or yellow on the tail, and marked with blackish brown or dark brown in some form: spotting and flecks or scale etching on the head, sometimes quite heavy and 4 rows of dots (sometimes faint or effectively absent, especially the outer pair) passing through the centre of dorsal scales. Upper lateral zone back to the base of the tail is a blackish brown (dark pigment sometimes confined to a broad edge of scales at the upper edge roughly at the dorsolateral line), usually fairly sharp-edged

at the upper edge but may or may not be sharply defined at the lower edge, and if not sharp then gradually merging inferiorly with lower lateral zone. This line extends forward as a stripe through orbit, lore and nasal before becoming paler, narrowing, curving down and meeting the opposite number at the tip of the snout. Labials have well-defined thick dark bars.

Lower surfaces pale brown to brownish white, with or without flecks; lower laterals and sometimes the ventrals are finely dark-edged. (Modified and amended from Storr 1981 and Wells 2012).

Spectrascincus thingi sp. nov. is depicted in life in Wilson and Swan (2021) on page 377 bottom.

S. hit sp. nov. is depicted in life in Horner (1991) page 110 in Fig. 97, second from bottom and online at:

https://www.flickr.com/photos/reptileshots/51559979561/ and

https://www.flickr.com/photos/reptileshots/52087904776/ and

https://www.flickr.com/photos/58349528@N02/50227108358/ and

https://www.flickr.com/photos/euprepiosaur/7531640612/ and

https://www.flickr.com/photos/58349528@N02/49027622541/ S. orientalis is depicted in life in Wilson (2022) on page 174

on right, and online at:

https://www.flickr.com/photos/zimny_anders/32574525663/ and

https://www.flickr.com/photos/smacdonald/4509191092/

S. zonulata is depicted in life in Wilson (2022) on page 177 top right, Cogger (2014) on page 632 top, Wilson and Swan (2021), page 391 bottom right and online at:

https://www.flickr.com/photos/114192916@N07/52189264042/ and

https://www.flickr.com/photos/114192916@N07/52190759675/

S. ingrami is depicted in life in Wilson and Swan (2021) on page 369 top, Wilson (2022) on page 174 top left and online at:

https://www.flickr.com/photos/colonel_007/44164138091/

Distribution: *S. hit sp. nov.* is found in the tropical north of the Northern Territory, generally west of the Gulf of Carpentaria and extending as far south-west as the Victoria River basin and northern extension of the Tanami Desert.

Etymology: When collecting this species south of Darwin with Tom Cotton during a field trip in 2013, I put a specimen on a log to photograph it. Before I was even able to take a single photograph, a Blue-winged Kookaburra *Dacelo leachii* Vigors and Horsfield, 1827 swooped down and grabbed the lizard in its beak. As it made its getaway it flew at me and hit me in my face.

Hence the etymology for the species.

TYCHISMIA WELLSEI SP. NOV.

LSIDurn:Isid:zoobank.org:act:A5674CB7-0F0C-481E-A474-9B195A91696F

Holotype: A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J80556 collected from the Greenmount Mining Lease, 40 km south of Cloncurry, Queensland, Australia, Latitude -21.0819369 S., Longitude 140.5009162 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J24444 collected from Cloncurry, Queensland, Australia, Latitude -20.7 S., Longitude 140.5 E.

Diagnosis: "*Tychismia fragilis* (Günther, 1876)", was originally named as "*Rhodona fragilis*", but has been shunted between various genera, although as of 2024, most herpetologists place the putative taxon in the genus *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833.

In the recent past, the only herpetologist with the good sense to remove the putative taxon from *Lerista* was Wells (2012), placing it in his monotypic genus *Krishna* Wells, 2012.

In line with the comments earlier in this paper, *Krishna* Wells, 2012 has been subsumed and synonymised within *Tychismia* Wells, 2012, with a type species of *Lerista chordae* Amey, Kutt and Hutchinson, 2005.

I note that the concept of *Tychismia* by Wells in 2012 does not match the phylogeny of Skinner *et al.* (2008) and I have accepted the phylogenetic placements of the latter authors in terms of species placements within genera, while utilising available genus names, including those of Wells (2012).

Also contrary to other Australian herpetologists to the present date (2024), Wells (2012) was alone in openly suggesting that putative *"Tychismia fragilis"* (as I am identifying it herein) was likely to be a number of species, rather than just one.

Examination of the morphological and biogeographical evidence by myself made the Wells (2012) conclusion in effect a statement of the obvious.

To that end, the two most divergent forms of putative *T. fragilis* are herein formally named as new species.

T. fragilis with a type locality of Peak Downs, north-east Queensland (Latitude 22.2549 S., Longitude 148.1797 E.) is found generally along the drier parts of the coast, ranges and nearby western hinterland, south of the tropics, in Queensland, extending south to the south-east corner of Queensland.

Tychismia wellsei sp. nov. is an outlying western population, until now treated as *T. fragilis*, but morphologically very divergent. It is a native of the Selywn Ranges, generally in the region between Cloncurry and Mount Isa, north-west Queensland, but quite likely throughout that region where suitable habitat occurs.

T. valentici sp. nov. is found in the cooler but drier parts of south-east Queensland generally in the elevated and drier triangle-shaped area between the Sunshine coast, the south border of Queensland and the western part of the Darling Downs.

The three species are separated from one another as follows: *T. fragilis* has a well-defined black stripe on the upper flank, about one to one and a half scales wide. The upper border at the dorsolateral edge is relatively straight edged and sharply defined.

The brown of the dorsum lightens at the dorsolateral edge to make the boundary more well defined.

The lower part of the black stripe on the upper flank fades somewhat and more-or-less merges with the greyish white below and without any well-defined lower edge.

This is definitely the case at the anterior part of the body and usually the case posteriorly, but not always so, where sometimes the lower edge is reasonably distinct. That is caused by an intensification of the black at the lower edge and the scales below being more whitish than greyish as seen towards the forelimbs. On the anterior part of the tail, the band from the upper flank runs along each side but is broken into a series of blotches in a line and the line itself is generally thin. The tiny dark spots on the scales of the dorsum are triangular in shape with a sharp posterior facing point. *T. wellsei sp. nov.* is very different to *T. fragilis* in that the stripe on the upper flank is a dull red colour.

The top of this dull red line has a close row of tiny black or dark brown dots along the lateral edge, one dot per scale. This is the dorsolateral line.

And below this dorsolateral line is a dull red colour between two rows of scales being about one scale wide.

There are no continuations of these lines in any way on to the tail, except at the very anterior part (within half the length of the adpressed hind limb).

There is orange tinge in the white of the upper labials, versus white in *T. fragilis*.

The blackish line from the snout through the eye to the top of the neck is well defined top and bottom, but then disintegrates behind the auricular region and before the front leg. There is no wide dark upper lateral line.

Colour is a dull red colour where the dark upper lateral line is in the other two species.

For *T. wellsei sp. nov.* the tiny dark spots on the scales of the dorsum are triangular in shape with a sharp posterior facing point, but very reduced in size as compared to seen in *T. fragilis*, making them almost undetectable except by way of very close scrutiny.

T. valentici sp. nov. is similar in most respects to *T. fragilis* but is separated from that taxon by the fact that the dark line on the upper flank is about 2 scales wide (versus less in *T. fragilis*) and the lower edge of this dark upper flank line is well defined on the lower edge along the entire length of the body (both anterior and posterior), versus not so in *T. fragilis*. Furthermore this band continues on each side of the tail as a generally thick unbroken dark band for the entire length of the tail (versus obviously broken in *T. fragilis*).

The tiny dark spots on the scales of the dorsum are triangular in shape but the posterior facing point is blunt edged.

The three preceding species being T. fragilis, T. wellsei sp. nov. and T. valentici sp. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Body form very small and elongate; tail moderately long and fragile; head/snout shape moderately deep, and snout rounded, not significantly protrusive; limbs small, welldeveloped and not overlapping when adpressed; forelimbs and hind limbs tridactyl, the third toe is the longest; lower eyelid with a transparent palpebral disc, and movable; body scales smooth with 20 midbody rows; nasals enlarged, in contact; supranasals absent; frontoparietals fused to form a single shield; interparietal distinct; parietal shields in contact behind interparietal; prefrontals small and widely separated; 3 supraoculars; 6 supralabials; ear opening small and distinct, about as large as the nostril; a pair of enlarged preanal scales. Forelimb about 5 percent of snout-vent length and hindlimb is about 15-20 percent of snout-vent length. Attains a maximum snout vent length of around 60 mm.

Colouration is brownish in some form above, individual scales each with a tiny black dot or streak, creating a series of more or less continuous fine dark lines down the length of the dorsum. The dorsolateral edge is well defined by a line in some way and below this is a dark blackish upper lateral line in two species or reddish instead in a third species.

This line along the upper flank may or may not continue along the sides of the tail.

Belly is white or cream and dotted with black.

T. fragilis is depicted in life in Cogger (2014) on page 604 bottom (same image in Wilson and Knowles (1988) on page 297 bottom right), Wilson and Swan (2021) on page 363 middle left (same image in Wilson (2022), page 173 top right), Wells (2012) on page 302 bottom and online at:

https://www.inaturalist.org/observations/208185970 and

https://www.flickr.com/photos/euprepiosaur/11046253574/

T. wellsei sp. nov. is depicted in life online at:

https://www.flickr.com/photos/ryanfrancis/8541999586

T. valentici sp. nov. is depicted in life in Wells (2012) on page 302, second from bottom and online at:

https://www.flickr.com/photos/gazs_pics/11476909994/

Distribution: *T. wellsei sp. nov.* is a native of the Selywn Ranges, generally in the region between Cloncurry and Mount Isa, north-west Queensland, but quite likely throughout that region (Selwyn Ranges and outliers) wherever suitable habitat occurs.

Etymology: *T. wellsei sp. nov.* is named in honour of Richard W. Wells currently of Drake, in northern New South Wales, Australia in recognition of his many critically important contributions to herpetology in Australia and internationally spanning some decades.

It is also appropriate that the person who literally wrote the 361 page "book" on *Lerista sensu lato* (Wells 2012) should have a species in the complex named in his honour.

Known to his friends as "Wellsey" or "Wellsei" the spelling of the species name "*wellsei*" is deliberate and should not be changed.

TYCHISMIA VALENTICI SP. NOV.

LSIDurn:lsid:zoobank.org:act:608E7B2B-C3F8-4054-AD3D-D9DD19EA8E0A

Holotype: A preserved adult male specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J83836 collected from the head of Reedy Creek in the Durikai State Forest, West of Warwick, Queensland, Australia, Latitude -28.175 S., Longitude 151.641111 E.

This government-owned facility allows access to its holdings. **Paratypes:** Five preserved specimens at the Queensland

Museum, Brisbane, Queensland, Australia, 1/ Specimen numbers J74661 and J59554 both collected from the Durikai State Forest, West of Warwick, Queensland, Australia, Latitude -28.2 S., Longitude 151.617484 E., and 2/ Specimen numbers J89512, J89514 and J89515 all collected from the Leyburn State Forest, Queensland, Australia, Latitude -28.029444 S., Longitude 151.611944 S.

Diagnosis: "*Tychismia fragilis* (Günther, 1876)", was originally named as "*Rhodona fragilis*", but has been shunted between various genera, although as of 2024, most herpetologists place the putative taxon in the genus *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833.

In the recent past, the only herpetologist with the good sense to remove the putative taxon from *Lerista* was Wells (2012), placing it in his monotypic genus *Krishna* Wells, 2012.

In line with the comments earlier in this paper, *Krishna* Wells, 2012 has been subsumed and synonymised within *Tychismia* Wells, 2012, with a type species of *Lerista chordae* Amey, Kutt and Hutchinson, 2005.

I note that the concept of *Tychismia* by Wells in 2012 does not match the phylogeny of Skinner *et al.* (2008) and I have accepted the phylogenetic placements of the latter authors in terms of species placements within genera, while utilising available genus names, including those of Wells (2012).

Also contrary to other Australian herpetologists to the present date (2024), Wells (2012) was alone in openly suggesting that putative *"Tychismia fragilis"* (as I am identifying it herein) was likely to be a number of species, rather than just one.

Examination of the morphological and biogeographical evidence by myself made the Wells (2012) conclusion in effect a statement of the obvious.

To that end, the two most divergent forms of putative *T. fragilis* are herein formally named as new species.

T. fragilis with a type locality of Peak Downs, north-east Queensland (Latitude 22.2549 S., Longitude 148.1797 E.) is found generally along the drier parts of the coast, ranges and nearby western hinterland, south of the tropics, in Queensland, extending south to the south-east corner of Queensland.

Tychismia wellsei sp. nov. is an outlying western population, until now treated as *T. fragilis*, but morphologically very divergent. It is a native of the Selywn Ranges, generally in the region between Cloncurry and Mount Isa, north-west Queensland, but quite likely throughout that region where suitable habitat occurs.

Tychismia valentici sp. nov. is found in the cooler but drier parts of south-east Queensland generally in the triangle shaped area between the Sunshine coast, the south border of Queensland and the western part of the Darling Downs.

The three species are separated from one another as follows: *T. fragilis* has a well-defined black stripe on the upper flank, about one to one and a half scales wide. The upper border at the dorsolateral edge is relatively straight edged and sharply defined.

The brown of the dorsum lightens at the dorsolateral edge to make the boundary more well defined.

The lower part of the black stripe on the upper flank fades somewhat and more-or-less merges with the greyish white below and without any well-defined lower edge.

This is definitely the case at the anterior part of the body and usually the case posteriorly, but not always so, where sometimes the lower edge is reasonably distinct. That is caused by an intensification of the black at the lower edge and the scales below being more whitish than greyish as seen towards the forelimbs. On the anterior part of the tail, the band from the upper flank runs along each side but is broken into a series of blotches in a line and the line itself is generally thin.

The tiny dark spots on the scales of the dorsum are triangular in shape with a sharp posterior facing point.

T. wellsei sp. nov. is very different to *T. fragilis* in that the stripe on the upper flank is a dull red colour.

The top of this dull red line has a close row of tiny black or dark brown dots along the lateral edge, one dot per scale. This is the dorsolateral line.

And below this dorsolateral line is a dull red colour between two rows of scales being about one scale wide.

There are no continuations of these lines in any way on to the tail, except at the very anterior part (within half the length of the adpressed hind limb).

There is orange tinge in the white of the upper labials, versus white in *T. fragilis.*

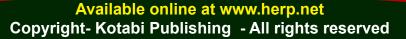
The blackish line from the snout through the eye to the top of the neck is well defined top and bottom, but then disintegrates behind the auricular region and before the front leg. There is no wide dark upper lateral line.

Colour is a dull red colour where the dark upper lateral line is in the other two species.

For *T. wellsei sp. nov.* the tiny dark spots on the scales of the dorsum are triangular in shape with a sharp posterior facing point, but very reduced in size as compared to seen in *T. fragilis*, making them almost undetectable except by way of very close scrutiny.

T. valentici sp. nov. is similar in most respects to *T. fragilis* but is separated from that taxon by the fact that the dark line on the upper flank is about 2 scales wide (versus less in *T. fragilis*) and the lower edge of this dark upper flank line is well defined on the lower edge along the entire length of the body (both anterior and posterior), versus not so in *T. fragilis.* Furthermore this band continues on each side of the tail as a generally thick unbroken dark band for the entire length of the tail (versus obviously broken in *T. fragilis*).

The tiny dark spots on the scales of the dorsum are triangular in shape with a but the posterior facing point is blunt edged. The three preceding species being T. fragilis, T. wellsei sp. nov. and T. valentici sp. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera *Lerista* Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species *Phaneropis muelleri* Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type



species *Lerista chordae* Amey, Kutt and Hutchinson 2005 and *Wondjinia* Wells, 2012, type species, *Lerista apoda* Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Body form very small and elongate; tail moderately long and fragile; head/snout shape moderately deep, and snout rounded, not significantly protrusive; limbs small, welldeveloped and not overlapping when adpressed; forelimbs and hind limbs tridactyl, the third toe is the longest; lower eyelid with a transparent palpebral disc, and movable; body scales smooth with 20 midbody rows; nasals enlarged, in contact; supranasals absent; frontoparietals fused to form a single shield; interparietal distinct; parietal shields in contact behind interparietal; prefrontals small and widely separated; 3 supraoculars; 6 supralabials; ear opening small and distinct, about as large as the nostril; a pair of enlarged preanal scales. Forelimb about 5 percent of snout-vent length and hindlimb is about 15-20 percent of snout-vent length. Attains a maximum snout-vent length of around 60 mm.

Colouration is brownish in some form above, individual scales each with a tiny black dot or streak, creating a series of more or less continuous fine dark lines down the length of the dorsum. The dorsolateral edge is well defined by a line in some way and below this is a dark blackish upper lateral line in two species or reddish instead in another species.

This line along the upper flank may or may not continue along the sides of the tail.

Belly is white or cream and dotted with black.

T. fragilis is depicted in life in Cogger (2014) on page 604 bottom (same image in Wilson and Knowles (1988) on page 297 bottom right), Wilson and Swan (2021) on page 363 middle left (same image in Wilson (2022), page 173 top right), Wells (2012) on page 302 bottom and online at:

https://www.inaturalist.org/observations/208185970 and

https://www.flickr.com/photos/euprepiosaur/11046253574/

T. wellsei sp. nov. is depicted in life online at:

https://www.flickr.com/photos/ryanfrancis/8541999586

T. valentici sp. nov. is depicted in life in Wells (2012) on page 302, second from bottom and online at:

https://www.flickr.com/photos/gazs_pics/11476909994/

Distribution: *T. valentici sp. nov.* is found in the cooler but drier parts of south-east Queensland generally in the triangle-shaped area between the Sunshine coast, the south border of Queensland and the western part of the Darling Downs.

Etymology: *T. valentici sp. nov.* is named in honour of Robert Valentic, originally of Greensborough, Victoria, Australia, but who has since lived in various other locations in recognition of his many contributions to Australian herpetology.

Rob Valentic is best known for his superb photos of reptiles that he has taken in his travels across Australia, Europe, Asia and elsewhere. They are generally regarded as "best in class".

The 361-page "book" on *Lerista sensu lato*, Wells (2012) was greatly enhanced by the many superb photos of rare and little-known species that were taken *in situ* by Rob Valentic that were published in that document.

AAAH GEN. NOV.

LSIDurn:lsid:zoobank.org:act:454BC89B-27ED-4DF8-816D-4C1A0264A22A

Type species: Aaah edwardsae skink subsp. nov. (this paper).

Diagnosis: The species within the genus Aaah gen. nov. are

separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

All three species (and two subspecies) in the genus are thick set for burrowing skinks.

They have one or other of 2 front digits (tiny first digit), or just one or sometimes none with a style, as well as always 2 digits at the rear; movable eyelid, nasals forming a median suture, frontoparietals paired, and an enlarged second supraocular excluding or nearly excluding first from contact with the frontal. Adult snout-vent length 64-95 mm. Length of appendages as a percent of snout vent length (SVL) is: fore-leg 0.5-1.7; hind-leg 11.1-18.9; snout to foreleg 21.9-25.7.

Nasals in short to long contact. Prefrontals widely separated. Frontoparietals separated, much smaller than the interparietal. 2-5 nuchals, 3 supraoculars, second always and first sometimes in contact with the frontal. Supraciliaries usually 0+1 or rarely 0+2 or 0+3. 6 supralabials. 2-3 temporals, usually 3. Upper secondary temporal largest, lower secondary temporal much the smallest. 18-22 midbody scalerows (usually 20). 8-15 lamellae under the longer toe.

Dorsally pale fawn in colour with the following dark-brown markings: 4 or 2 dorsal lines from neck to middle of tail (on which they break up into series of dots), blotches on the head and/or dark etching between the scales, and a stripe from the lores (being the area between eyes and nostril) through the orbit to the base of the tail. Dorsal colour is sometimes faded. Lips, ventrolateral surfaces and belly are whitish. Belly sometimes very lightly dark flecked.

Under the toes is dark grey rather than the white of the other ventral surfaces.

Distribution: From just north of Adelaide in South Australia, generally westward across the Great Australian Bight, mainly proximal to the coast, but including nearby inland and offshore islands, being particularly abundant in beachside dune habitats, extending into Western Australia beyond the Nullarbor and then extending north to the Goldfields region.

Etymology: In 1998 I did a reptile survey in conjunction with Ian Renton at Tiddy Widdy beach, Ardrossen in South Australia on a cold August day.

Every time we raked up one of these lizards, he'd exclaim "Aaah" hesitate for a few seconds and then slowly say "skink". So "aaah" is the genus name for these skinks.

Content: Aaah edwardsae (Storr, 1982); A. baynesi (Storr, 1972); A. picturata (Fry, 1914).

AAAH EDWARDSEAE SKINK SUBSP. NOV.

LSIDurn:Isid:zoobank.org:act:AF3E5366-3A67-4377-B360-EB1F38C3DE16

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R4294 collected from Port Wakefield, South Australia, Australia, Latitude -34.18 S., Longitude 138.15 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 R9298 collected from Thompsons Beach, South Australia, Australia, Latitude -34.52 S., Longitude 138.32 E. 2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R15613 collected from Port Parham, South Australia, Australia, Latitude -34.42 S., Longitude 138.27 E.

Diagnosis: Until now, *Aaah edwardsae skink subsp. nov.* has been treated as the eastern population of *Aaah edwardsae* (Storr, 1982), better known as "*Lerista edwardsae*" with a type locality of Streaky Bay. South Australia, Australia (Latitude -32.50 S., Longitude 134.15 E.), being on the western edge of the Eyre Peninsula.

Aaah edwardsae skink subsp. nov. a taxon from the east side of the Spencer Gulf, in a region stretching south to the northern outskirts of Adelaide in South Australia, is separated from the nominate form of *A. edwardsae* found generally around the west Eyre Peninsula westwards towards the Nullarbor, by having: 1/ A generally darker coloured dorsum, 2/ Thick dark etching between the scales on the upper surface of the head (versus light or none in *A. edwardsae*) and 3/ Two continuous thick black bands running down the mid dorsum which are unbroken at least until past the pelvic girdle, versus bands that are thinner and commonly break anterior to the pelvic girdle, 4/ Most specimens have only one supraocular in contact with frontal, versus the reverse in nominate *A. edwardsae* (2 in contact).

A. edwardsae skink subsp. nov. is depicted in life in Cogger (2014) on page 603 at top left and online at:

https://www.flickr.com/photos/reptileshots/15589313542/ and

https://www.inaturalist.org/observations/206751709 and

https://www.flickr.com/photos/ryanfrancis/16587119909/

A. edwardsae of the nominate subspecies is depicted in life in Storr (1982) on page 2, bottom, Wilson and Swan (2021) on page 363, second from bottom on left and online at: https://www.inaturalist.org/observations/67092745

A. edwardsae and the subspecies Aaah edwardsae skink subsp. nov. are separated from the closely related A. picturata (Fry, 1914) by having a much shorter foreleg, fewer dorsal lines, as in just 2 instead of four and usually less mid body rows (18-20 versus 20-22).

The three preceding taxa are in turn separated from *A. baynesi* (Storr, 1972) (of both subspecies) by having a strong rather than faded dorsal colouration and 9-14 rather than 8-10 subdigital lamellae under the second toe.

The preceding species, being the entirety of the genus *Aaah gen. nov.* are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell,

1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

All three species (and two subspecies) in the genus are thick set for burrowing skinks.

They have one or other of 2 front digits (tiny first digit), or just one or sometimes none with a style, as well as always 2 digits at the rear; movable eyelid, nasals forming a median suture, frontoparietals paired, and an enlarged second supraocular excluding or nearly excluding first from contact with the frontal. Adult snout-vent length 64-95 mm. Length of appendages as a percent of snout vent length (SVL) is: fore-leg 0.5-1.7; hind-leg 11.1-18.9; snout to foreleg 21.9-25.7.

Nasals in short to long contact. Prefrontals widely separated. Frontoparietals separated, much smaller than the interparietal. 2-5 nuchals, 3 supraoculars, second always and first sometimes in contact with the frontal. Supraciliaries usually 0+1 or rarely 0+2 or 0+3. 6 supralabials. 2-3 temporals, usually 3. Upper secondary temporal largest, lowe secondary temporal much the smallest.

18-22 Midbody scale-rows (usually 20). 8-15 lamellae under the longer toe.

Dorsally the colour is pale fawn with the following dark-brown markings: 4 or 2 dorsal lines from neck to middle of tail (on which they break up into series of dots), blotches on the head and/or dark etching between the scales, and a stripe from the lores (the area between eyes and nostril) through the orbit to the base of the tail. Dorsal colour is sometimes faded. Lips, ventrolateral surfaces, and belly are whitish. Belly sometimes very lightly dark flecked.

Under the toes is dark grey rather than the white of the other ventral surfaces.

Distribution: *A. edwardsae skink subsp. nov.* is a taxon from the west side of the Spencer Gulf, extending from near Adelaide in the south, north to Lake Torrens and including the north-west of the Spencer Gulf.

A. edwardsae of the nominate form occupies most of the upper Eyre Peninsula to the eastern edge of the Nullarbor in South Australia.

Etymology: In 1998 I did a reptile survey in conjunction with Ian Renton at Tiddy Widdy beach, Ardrossen in South

Australia on a cold August day.

Every time we raked up one of these lizards, he'd exclaim "Aaah" hesitate for a few seconds and then slowly say "skink". So "skink" is the species name for these lizards.

AAAH BAYNESI NGANDATHA SUBSP. NOV.

LSIDurn:Isid:zoobank.org:act:4E0E9345-F7D4-4497-B97A-F7C0D459A7F7

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R28705 collected from Twilight Cove, Western Australia, Australia, Latitude -32.25 S., Longitude 126.05 E.

This government-owned facility allows access to its holdings.

Paratypes: Four preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R60814, R67304, R67305 and R94109 all collected from the vicinity of the Eyre Homestead about 30 km southeast of Cocklebiddy, Western Australia, Latitude -32.25 S., Longitude 126.3 E.

Diagnosis: Until now *Aaah baynesi ngandatha subsp. nov.* has been treated as a divergent western population of *A. baynesi* (Storr, 1972), better known as *"Lerista baynesi"* with a type locality of Eucla, Western Australia, Australia, Latitude 31.43 S., Longitude 128.53 E.

Aaah baynesi ngandatha subsp. nov. is separated from *A. baynesi* by having 1/ Well defined lines on the dorsum and 2/ A dark lateral stripe, versus faint in *A. baynesi*.

Both *A. baynesi ngandatha subsp. nov.* and *A. baynesi* are separated from the closely related taxa

Aaah edwardsae (Storr, 1982), the subspecies Aaah edwardsae skink subsp. nov. and the closely related A. picturata (Fry, 1914) by having a weaker dorsal pattern and 8-10 subdigital lamellae under the second toe versus 10-14 in the other species.

A. baynesi ngandatha subsp. nov. is depicted in life online at: https://www.flickr.com/photos/27897324@N07/52790079698/

A. baynesi of the nominate form is depicted in life online

https://www.flickr.com/photos/akashsherping/32964034882/ The preceding species, being the entirety of the genus Aaah gen. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type

species, *Lerista apoda* Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

All three species (and two subspecies) in the genus are thick set for burrowing skinks.

They have one or other of 2 front digits (tiny first digit), or just one or sometimes none with a style, as well as always 2 digits at the rear; movable eyelid, nasals forming a median suture, frontoparietals paired, and an enlarged second supraocular excluding or nearly excluding first from contact with the frontal. Adult snout-vent length 64-95 mm. Length of appendages as a percent of snout vent length (SVL) is: fore-leg 0.5-1.7; hind-leg 11.1-18.9; snout to foreleg 21.9-25.7.

Nasals in short to long contact. Prefrontals widely separated. Frontoparietals separated, much smaller than the interparietal. 2-5 nuchals, 3 supraoculars, second always and first sometimes in contact with the frontal. Supraciliaries usually 0+1 or rarely 0+2 or 0+3. 6 supralabials. 2-3 temporals, usually 3. Upper secondary temporal largest, lower secondary temporal much the smallest.

18-22 Midbody scale-rows (usually 20). 8-15 lamellae under the longer toe.

Dorsally pale fawn colour with the following dark-brown markings: 4 or 2 dorsal lines from neck to middle of tail (on which they break up into series of dots), blotches on the head and/or dark etching between the scales, and a stripe from the lores (the area between eyes and nostril) through the orbit to the base of the tail. Dorsal colour is sometimes faded. Lips, ventrolateral surfaces, and belly are whitish. Belly sometimes very lightly dark flecked.

Under the toes is dark grey rather than the white of the other ventral surfaces.

Distribution: Aaah baynesi ngandatha subsp. nov. occurs along the coastal strip from Twilight Cove, Western Australia, Australia, Latitude -32.25 S., Longitude 126.05 E. in the west, east to about 50 km east of Madura, Western Australia, Australia, Latitude - 31.916667 S., Longitude 127.5 E.

The nominate form of *A. baynesi* occurs from Mundrabilla Roadhouse, Western Australia, Australia, Latitude -31.85 S., Longitude 127.916 E. in the west, along the coastal strip, east to about 20 km east of the Western Australian, South Australian border.

Etymology: Aaah baynesi ngandatha subsp. nov. is named after the Ngandatha people, the original Aboriginal Australian inhabitants of the southern Nullarbor region. Most died from disease after the Europeans invaded in the 1800's. Descendants of survivors got covered in radioactive ashes after the British tested their atomic bombs in the deserts to the immediate north of where the Ngandatha people live. Now they just get sick and commonly die from radiation related things instead.

The spelling of the subspecies name should not be amended to form the version "orum" or similar.

AH GEN. NOV.

LSIDurn:lsid:zoobank.org:act:B4471009-A8A3-4DE3-85A5-EA94210256DF

Type species: Ah ha sp. nov. (this paper)

Diagnosis: The species within the genus *Ah gen. nov.* are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1839, type species *Soridia lineata* Gray, 1839, *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845,

Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A slender burrowing skink with 4 digits on front and back limbs and immovable eyelid. Dorsum and flanks light brown to whitish and boldly patterned with 6 sharp edged moderately thick longitudinal lines. Under toes are greyish brown, the rest of the venter is white, becoming buffy under the tail.

Nasals in medium to long contact. Prefrontals widely separated. Frontoparietals in medium to long contact, smaller than interparietal. 2-5 nuchals. 3 supraoculars, the first two in contact with the frontal. 4 supraciliaries, first three are subequal and last by far the smallest. 6 supralabials, rarely 7. 3 temporals, upper secondary temporal much the largest, lower secondary much the smallest. 16, rarely 18 midbody scale-rows. 16-18 lamellae under the fourth toe.

Distribution: South-west Western Australia in a restricted coastal and near coastal region between Perth / Rottnest Island in the South-west, Martinjinni nature reserve, (Latitude -30.301944 S., 116.455556 E.) in the northeast and Eneabba (Latitude -29.85 S., Longitude 115.283333) in the north-west.

Etymology: Recalling the first time I saw a new species in the genus, I exclaimed "ah ha", hence both the genus name and the name of the new species described immediately following this description.

The genus and species name are deliberately chosen to ignite interest among people in this generally neglected group of reptiles.

Content: Ah ha sp. nov. (type species); Ah christinae (Storr, 1979).

AH HA SP. NOV.

LSIDurn:Isid:zoobank.org:act:693DA453-3941-4542-959D-7FE8FB2CD678

Holotype: A preserved male specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R114910 collected from Ellenbrook, Western Australia, Australia, Latitude -31.75 S., Longitude 116.033333 E.

This government-owned facility allows access to its holdings.

Paratypes: Six preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R113375, R115087, R115088, R115285, R115299 and R141145, all collected from the Ellenbrook area, Western Australia, Lat. -31.75 S., Long. 116.033333 E. **Diagnosis:** Until now, *Ah ha sp. nov.* has been treated as a southern population of "*Lerista christinae* Storr, 1979".

Ah christinae (Storr, 1979) is the only other species in the new genus *Ah gen. nov.*. *Ah gen. nov.* is a genus most closely associated with *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845, being another species group from southwest Australia.

Ah christinae is only known from the area of the type locality at Badgingarra, Western Australia, about 160 km north of Perth and a small number of nearby locations, generally on or near the adjacent coastline.

Ah ha sp. nov. is only known to occur at Rottnest Island and at or immediately beyond the northern outskirts of Perth, the State Capital of Western Australia.

Ah ha sp. nov. is readily separated from *Ah christinae* by colouration.

Ah ha sp. nov. has a brown coloured dorsum, including brown upper surface of the head with dark brown stripes either side of the vertebral line, or alternatively beige on top, but with an obvious brown rinse and blackish stripes. The black stripe running along the upper flank is relatively broad. The distal end of the tail is a strong orange colour. On the lower neck commences a bold dark stripe that runs across the forelimb and along the lower flank to the hind leg.

By contrast *Ah christinae* has a yellowish white dorsum, including a whitish upper surface of the head, with black stripes either side of the vertebral line. The black stripe running along the upper flank is relatively narrow. The distal end of the tail is a whitish and with no indication of being an orange colour. The dark stripe that commences anterior to the forelimb is small and barely visible and commences just anterior to it and not from the neck region.

The same stripe remains thin along the lower flank.

Unlike *Ah ha sp. nov.*, the upper surfaces of the hind limbs in *Ah christinae* are whitish with small dark flecks or markings.

Ah ha sp. nov. and Ah christinae are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

A slender burrowing skink with 4 digits on front and back limbs and immovable eyelid. Dorsum and flanks light brown to whitish and boldly patterned with 6 sharp edged moderately thick longitudinal lines. Under toes are greyish brown, the rest of the venter is white, becoming buffy under the tail.

Nasals in medium to long contact. Prefrontals widely separated. Frontoparietals in medium to long contact, smaller than interparietal. 2-5 nuchals. 3 supraoculars, the first two in contact with the frontal. 4 supraciliaries, first three are subequal and last by far the smallest. 6 supralabials, rarely 7. 3 temporals, upper secondary temporal much the largest, lower secondary much the smallest. 16, rarely 18 midbody scale-rows. 16-18 lamellae under the fourth toe.

Ah ha sp. nov. is depicted in life in Cogger (2014) on page 599 top left, Wilson and Swan (2021) on page 361 top left and online at:

https://www.flickr.com/photos/195006528@ N02/53428538738/

and

https://www.flickr.com/photos/brian_busho/14492211922/ and

https://www.inaturalist.org/observations/197370073 and

https://www.inaturalist.org/observations/197370074 and

https://www.inaturalist.org/observations/155252258

Ah christinae is depicted in life in Storr *et al.* (1981) on plate 13, photo 8, at bottom right of page.

Distribution: *Ah ha sp. nov.* is only known to occur at Rottnest Island and at or immediately beyond the northern outskirts of Perth, the State Capital of Western Australia.

Due the very limited known range of the species and the fact that it sits on the periphery of a rapidly expanding urban metropolis, *Ah ha sp. nov.* should be treated as "vulnerable" and as a matter of urgency, be properly assessed by the State Government in terms of its conservation status.

Ah christinae is only known from the area of the type locality

at Badgingarra, Western Australia, about 160 km north of

Perth and a small number of nearby locations, generally on or near the adjacent coastline.

Etymology: Recalling the first time I saw a new species in the genus, I exclaimed "ah ha", hence both the genus name and the name of this new species.

The genus and species name are deliberately chosen to ignite interest among people in this generally neglected group of reptiles, especially noting the likely precarious conservation status of the newly described species.

OH GEN. NOV.

LSIDurn:lsid:zoobank.org:act:F2A3D390-29E6-4263-9471-89DC3C873423

Type species: Oh kay sp. nov. (this paper)

Diagnosis: The species within the genus *Oh gen. nov.* are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1839, type species *Soridia lineata* Gray, 1839, *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845, *Phaneropis* Fischer, 1881, type species *Phaneropis muelleri* Fischer, 1881, *Nodorha* Mittleman, 1952, type species *Riopa boulengeri* Duméril and Bibron ,1839, *Gavisus* Wells and Wellington, 1984, type species: *Lygosoma* (*Rhodona*) *wilkinsi* Parker, 1926, *Telchinoscincus* Wells and Wellington, 1984, type species *Rhodona nichollsi* Loveridge, 1933, *Xynoscincus*

Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

Wells (2012) placed the species in this genus and the genus *Acdc gen. nov.* into his genus *Tychismia* Wells, 2012 (type species *Lerista chordae* Amey, Kutt and Hutchinson 2005). They are not closely related and two new genera were

erected herein to accommodate the relevant taxa.

Distribution: Southern Australian coast and hinterland from the Victorian/South Australian border, including the Flinders Ranges district and nearby areas to the west, across the Great Australian Bight to about Esperance in south-west Australia as well as the central Australian ranges.

Etymology: When doing fieldwork north of Port Augusta, South Australia in search of relevant species, I asked a local Kokatha (Aboriginal native) elder what their tribal name was for the small burrowing skinks and all he said was "Oh". So that is the genus name.

Content: Oh kay sp. nov. (type species); O. dorsalis (Storr, 1985); O. frosti (Zietz, 1895); O. know sp. nov.; O. phuk sp. nov.; O. sheet sp. nov.; O. yes sp. nov..

OH KAY SP. NOV.

LSIDurn:lsid:zoobank.org:act:D087FCE7-5121-4D99-8AE3-1F07C3689A49

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R16590 collected from Ti Tree Well, Flinders Ranges National Park, South Australia, Australia, Latitude -31.37 S., Longitude 138.77 E.

This government-owned facility allows access to its holdings. **Paratype:** Two preserved specimens at the Australian

Museum, Sydney, New South Wales, Australia specimen numbers R.19208 and R.19209 both collected from the Flinders Ranges, South Australia, Australia, Latitude -30.25 S., Longitude 139.083 E.

Diagnosis: Until now, all of *Oh kay sp. nov.*, *Oh sheet sp. nov.*, *Oh yes sp. nov.* and *O. know sp. nov* have all been treated as easterly populations of *O. dorsalis* (Storr, 1985), better known as *"Lerista dorsalis* Storr, 1985".

O. dorsalis is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not north or south of these areas, in inland South Australia.

O. yes sp. nov. is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) from the central Australian ranges of the Northern Territory is separated from all the other six preceding species (and as described below) by the combination of four well-defined lines on the anterior dorsum, becoming two further down, a poorly defined thin greyish line on the otherwise white lower flank; a well-defined black line running down either side of the lateral edge of the tail, being a continuation of the upper lateral line on the flank; white upper labials with moderately thick dark brown etching; under tail is buff, spotted with brown, rather than pinkish and immaculate in the other species, as well as a generally thinner more slender build and smaller adult size than the other species, averaging just 50 mm in snout-vent length, versus 60 mm in the other species.

The six other preceding species are separated from one another as follows:

O. dorsalis has a dorsal pattern including two bold, thick, well defined chocolate brown to blackish stripes on either side of the vertebral line. Some specimens, especially younger ones have a second such line towards the outer edge, but in most specimens, these are merely rows of dark brown spots on an otherwise medium brown background. The body lines break down on the tail abruptly about the distance of the adpressed limb to the knee or slightly further, whereupon the tail colouration is diffuse and without any obvious lines or markings. The tail is the same colour as the dorsum to the distal end.

O. kay sp. nov. has lines on the dorsum reduced to two rows of tiny spots that break up down the back, with no outer rows or lines at all. The dorsum is brown on top. The tail is also brown but with a dull orange tinge along most of the length. This species has 20-22 midbody rows versus 18 or less in all the other species.

O. sheet sp. nov. is readily separated from all other species in the group by the fact that from the distance of the adpressed limb to the knee or slightly further down the tail, the entire tail is a brilliant orange colour.

O. sheet sp. nov. is further separated from the others in the complex by having a light beige background colour on the dorsum that is heavily infused a dull orange, four thin, but well-defined dark brown lines running down the dorsum and conspicuous dark brown spots of moderate size scattered across the entire upper surface of the otherwise light orangish beige head.

O. yes sp. nov. is readily separated from the others in the complex by its unique combination of a larger average snout vent length, being the only one in the complex averaging over 60 mm (the rest are smaller than this), and a brown dorsum and tail effectively devoid of any obvious markings or lines, save for perhaps a small number of indistinct spots observable on close inspection.

Unlike the preceding three species the black of the thick stripe along the upper lateral surface runs onto the tail and continues about halfway along the tail length but is heavily broken up with lighter mottling or brown intrusions from above and below.

O. phuk sp. nov. is similar in most respects to *O. yes sp. nov.*, but is separated from that taxon by its smaller adult size (55-60 mm) and that the thick black of the stripe along the upper lateral surface runs onto the tail and continues most of the way along the lateral part of the tail length as a thick black band and is not broken up with lighter mottling or brown intrusions from above and below (contrasting this species with all the other preceding ones, except for some specimens of *O. yes sp. nov.*).

O. phuk sp. nov. is also separated from *O. yes sp. nov.* by the fact that on the brown upper surface of the head are scattered tiny brown spots or peppering, versus all brown on the head and with dark etchings of scales in *O. yes sp. nov.*.

O. know sp. nov. is separated from the preceding species by its distinctively greyish brown dorsum, making it overall appear to be a darker lizard. Dorsal stripes are formed by dark spots in rows, not completely connected, but still forming obvious and thin stripes when viewed either at a distance or at a glance. On the head there are dark grey blotches and spots on the upper surface as well as dark scale etchings and the snout is obviously lighter than the region behind the eyes. The black stripe on the upper lateral surface extends most of the way along the tail as a thick black line on each lateral surface.

O. know sp. nov. is the only species in the complex in which the two rows of spots (lines) running either side of the lateral surface continue as is along about half the length of the tail, rather than dissipating almost immediately beyond the pelvic girdle at about the length of the adpressed limb to the knee or slightly further down the tail.

The seven preceding species, being O. kay sp. nov., O. dorsalis, O. frosti, O. sheet sp. nov., O. yes sp. nov., O. know sp. nov. and O. phuk sp. nov., being all the species within the genus Oh gen. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type

species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

O. dorsalis is depicted in life in Wilson and Swan (2021) on page 363 top right and online at:

- https://www.inaturalist.org/observations/208869750 and
- https://www.inaturalist.org/observations/189411143
- O. sheet sp. nov. is depicted in life online at:
- https://www.flickr.com/photos/reptileshots/15346451877/
- O. yes sp. nov. is depicted in life online at:
- https://www.inaturalist.org/observations/66651978
- O. know sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/12856098 and

- https://www.inaturalist.org/observations/105345886
- O. phuk sp. nov. is depicted in life online at:
- https://www.inaturalist.org/observations/205195351

Distribution: *O. kay sp. nov.* is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

Etymology: When conducting fieldwork in the area in between doing a snake handling course for the Leigh Creek mine, the lady in charge of the food canteen was named Kay. Her assistances in feeding the team and myself was appreciated and so this lizard is named in her honour.

OH SHEET SP. NOV.

LSIDurn:lsid:zoobank.org:act:3674D90A-EC88-4E59-91C1-F8D5A34AFBBD

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R20990 collected from 55 km south of Olympic Dam, South Australia, Australia, Latitude -30.45 S., Longitude 136.88 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the South Australian Museum, Adelaide, South Australia, Australia, specimen numbers R20904, R20979 and R20989 all collected from 52 km south of Olympic Dam, South Australia, Australia, Latitude -30.92 S., Longitude 136.88 E.

Diagnosis: Until now, all of *Oh kay sp. nov.*, *Oh sheet sp. nov.*, *Oh yes sp. nov.* and *O. know sp. nov* have all been treated as easterly populations of *O. dorsalis* (Storr, 1985), better known as "*Lerista dorsalis* Storr, 1985".

O. dorsalis is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not known from north or south of these areas, in inland South Australia.

O. yes sp. nov. is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) from the central Australian ranges of the Northern Territory is separated from all the other six preceding species (and as described below) by the combination of four well-defined lines on the anterior dorsum, becoming two further down, a poorly defined thin greyish line on the otherwise white lower flank; a well-defined black line running down either side of the lateral edge of the tail, being a continuation of the upper lateral line on the flank; white upper labials with moderately thick dark brown etching; under tail is buff, spotted with brown, rather than pinkish and immaculate in the other species, as well as a generally thinner more slender build and smaller adult size than the other species, averaging just 50 mm in snout-vent length, versus 60 mm in the other species.

The other six preceding species are separated from one another as follows:

O. dorsalis has a dorsal pattern including two bold, thick, well defined chocolate brown to blackish stripes on either side of the vertebral line. Some specimens, especially younger ones have a second such line towards the outer edge, but in most specimens, these are merely rows of dark brown spots on an otherwise medium brown background. The body lines break down on the tail abruptly about the distance of the adpressed limb to the knee or slightly further, whereupon the tail colouration is diffuse and without any obvious lines or markings. The tail is the same colour as the dorsum to the distal end.

O. kay sp. nov. has lines on the dorsum reduced to two rows of tiny spots that break up down the back, with no outer rows

or lines at all. The dorsum is brown on top. The tail is also brown but with a dull orange tinge along most of the length. This species has 20-22 midbody rows versus 18 or less in all the other species.

O. sheet sp. nov. is readily separated from all other species in the group by the fact that from the distance of the adpressed limb to the knee or slightly further down the tail, the entire tail is a brilliant orange colour.

O. sheet sp. nov. is further separated from the others in the complex by having a light beige background colour on the dorsum that is heavily infused a dull orange, four thin, but well-defined dark brown lines running down the dorsum and conspicuous dark brown spots of moderate size scattered across the entire upper surface of the otherwise light orangish beige head.

O. yes sp. nov. is readily separated from the others in the complex by its unique combination of a larger average snout vent length, being the only one in the complex averaging over 60 mm (the rest are smaller than this), and a brown dorsum and tail effectively devoid of any obvious markings or lines, save for perhaps a small number of indistinct spots observable on close inspection.

Unlike the preceding three species the black of the thick stripe along the upper lateral surface runs onto the tail and continues about halfway along the tail length but is heavily broken up with lighter mottling or brown intrusions from above and below.

O. phuk sp. nov. is similar in most respects to *O. yes sp. nov.*, but is separated from that taxon by its smaller adult size (55-60 mm) and that the thick black of the stripe along the upper lateral surface runs onto the tail and continues most of the way along the lateral part of the tail length as a thick black band and is not broken up with lighter mottling or brown intrusions from above and below (contrasting this species with all the other preceding ones, except for some specimens of *O. yes sp. nov.*).

O. phuk sp. nov. is also separated from *O. yes sp. nov.* by the fact that on the brown upper surface of the head are scattered tiny brown spots or peppering, versus all brown on the head and with dark etchings of scales in *O. yes sp. nov.*.

O. know sp. nov. is separated from the preceding species by its distinctively greyish brown dorsum, making it overall appear to be a darker lizard. Dorsal stripes are formed by dark spots in rows, not completely connected, but still forming obvious and thin stripes when viewed either at a distance or at a glance. On the head there are dark grey blotches and spots on the upper surface as well as dark scale etchings and the snout is obviously lighter than the region behind the eyes.

The black stripe on the upper lateral surface extends most of the way along the tail as a thick black line on each lateral surface.

O. know sp. nov. is the only species in the complex in which the two rows of spots (lines) running either side of the lateral surface continue as is along about half the length of the tail, rather than dissipating almost immediately beyond the pelvic girdle at about the length of the adpressed limb to the knee or slightly further down the tail.

The seven preceding species, being *O. kay sp. nov.*, *O. frosti*, *O. dorsalis*, *O. sheet sp. nov.*, *O. yes sp. nov.*, *O. know sp. nov.* and *O. phuk sp. nov.*, being all the species within the genus *Oh gen. nov.* are separated from all other members of *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1845, type species *Soridia lineata* Gray, 1839, *Miculia* Gray, 1845, type species *Miculia*

elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

O. dorsalis is depicted in life in Wilson and Swan (2021) on page 363 top right and online at:

https://www.inaturalist.org/observations/208869750 and

https://www.inaturalist.org/observations/189411143

O. sheet sp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/15346451877/

O. yes sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/66651978

O. know sp. nov. is depicted in life online at: https://www.inaturalist.org/observations/12856098 and

https://www.inaturalist.org/observations/105345886 *O. phuk sp. nov*. is depicted in life online at:

https://www.inaturalist.org/observations/205195351

Distribution: O. sheet sp. nov., is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not known from north or south of these areas, in inland

South Australia.

Etymology: When doing a snake handling course and fieldwork at Arrium Mining's Southern Iron site, west of Lake Torrens in South Australia, herpetologist Dave Reid caught small skinks and geckos in the area under sheets of material placed on the sand and by use of associated pit traps and lines.

It is appropriate that the etymology of the species recognizes one of the tools used to catch it.

OH YES SP. NOV.

LSIDurn:Isid:zoobank.org:act:69ED8D31-CB84-4F04-99EC-3D15D7E2E70D

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.79793 collected from a rubbish tip at Port Lincoln, South Australia, Australia, Latitude -34.75 S., Longitude 135.866 E.

This government-owned facility allows access to its holdings.

Paratypes: 1 / Two preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.79636 and R.79637 both collected from just west of "Redbaks", Whalers Way, Port Lincoln, South Australia, Australia, Latitude -34.916 S., Longitude 135.616 E., 2/ A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R2554 collected from North Brother, Brother Islands, Coffin Bay, South Australia, Latitude -34.6 S., Longitude 135.37 E.

Diagnosis: Until now, all of *Oh kay sp. nov.*, *Oh sheet sp. nov.*, *Oh yes sp. nov.* and *O. know sp. nov* have all been treated as easterly populations of *O. dorsalis* (Storr, 1985), better known as *"Lerista dorsalis* Storr, 1985".

O. dorsalis is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not known

from north or south of these areas, in inland South Australia. *O. yes sp. nov.* is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) from the central Australian ranges of the Northern Territory is separated from all the other six preceding species (and as described below) by the combination of four well-defined lines on the anterior dorsum, becoming two further down, a poorly defined thin greyish line on the otherwise white lower flank; a well-defined black line running down either side of the lateral edge of the tail, being a continuation of the upper lateral line on the flank; white upper labials with moderately thick dark brown etching; under tail is buff, spotted with brown, rather than pinkish and immaculate in the other species, as well as a generally thinner more slender build and smaller adult size than the other species, averaging just 50 mm in snout-vent length, versus 60 mm in the other species.

The other six preceding species are separated from one another as follows:

O. dorsalis has a dorsal pattern including two bold, thick, well defined chocolate brown to blackish stripes on either side of the vertebral line. Some specimens, especially younger ones have a second such line towards the outer edge, but in most specimens, these are merely rows of dark brown spots on an otherwise medium brown background. The body lines break down on the tail abruptly about the distance of the adpressed limb to the knee or slightly further, whereupon the tail colouration is diffuse and without any obvious lines or markings. The tail is the same colour as the dorsum to the distal end.

O. kay sp. nov. has lines on the dorsum reduced to two rows of tiny spots that break up down the back, with no outer rows or lines at all. The dorsum is brown on top. The tail is also brown but with a dull orange tinge along most of the length. This species has 20-22 midbody rows versus 18 or less in all the other species.

O. sheet sp. nov. is readily separated from all other species in the group by the fact that from the distance of the adpressed limb to the knee or slightly further down the tail, the entire tail is a brilliant orange colour.

O. sheet sp. nov. is further separated from the others in the complex by having a light beige background colour on the dorsum that is heavily infused a dull orange, four thin, but well-defined dark brown lines running down the dorsum and conspicuous dark brown spots of moderate size scattered across the entire upper surface of the otherwise light orangish beige head.

O. yes sp. nov. is readily separated from the others in the complex by its unique combination of a larger average snout vent length, being the only one in the complex averaging over 60 mm (the rest are smaller than this), and a brown dorsum and tail effectively devoid of any obvious markings or lines, save for perhaps a small number of indistinct spots observable on close inspection.

Unlike the preceding three species the black of the thick stripe along the upper lateral surface runs onto the tail and continues about halfway along the tail length but is heavily broken up with lighter mottling or brown intrusions from above and below.

O. phuk sp. nov. is similar in most respects to *O. yes sp. nov.*, but is separated from that taxon by its smaller adult size (55-60 mm) and that the thick black of the stripe along the upper lateral surface runs onto the tail and continues most of the way along the lateral part of the tail length as a thick black band and is not broken up with lighter mottling or brown intrusions from above and below (contrasting this species with all the other preceding ones, except for some specimens of *O. yes sp. nov.*).

O. phuk sp. nov. is also separated from *O. yes sp. nov.* by the fact that on the brown upper surface of the head are scattered tiny brown spots or peppering, versus all brown on the head and with dark etchings of scales in *O. yes sp. nov.*.

O. know sp. nov. is separated from the preceding species by its distinctively greyish brown dorsum, making it overall appear to be a darker lizard. Dorsal stripes are formed by dark spots in rows, not completely connected, but still forming obvious and thin stripes when viewed either at a distance or at a glance. On the head there are dark grey blotches and spots on the upper surface as well as dark scale etchings and the snout is obviously lighter than the region behind the eyes.

The black stripe on the upper lateral surface extends most of the way along the tail as a thick black line on each lateral surface.

O. know sp. nov. is the only species in the complex in which the two rows of spots (lines) running either side of the lateral

surface continue as is along about half the length of the tail, rather than dissipating almost immediately beyond the pelvic girdle at about the length of the adpressed limb to the knee or slightly further down the tail.

The seven preceding species, being O. kay sp. nov., O. frosti, O. dorsalis, O. sheet sp. nov., O. yes sp. nov., O. know sp. nov. and O. phuk sp. nov., being all the species within the genus Oh gen. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

O. dorsalis is depicted in life in Wilson and Swan (2021) on page 363 top right and online at:

https://www.inaturalist.org/observations/208869750 and

https://www.inaturalist.org/observations/189411143

O. sheet sp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/15346451877/

O. yes sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/66651978

O. know sp. nov. is depicted in life online at: https://www.inaturalist.org/observations/12856098 and

https://www.inaturalist.org/observations/105345886

O. phuk sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205195351

Distribution: *O. yes sp. nov.* is a taxon apparently confined to the lower Eyre Peninsula in South Australia, including immediately offshore islands.

Etymology: When searching for putative *Lerista* in South Australia, on the Eyre Peninsula with well-known herpetologist and snake catcher Ian Renton in the 1990's, we would rake leaves and debris under tussocks behind a beach front.

I often knew when Ian had caught a small skink by his exclamation "yes".

Hence the etymology for this species.

OH KNOW SP. NOV.

LSIDurn:lsid:zoobank.org:act:D1ADCA26-B35F-403D-B952-60083A0E4CD9

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R18521 collected from Blanchetown Rubbish Tip, South Australia, Australia, Latitude -34.37 S., Longitude 139.6 E.

This government-owned facility allows access to its holdings. **Paratypes:** Two preserved specimens at the South Australian Museum, Adelaide, South Australia, Australia, specimen numbers R14680 and R18855 both collected from the Brookfield Conservation Park, South Australia, Australia, Latitude -34.33 S., Longitude 139.51 E.

Diagnosis: Until now, all of *Oh kay sp. nov.*, *Oh sheet sp. nov.*, *Oh yes sp. nov.* and *O. know sp. nov* have all been treated as easterly populations of *O. dorsalis* (Storr, 1985), better known as "*Lerista dorsalis* Storr, 1985".

O. dorsalis is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not known from north or south of these areas, in inland South Australia.

O. yes sp. nov. is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) from the central Australian ranges of the Northern Territory is separated from all the other six preceding species (and as described below) by the combination of four well-defined lines on the anterior dorsum, becoming two further down, a poorly defined thin greyish line on the otherwise white lower flank; a well-defined black line running down either side of the lateral edge of the tail, being a continuation of the upper lateral line on the flank; white upper labials with moderately thick dark

brown etching; under tail is buff, spotted with brown, rather than pinkish and immaculate in the other species, as well as a generally thinner more slender build and smaller adult size than the other species, averaging just 50 mm in snout-vent length, versus 60 mm in the other species.

The other six species listed above are separated from one another as follows:

O. dorsalis has a dorsal pattern including two bold, thick, well defined chocolate brown to blackish stripes on either side of the vertebral line. Some specimens, especially younger ones have a second such line towards the outer edge, but in most specimens, these are merely rows of dark brown spots on an otherwise medium brown background. The body lines break down on the tail abruptly about the distance of the adpressed limb to the knee or slightly further, whereupon the tail colouration is diffuse and without any obvious lines or markings. The tail is the same colour as the dorsum to the distal end.

O. kay sp. nov. has lines on the dorsum reduced to two rows of tiny spots that break up down the back, with no outer rows or lines at all. The dorsum is brown on top. The tail is also brown but with a dull orange tinge along most of the length. This species has 20-22 midbody rows versus 18 or less in all the other species.

O. sheet sp. nov. is readily separated from all other species in the group by the fact that from the distance of the adpressed limb to the knee or slightly further down the tail, the entire tail is a brilliant orange colour.

O. sheet sp. nov. is further separated from the others in the complex by having a light beige background colour on the dorsum that is heavily infused a dull orange, four thin, but well-defined dark brown lines running down the dorsum and conspicuous dark brown spots of moderate size scattered across the entire upper surface of the otherwise light orangish beige head.

O. yes sp. nov. is readily separated from the others in the complex by its unique combination of a larger average snout vent length, being the only one in the complex averaging over 60 mm (the rest are smaller than this), and a brown dorsum and tail effectively devoid of any obvious markings or lines, save for perhaps a small number of indistinct spots observable on close inspection.

Unlike the preceding three species the black of the thick stripe along the upper lateral surface runs onto the tail and continues about halfway along the tail length but is heavily broken up with lighter mottling or brown intrusions from above and below.

O. phuk sp. nov. is similar in most respects to *O. yes sp. nov.*, but is separated from that taxon by its smaller adult size (55-60 mm) and that the thick black of the stripe along the upper lateral surface runs onto the tail and continues most of the way along the lateral part of the tail length as a thick black band and is not broken up with lighter mottling or brown intrusions from above and below (contrasting this species with all the other preceding ones, except for some specimens of *O. yes sp. nov.*).

O. phuk sp. nov. is also separated from *O. yes sp. nov.* by the fact that on the brown upper surface of the head are scattered tiny brown spots or peppering, versus all brown on the head and with dark etchings of scales in *O. yes sp. nov.*.

O. know sp. nov. is separated from the preceding species by its distinctively greyish brown dorsum, making it overall appear to be a darker lizard. Dorsal stripes are formed by dark spots in rows, not completely connected, but still forming obvious and thin stripes when viewed either at a distance or at a glance. On the head there are dark grey blotches and spots on the upper surface as well as dark scale etchings and the snout is obviously lighter than the region behind the eyes.

The black stripe on the upper lateral surface extends most of the way along the tail as a thick black line on each lateral surface.

O. know sp. nov. is the only species in the complex in which the two rows of spots (lines) running either side of the lateral surface continue as is along about half the length of the tail, rather than dissipating almost immediately beyond the pelvic girdle at about the length of the adpressed limb to the knee or slightly further down the tail.

The seven preceding species, being O. kay sp. nov., O. frosti, O. dorsalis, O. sheet sp. nov., O. yes sp. nov., O. know sp. nov. and O. phuk sp. nov., being all the species within the genus Oh gen. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

O. dorsalis is depicted in life in Wilson and Swan (2021) on page 363 top right and online at:

https://www.inaturalist.org/observations/208869750 and

https://www.inaturalist.org/observations/189411143

O. sheet sp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/15346451877/

O. yes sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/66651978

O. know sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/12856098 and

https://www.inaturalist.org/observations/105345886

O. phuk sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205195351

Distribution: *O. know sp. nov.* is a taxon from the lower Murray basin, with a distribution extending to nearby parts of south-east South Australia.

Etymology: In 1998, I was searching for putative *Lerista* in South Australia, with Ian Renton at the type locality for this taxon.

Ian Renton lifted a sheet of tin and he grabbed at a specimen as it fled.

Unfortunately, he grabbed the tail and it broke off, causing the lizard to escape.

He yelled out "Oh no!".

It didn't take a stroke of genius to "know" that he had lost a reptile.

Hence the etymology for this species.

OH PHUK SP. NOV.

LSIDurn:lsid:zoobank.org:act:D785E0EB-5B6B-4D03-A00D-58DAA53D57B9

Holotype: A preserved specimen at the Western Australian Museum, Perth, Western Australia, Australia, specimen number R81851 collected from Lake Gilmore, Western Australia, Australia, Latitude -32.483333 S., Longitude 121.45 E.

This government-owned facility allows access to its holdings.

Paratypes: Three preserved specimens at the Western Australian Museum, Perth, Western Australia, Australia, specimen numbers R163631, R163632 and R151195 collected from roughly 30 km north northwest of Salmon Gums, Western Australia, Australia, Latitude -32.703889 S., Longitude 121.416944 E.

Diagnosis: Until now, all of *Oh kay sp. nov.*, *Oh sheet sp. nov.*, *Oh yes sp. nov.* and *O. know sp. nov* have all been treated as easterly populations of *O. dorsalis* (Storr, 1985), better known as *"Lerista dorsalis* Storr, 1985".

O. dorsalis is herein confined to the Great Australian Bight, generally east of the Eyre Peninsula, in South Australia, extending in range west to nearly Esperance in Western Australia.

O. kay sp. nov., is a taxon confined to the upper Flinders Ranges, South Australia in the general vicinity of the type localities.

O. sheet sp. nov. is a taxon from the region immediately west of Lake Torrens and east of Lake Gairdner and not known from north or south of these areas, in inland South Australia.

O. yes sp. nov. is a taxon from the lower Eyre Peninsula in South Australia.

O. know sp. nov. is a taxon from the lower Murray basin, with

a distribution extending to nearby parts of south-east South Australia.

O. phuk sp. nov. is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

The only other species in this genus, *O. frosti* (Zietz, 1895) from the central Australian ranges of the Northern Territory is separated from all the other six preceding species (and as described below) by the combination of four well-defined lines on the anterior dorsum, becoming two further down, a poorly defined thin greyish line on the otherwise white lower flank; a well-defined black line running down either side of the lateral edge of the tail, being a continuation of the upper lateral line on the flank; white upper labials with moderately thick dark brown etching; under tail is buff, spotted with brown, rather than pinkish and immaculate in the other species, as well as a generally thinner more slender build and smaller adult size than the other species, averaging just 50 mm in snout-vent length, versus 60 mm in the other species.

The other six species listed above are separated from one another as follows:

O. dorsalis has a dorsal pattern including two bold, thick, well defined chocolate brown to blackish stripes on either side of the vertebral line. Some specimens, especially younger ones have a second such line towards the outer edge, but in most specimens, these are merely rows of dark brown spots on an otherwise medium brown background. The body lines break down on the tail abruptly about the distance of the adpressed limb to the knee or slightly further, whereupon the tail colouration is diffuse and without any obvious lines or markings. The tail is the same colour as the dorsum to the distal end.

O. kay sp. nov. has lines on the dorsum reduced to two rows of tiny spots that break up down the back, with no outer rows or lines at all. The dorsum is brown on top. The tail is also brown but with a dull orange tinge along most of the length. This species has 20-22 midbody rows versus 18 or less in all the other species.

O. sheet sp. nov. is readily separated from all other species in the group by the fact that from the distance of the adpressed limb to the knee or slightly further down the tail, the entire tail is a brilliant orange colour.

O. sheet sp. nov. is further separated from the others in the complex by having a light beige background colour on the dorsum that is heavily infused a dull orange, four thin, but well-defined dark brown lines running down the dorsum and conspicuous dark brown spots of moderate size scattered across the entire upper surface of the otherwise light orangish beige head.

O. yes sp. nov. is readily separated from the others in the complex by its unique combination of a larger average snout vent length, being the only one in the complex averaging over 60 mm (the rest are smaller than this), and a brown dorsum and tail effectively devoid of any obvious markings or lines, save for perhaps a small number of indistinct spots observable on close inspection.

Unlike the preceding three species the black of the thick stripe along the upper lateral surface runs onto the tail and continues about halfway along the tail length but is heavily broken up with lighter mottling or brown intrusions from above and below.

O. phuk sp. nov. is similar in most respects to *O. yes sp. nov.*, but is separated from that taxon by its smaller adult size (55-60 mm) and that the thick black of the stripe along the upper lateral surface runs onto the tail and continues most of the way along the lateral part of the tail length as a thick

black band and is not broken up with lighter mottling or brown intrusions from above and below (contrasting this species with all the other preceding ones, except for some specimens of *O. yes sp. nov.*).

O. phuk sp. nov. is also separated from *O. yes sp. nov.* by the fact that on the brown upper surface of the head are scattered tiny brown spots or peppering, versus all brown on the head and with dark etchings of scales in *O. yes sp. nov.*.

O. phuk sp. nov. is not as divergent from *O. dorsalis* as the other taxa related to *O. phuk sp. nov.* named herein, but as it is clearly evolving as a separate population and genetically divergent from *O. phuk sp. nov.* I have chosen to describe the form as a species rather than as a subspecies.

O. know sp. nov. is separated from the preceding species by its distinctively greyish brown dorsum, making it overall appear to be a darker lizard. Dorsal stripes are formed by dark spots in rows, not completely connected, but still forming obvious and thin stripes when viewed either at a distance or at a glance. On the head there are dark grey blotches and spots on the upper surface as well as dark scale etchings and the snout is obviously lighter than the region behind the eyes.

The black stripe on the upper lateral surface extends most of the way along the tail as a thick black line on each lateral surface.

O. know sp. nov. is the only species in the complex in which the two rows of spots (lines) running either side of the lateral surface continue as is along about half the length of the tail, rather than dissipating almost immediately beyond the pelvic girdle at about the length of the adpressed limb to the knee or slightly further down the tail.

The seven preceding species, being O. kay sp. nov., O. frosti, O. dorsalis, O. sheet sp. nov., O. yes sp. nov., O. know sp. nov. and O. phuk sp. nov., being all the species within the genus Oh gen. nov. are separated from all other members of Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is smaller than nostril (rarely occasionally as large); foreleg-hindleg ratio is 0.33-0.56.

These last two characters separate this genus from the morphologically similar genus *Acdc gen. nov.* of north-west Western Australia, which instead have an ear aperture about twice as large as the nostril and a foreleg-hindleg ratio of 0.56-0.69.

O. dorsalis is depicted in life in Wilson and Swan (2021) on page 363 top right and online at:

https://www.inaturalist.org/observations/208869750 and

https://www.inaturalist.org/observations/189411143

O. sheet sp. nov. is depicted in life online at:

https://www.flickr.com/photos/reptileshots/15346451877/

O. yes sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/66651978

O. know sp. nov. is depicted in life online at: https://www.inaturalist.org/observations/12856098 and

https://www.inaturalist.org/observations/105345886

O. phuk sp. nov. is depicted in life online at:

https://www.inaturalist.org/observations/205195351

Distribution: *O. phuk sp. nov.* is a taxon apparently confined to the Peak Charles National Park area in Western Australia, north-northeast of Esperance.

Etymology: In 1981 when hitch-hiking across Australia with Monique Macquire, we were offered a night at a camp with some Ngadju (Aboriginal) people at a settlement about 2 hours north of Esperance.

They cooked up "bush tucker", which consisted of some kind of soupy broth. This included a range of plants of unknown kinds as well as chopped up invertebrates and small burrowing skinks.

When one of the tribe members accidentally choked on a bit of a skink, he spat it out and blurted out the word "Phuk!"

Hence the etymology for the species.

TISM GEN. NOV.

LSIDurn:Isid:zoobank.org:act:83D5B08D-3783-4F1E-B01C-536D7BDED2C3

Type species: Lerista kalumburu Storr, 1976.

Diagnosis: The genus *Tism gen. nov.* is separated from all other species within the putative genus *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1839, type species *Soridia lineata* Gray, 1839, *Miculia* Gray, 1845, type species *Miculia elegans* Gray, 1845, *Phaneropis* Fischer, 1881, type species *Phaneropis muelleri* Fischer, 1881, *Nodorha* Mittleman, 1952, type species *Riopa boulengeri* Duméril and Bibron ,1839, *Gavisus* Wells and Wellington, 1984, type species: *Lygosoma* (*Rhodona*) *wilkinsi* Parker, 1926, *Telchinoscincus* Wells and Wellington, 1984,

type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Small obscurely spotted sliding skink with digits 1 + 3 and a movable eyelid. Average adult snout-vent length is 50 mm. Length of appendages, etc. as approximate percentage of snout-vent length: foreleg 2 percent; hindleg 13 percent; tail 73 percent; snout to foreleg 25 percent.

Nasals forming a long median suture. Prefrontals widely separated.

Frontoparietals separated, and very much smaller than the interparietal. 2-3 nuchals.

3 supraoculars, first two contacting the frontal. 5 supraciliaries; first and fourth the largest; second, third and fifth the smallest. Upper secondary temporal largest, lower secondary is far smaller. 18 midbody rows; 8-9 lamellae under the longest toe.

Dorsal surface is medium brown in colour, each dorsal scale with a central brown dark spot; spots on flanks tending to coalesce into obscure longitudinally orientated lines. There is more dark in the scales than light on the tail, making the tail appearing to be darker than the body. Lips are whitish, barred with a purplish dark brown. Belly whitish, sparsely spotted with pale brown towards tip of tail (modified and amended from Storr 1976).

The monotypic species, *Tism kalumburu* (Storr, 1976) is readily distinguishable from the morphologically similar Kimberley taxa *Marrunisauria walker* (Boulenger, 1891), *M. borealis* (Storr, 1971), *M. wam sp. nov., Gaia oomph sp. nov.* and *G. griffini* (Storr, 1982) by having the combination of smaller frontoparietals, larger primary temporal and fewer rows of midbody scales (18, versus 20 (rarely 19 or 21) in all the other species); less heavily spotted under the tail, and the supraciliaries are less disparate in size from front to back.

Distribution: Confined to a small area in the north Kimberley district of Western Australia, Australia.

Etymology: Named in honour of the iconic band TISM. TISM were a seven-piece "anonymous" alternative rock band, formed in Melbourne, Victoria, Australia, that played extensively in the 1980's and are still active in 2024. The name TISM is an abbreviation of "This is serious mum".

Content: Tism kalumburu (Storr, 1976) (monotypic). ACDC GEN. NOV.

LSIDurn:Isid:zoobank.org:act:A4E7B619-ECD0-46A0-A151-E765252ECEFF

Type species: Lerista flammicauda Storr, 1985.

Diagnosis: The genus *Acdc gen. nov.* is separated from all other species within the putative genus *Lerista sensu lato* this including all other species within the putative genera *Lerista*

Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Four fingers, four toes, movable eyelids, three supraoculars (first two in contact with the frontal) and five supraciliaries (second and fifth being the smallest). Ear aperture is smaller than the nostril (occasionally as large); foreleg-hindleg ratio 0.33-0.56; Dorsal pattern of two or four dark stripes or lines of spots usually well developed; under tail pink, usually immaculate; black upper lateral stripe wide and sharply defined. Nasals usually narrowly separated, but sometimes in short contact. Widely separated prefrontals. Frontoparietals in short to long contact. 3 supraoculars with the first two in contact with the frontal. 5 supraciliaries with the second and last the smallest, or rarely 4 or 6. Six or rarely seven upper labials, 16-22 midbody rows, (usually 18). 12-21 lamellae under the third toe.

Ear aperture is about twice as large as the nostril and the foreleg-hindleg ratio is 0.56-0.69.

These last two characters separate this genus from the morphologically similar genus *Oh gen. nov.* from the central Australian Ranges and southern Australia, which instead has an ear aperture that is smaller than the nostril (rarely occasionally as large) and a foreleg-hindleg ratio of 0.33-0.56 **Distribution:** North-west Australia in the region of the Pilbara and just south of there.

Etymology: Named in honour of the iconic Australian Rock Band AC/DC (so the name is pronounced aye-see-dee-see). They formed in 1973 and still play in 2024.

Content: Acdc flammicauda (Storr, 1975) (type species); A. zietzi (Wells and Wellington, 1985).

Comments: The name "*Lerista zietzi* Wells and Wellington, 1985" has date priority over the name "*Lerista chalybura* Storr, 1985", published later that year.

Hence the correct ICZN nomen to use is "zietzi".

A number of non ICZN sites such as Peter Uetz's "The Reptile Database" deliberately use the junior synonym instead as if it is correct, knowing that it is not and pretend that "*Lerista zietzi* Wells and Wellington, 1985" does not exist. This remained the case as recently as last checked in early 2024.

Wells (2012) placed the species in this genus (Acdc gen.

nov.) and the genus *Oh gen. nov.* into his genus *Tychismia* Wells, 2012 (type species *Lerista chordae* Amey, Kutt and Hutchinson 2005). They are not closely related based on the phylogeny published by Skinner *et al.* (2008) and on my reassessment of the relevant species, two new genera were erected to accommodate the relevant taxa.

Peter Uetz regularly manipulates and censors material out of his allegedly complete and allegedly ICZN compliant "reptile database".

In 2022 he deleted over 1,000 papers and names that carried Russian authorship.

When he came under criticism from others in the biological sciences on online forums such as "Facebook", he restored some of the censored material on his "Reptile database" site.

He then lied about the censorship. On some online forums he was seen later denying that his acts of censorship had happened.

See Uetz (2022a, 2022b) for details.

LABI GEN. NOV.

LSIDurn:Isid:zoobank.org:act:29062FCA-61FF-4AEB-AFC9-046E79A28AEF

Type species: Mocoa microtis Gray, 1845.

Diagnosis: The genus Labi gen. nov. is separated from all other species within Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lvgosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

5 digits on all four limbs, four supraoculars; 6 supraciliaries; hindlimb is about as long as the distance from the snout to the forelimb; nasals in contact or narrowly separated; there is a pale mid lateral line of some sort from snout or ear to the groin.

Distribution: From south-west western Australia, along the southern coast of Australia to the Eyre Peninsula.

Etymology: "Labi" in Latin means to slide and so the genus name is a direct transferral of the word. It accurately reflects how these tiny lizards tend to move about.

Content: *Labi microtis* (Gray, 1845) (type species); *L. arenicola* (Storr, 1971); *L. schwaneri* (Storr, 1991).

Comment: The three species in the genus as recognised herein are all very closely related as determined by Farquhar *et al.* (2024), who actually synonymised all the forms. Evidence in support of a fourth taxon, "*Lerista microtis intermedia* Storr, 1991" was so weak that it is subsumed within *L. microtis* herein.

GO GEN. NOV.

LSIDurn:lsid:zoobank.org:act:E2A4C43C-5D64-480C-AE22-ADE6B5FF4692

Type species: Rhodona punctato-vittata Günther, 1867. Diagnosis: The three species within the genus Go gen. nov. are separated from all other species within Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Relatively large and robust burrowing skink with an adult snout-vent to 100 mm. 4 limbs; forelimb is less than half the length of the hindlimb. Digits variable. Forelimb is stylar with 1, 2 fingers. 2 or 3 toes. Hindlimb is about 10 percent of snout-vent length.

Eyelid movable. Snout slightly protrusive. Pattern is absent, or consists of tiny dark spots aligned in rows, or joined to form longitudinal lines down the body. Lower flanks pale and the individual scales are edged dark brown. Belly is white or cream.

18 midbody rows; nasals broadly in contact; frontoparietals paired, not contacting and distinct from the interparietal; prefrontals are small and widely separated. Three supraoculars. Six supralabials.

Distribution: Go gen. nov. as a genus is essentially confined to the basins of the Murray Darling System (Go punctatovittata (Günther, 1867)), Cooper's Creek drainage (G. emmotti (Ingram, Couper and Donnellan, 1993)) and the Burdekin in north-east Queensland (G. colliveri (Couper and Ingram, 1992)), this generally being mainly west of the Great Dividing Range in Eastern Australia (except for the eastern distribution of G. colliveri).

Etymology: In 2019, Paul Woolf and myself went to southwest Queensland collecting specimens in this genus. We had to "go" to the "middle of nowhere" to find them. Hence the etymology.

Content: Go punctatovittata (Günther, 1867) (type species); G. colliveri (Couper and Ingram, 1992); G. emmotti (Ingram, Couper and Donnellan, 1993).

GET GEN. NOV.

LSIDurn:Isid:zoobank.org:act:19ABBA94-8776-404B-8760-37C033D9747E

Type species: Get it sp. nov.

Diagnosis: The four Northern Territory endemic species comprising the entirety of the genus Get gen. nov., being Get it sp. nov., G. carpentariae (Greer, 1983), G. intoit sp. nov..and G. stylis (Mitchell, 1955) are separated from all other species within Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron ,1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Pale beige, reddish brown, olive brown or grey, brown above, with a dark brown line of spots, often joined, down each of the paravertebral scales on the dorsum, extending down most or all of the tail. Some species also have from the tip of the snout, through the eye, along the body and tail, a broad continuous stripe along the upper flank and sides of the tail, while the alternative configuration is a body and flanks with numerous narrow, longitudinal lines running from front to back. Head and paler scales may be flecked or mottled with dark brown. Lower surfaces immaculate white. No forelimbs or evidence of a groove. Hindlimb monodactyl or stylar being 1-5 percent of snout-vent length. Lower eyelid is movable. 16-20 midbody rows. Nasals large and in broad contact. Frontoparietals paired and distinct from the interparietal. No prefrontals. Three supraoculars and five supralabials. First temporal may in broad contact with the parietal. Adult snout vent to about 70 mm.

Distribution: The eastern part of the top end of the Northern Territory, Australia, including offshore islands on the west side of the Gulf of Carpentaria.

Etymology: A colleague who asked not to be named, when asked how he caught reptiles on Groote Eylandt told me that he would tell the Aboriginal children from the Warnindilyakwa

tribe to "get it", which they did. Hence the etymology for the genus and the species from Groote Eylandt.

Content: Get it sp. nov. (type species); G. carpentariae (Greer, 1983); G. intoit sp. nov.; G. stylis (Mitchell, 1955). GET IT SP. NOV.

LSIDurn:lsid:zoobank.org:act:B5038D9E-18CC-447A-9070-1DF5CBAD4C0A

Holotype: A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R2855.A collected from Umbakumba, Groote Eylandt, Northern Territory, Australia, Latitude -13.87 S., Longitude 136.82 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 R2855.B collected from Umbakumba, Groote Eylandt, Northern Territory, Australia, Latitude -13.87 S., Longitude 136.82 E.

Diagnosis: Get it sp. nov. a taxon apparently restricted to Groote Eylandt in the Northern Territory is morphologically similar to Get carpentariae (Greer, 1983), better known as "Lerista carpentariae" a taxon apparently restricted to the Sir Edward Pellew Group Of Islands also in the Northern Territory and the adjacent Gulf of Carpentaria as far west as Limmon, Northern Territory.

Get it sp. nov. is most easily separated from *G. carpentariae* by the fact that the dark brown band on the back of the head and neck is very thick, versus thin in *G. carpentariae*. The tail of *G. it sp. nov.* has a thick unbroken black band along the entire length of the tail, versus a thinner band on the tail in *G. carpentariae* with intrusions of pigment from above and below and/or otherwise reduced in colour intensity, as in faded and pale. *Get it sp. nov.* is further separated from *G. carpentariae* because it has lost the presubocular and the bones of the pes distal to the proximal tarsals (see Fig. 7 A-B in Mitchell, 1955).

The two species *G. it sp. nov.* and *G. carpentariae* are separated from all other species in the genus *Get gen. nov.* by having the unique combination of 16 midbody rows, three supraoculars and a dorsal pattern and lateral pattern which has from the tip of the snout, through the eye, along the body and tail, a broad continuous stripe along the upper flank and sides of the tail, and not an alternative configuration of a body and flanks with numerous narrow, longitudinal lines running from front to back and not the thick line on the upper flank.

Get it sp. nov. and *G. carpentariae* are both sandy coloured lizards on top versus brownish in both *Get intoit sp. nov.* and *G. stylis* (Mitchell, 1955).

G. *carpentariae* has a purplish brownish tinge, versus a deep dark yellow in *Get it sp. nov*..

G. stylis is endemic to the north-east tip of the Northern Territory, while *G. intoit sp. nov*. is endemic to the Arnhem Land Plateau including outliers and extensions to the east and southeast.

G. stylis is separated from both *Get it sp. nov.* and *G. carpentariae* by having 16 midbody rows instead of the 18 midbody rows seen in the other two species.

Get intoit sp. nov. is the only species in the genus Get gen. nov. (also including G. stylis, G. it sp. nov. and G. carpentariae) which has a dorsal and lateral patten of thin longitudinal stripes and no thick band on the upper part of the flank. Get intoit sp. nov. is also alone in the genus in not having supraciliaries.

Get intoit sp. nov. has long been mistaken for being a western population of Gavius karlschmidti (Marx and Hosmer, 1959) a species exclusively of north-east Queensland. Get intoit



sp. nov. is readily separated from *Gavius karlschmidti* (based on the types) by the absence of a dark patch around the ear opening and spotting on the head that does not tend to form lateral barring in any way.

The longitudinal lines on the body appear to fade significantly in adult *Gavius karlschmidti*, which also lighten in overall colour quite significantly with age, neither of which is the case in *Get intoit sp. nov.*

The four Northern Territory endemic species comprising the entirety of the genus Get gen. nov., being Get it sp. nov., G. carpentariae (Greer, 1983), G. intoit sp. nov..and G. stylis (Mitchell, 1955) are separated from all other species within Lerista sensu lato this including all other species within the putative genera Lerista Bell, 1833, type species Lerista lineata Bell, 1833, Rhodona Gray, 1839, type species Rhodona punctata Gray, 1839, Soridia Gray, 1839, type species Soridia lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, Xynoscincus Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldneyia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

with a dark brown line of spots, often joined, down each of the paravertebral scales on the dorsum, extending down most or all of the tail. Some species also have from the tip of the snout, through the eye, along the body and tail, a broad continuous stripe along the upper flank and sides of the tail, while the alternative configuration is a body and flanks with numerous narrow, longitudinal lines running from front to back. Head and paler scales may be flecked or mottled with dark brown. Lower surfaces immaculate white. No forelimbs or evidence of a groove. Hindlimb monodactyl or stylar being 1-5 percent of snout-vent length. Lower eyelid is movable. 16-20 midbody rows. Nasals large and in broad contact. Frontoparietals paired and distinct from the interparietal. No prefrontals. Three supraoculars and five supralabials. First temporal may in broad contact with the parietal. Adult snout vent to about 70 mm.

Pale beige, reddish brown, olive brown or grey, brown above,

Snout is obtusely angular, with a countersunk lower jaw in lateral view.

Get it sp. nov. is depicted in life in Wilson and Swan (2021) on page 359 bottom left, Horner (1992) on page 102, Fig. 89, second image from bottom on page and online at:

https://www.flickr.com/photos/58349528@N02/53549351527/ *G. carpentariae* is depicted in life in Wilson and Knowles on page 296 at top right (image 531) and online at: https://www.flickr.com/photos/58349528@N02/52037907595/ and

https://www.flickr.com/photos/euprepiosaur/51937656289/

Get intoit sp. nov. is depicted in life in Cogger (2014) on page 609 at top, Wilson and Knowles (1988) on page 299 middle left in photo 550 and also page 303 middle left in photo 575, Wilson and Swan (2021) on page 371 at top, Hoser (1992) on page 103 at bottom and online at:

https://www.flickr.com/photos/58349528@N02/51276418750/ and

https://www.flickr.com/photos/58349528@N02/51276418235/ *Get stylis* is depicted in life in Wilson and Swan (2021) on page 385 middle, Cogger (2014) on page 625 top right and online at:

https://www.flickr.com/photos/zimny_anders/33260904421/

Distribution: *Get it sp. nov.* is believed to be endemic to Groote Eylandt in the Northern Territory.

Etymology: A colleague who asked not to be named, when asked how he caught reptiles on Groote Eylandt told me that he would tell the Aboriginal children from the Warnindilyakwa tribe to "get it", which they did. Hence the etymology for the genus and the species from Groote Eylandt.

GET INTOIT SP. NOV.

LSIDurn:lsid:zoobank.org:act:25626FD4-54B1-425E-B3F4-DCB12FFA81CD

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, Specimen number R.39768 collected at the Woolwonga Wildlife Reserve, Northern Territory, Australia, Latitude -12.75 S., Longitude 132.65 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Three preserved specimens at the Australian National Wildlife Collection (ANWC), Canberra, ACT, Australia, specimen numbers R02662, R02677 and R05967 all collected within 1 km of Nourlangie Camp, South Alligator River, Northern Territory, Australia, Latitude -12.7667 S., Longitude 132.6583 S., 2/ A preserved specimen at the Museum and Art Gallery of the Northern Territory Reptile Collection, specimen number R13884 collected from Nourlangie Rock, Kakadu National Park, Northern Territory, Australia, Latitude -12.717 S., Longitude 132.55 E., 3/ A preserved specimen at the Museum and Art Gallery of the Northern Territory Reptile Collection, specimen number R10963 collected from the South Alligator Ranger Station, Kakadu National Park, Northern Territory, Australia, Latitude -12.683 S., Longitude 132.45 E., 4/ A preserved specimen at the Museum and Art Gallery of the Northern Territory Reptile Collection, specimen number R03845 collected from East Point Road, Kapalga, Kakadu National Park (site 7), Latitude -12.65 S., Longitude 132.4611 E.

Diagnosis: Until now, *Get intoit sp. nov.* has been treated as a western population of *Gavius karlschmidti* (Marx and Hosmer, 1959), better known as *"Lerista karlschmidti"* with a type locality of Woodstock, about 23 miles south of Townsville, Queensland, Australia.

Gavius karlschmidti is in fact more closely related to the distributionally proximal north Queensland species *Gavius wilkinsi* (Parker, 1926) and differs mainly in the number of digits in the hind limb (2 versus one). Otherwise, those two taxa are essentially similar.

Gavisus allanae (Longman, 1937) also in the same species group as *Gavius karlschmidti* shares the single digit in the hind limb character with *Gavius karlschmidti*.

The similar dorsal colour pattern, head scalation and monodactyl hindlimbs has led herpetologists to believe that the top end animals described herein as *Get intoit sp. nov.* are in fact *G. karlschmidti* when in my opinion they are not (e.g. Amey and Couper 2017) (see relevant comments earlier in this paper).

Get intoit sp. nov. is readily separated from *Gavius karlschmidti* (based on the types) by the absence of a dark patch around the ear opening and spotting on the head that does not tend to form lateral barring in any way.

The longitudinal lines on the body appear to fade significantly in adult *Gavius karlschmidti*, which also (based on the types) lighten in dorsal colouration generally as they age, neither of which is the case in *Get intoit sp. nov.*

Get intoit sp. nov. is the only species in the genus *Get gen. nov.* also including *G. stylis* (Mitchell, 1955), *G. it sp. nov.* and *G. carpentariae* (Greer, 1983) which has a dorsal and lateral patten of thin longitudinal stripes and no thick band on the upper part of the flank as well as no supraciliary scales.

Get it sp. nov. a taxon apparently restricted to Groote Eylandt in the Northern Territory is morphologically similar to *Get carpentariae* (Greer, 1983), better known as *"Lerista carpentariae"* a taxon apparently restricted to the Sir Edward Pellew Group Of Islands also in the Northern Territory and the adjacent Gulf of Carpentaria as far west as Limmon, Northern Territory.

Get it sp. nov. is most easily separated from *G. carpentariae* by the fact that the dark brown band on the back of the head and neck is very thick, versus thin in *G. carpentariae*. The tail of *G. it sp. nov.* has a thick unbroken black band along the entire length of the tail, versus a thinner band on the tail in *G. carpentariae* with intrusions of pigment from above and below and/or otherwise reduced in colour intensity, as in faded and pale. *Get it sp. nov.* is further separated from *G. carpentariae* because it has lost the presubocular and the bones of the pes distal to the proximal tarsals (see Fig. 7 A-B in Mitchell, 1955).

The two species *Get it sp. nov.* and *G. carpentariae* are separated from all other species in the genus *Get gen. nov.* by having the unique combination of 16 midbody rows, three supraoculars and a dorsal pattern and lateral pattern which has from the tip of the snout, through the eye, along the body and tail, a broad continuous stripe along the upper flank and sides of the tail, and not an alternative configuration of a body and flanks with numerous narrow, longitudinal lines running from front to back and not the thick line on the upper flank.

Get it sp. nov. and *G. carpentariae* are both sandy coloured lizards on top versus brownish in both *Get intoit sp. nov.* and *G. stylis* (Mitchell, 1955).

G. *carpentariae* has a purplish brownish tinge, versus a deep dark yellow in *Get it sp. nov*..

G. stylis is endemic to the north-east tip of the Northern Territory, while *G. intoit sp. nov.* is endemic to the Arnhem Land Plateau including outliers and extensions to the east and southeast.

G. stylis is separated from both *Get it sp. nov.* and *G. carpentariae* by having 16 midbody rows instead of the 18 midbody rows seen in the other two species.

The four Northern Territory endemic species comprising the entirety of the genus *Get gen. nov.*, being *Get it sp. nov.*, *G. carpentariae* (Greer, 1983), *G. intoit sp. nov.* and *G. stylis* (Mitchell, 1955) are separated from all other species within *Lerista sensu lato* this including all other species within the putative genera *Lerista* Bell, 1833, type species *Lerista lineata* Bell, 1833, *Rhodona* Gray, 1839, type species *Rhodona punctata* Gray, 1839, *Soridia* Gray, 1839, type species *Soridia*

lineata Gray, 1839, Miculia Gray, 1845, type species Miculia elegans Gray, 1845, Phaneropis Fischer, 1881, type species Phaneropis muelleri Fischer, 1881, Nodorha Mittleman, 1952, type species Riopa boulengeri Duméril and Bibron, 1839, Gavisus Wells and Wellington, 1984, type species: Lygosoma (Rhodona) wilkinsi Parker, 1926, Telchinoscincus Wells and Wellington, 1984, type species Rhodona nichollsi Loveridge, 1933, *Xynoscincus* Wells and Wellington, 1988, type species Lerista stictopleura Storr, 1985, Alcisius Wells, 2012, type species, Lerista vermicularis Storr 1982, Aphroditia Wells, 2012, type species Lygosoma (Rhodona) macropisthopus Werner, 1903, Cybelia Wells, 2012, type species Lygosoma (Rhodona) terdigitatum Parker, 1926, Gaia Wells, 2012, type species, Rhodona bipes Fischer, 1882, Goldnevia Wells, 2012, type species, Rhodona planiventralis Lucas and Frost, 1902, Krishna Wells, 2012, type species Rhodona fragilis Günther, 1876, Lokisaurus Wells, 2012, type species: Ablepharus timidus De Vis, 1888, Marrunisauria Wells, 2012, type species, Lerista borealis Storr, 1971, Spectrascincus Wells, 2012, type species, Lerista ingrami Storr, 1991, Tychismia Wells, 2012, type species Lerista chordae Amey, Kutt and Hutchinson 2005 and Wondjinia Wells, 2012, type species, Lerista apoda Storr, 1976, all as defined by Wells (2012) and assuming placement of all relevant species within these genera, by the following unique combination of characters:

Pale beige, reddish brown, olive brown or grey, brown above, with a dark brown line of spots, often joined, down each of the paravertebral scales on the dorsum, extending down most or all of the tail. Some species also have from the tip of the snout, through the eye, along the body and tail, a broad continuous stripe along the upper flank and sides of the tail, while the alternative configuration is a body and flanks with numerous narrow, longitudinal lines running from front to back. Head and paler scales may be flecked or mottled with dark brown. Lower surfaces immaculate white. No forelimbs or evidence of a groove. Hindlimb monodactyl or stylar being 1-5 percent of snout-vent length. Lower eyelid is movable. 16-20 midbody rows. Nasals large and in broad contact. Frontoparietals paired and distinct from the interparietal. No prefrontals. Three supraoculars and five supralabials. First temporal may in broad contact with the parietal. Adult snout vent to about 70 mm.

Snout is obtusely angular, with a countersunk lower jaw in lateral view.

Get intoit sp. nov. is depicted in life in Cogger (2014) on page 609 at top, Wilson and Knowles (1988) on page 299 middle left in photo 550 and also page 303 middle left in photo 575, Wilson and Swan (2021) on page 371 at top, Hoser (1992) on page 103 at bottom and online at:

https://www.flickr.com/photos/58349528@N02/51276418750/ and

https://www.flickr.com/photos/58349528@N02/51276418235/ Get stylis is depicted in life in Wilson and Swan (2021) on page 385 middle, Cogger (2014) on page 625 top right and online at:

https://www.flickr.com/photos/zimny_anders/33260904421/ *Get it sp. nov.* is depicted in life in Wilson and Swan (2021) on page 359 bottom left, Horner (1992) on page 102, Fig. 89 second image from bottom on page and online at:

https://www.flickr.com/photos/58349528@N02/53549351527/ *G. carpentariae* is depicted in life in Wilson and Knowles on page 296 at top right (image 531) and online at: https://www.flickr.com/photos/58349528@N02/52037907595/

and

https://www.flickr.com/photos/euprepiosaur/51937656289/

Distribution: *Get intoit sp. nov.* is a taxon effectively endemic to the Arnhem Plateau region, including hilly outliers and extensions to the east and south.

Etymology: When checking out skinks and other reptiles at the Northern Territory Museum in 2014, Tom Cotton exclaimed that I was getting "intoit". Hence the taxon name.

CONSERVATION

Delays in recognition of these newly named species and subspecies, could jeopardise the long-term survival of the taxa as outlined by Hoser (2007, 2019a, 2019b) and sources cited therein.

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, Wüster et al. 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. Dubois et al. 2019 and Ceriaco et al. 2023). 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, 2009, 2012a, 2012b, 2013, 2015a-f, 2019a, 2019b), ICZN (1991, 2001, 2012, 2021), Mosyakin (2022), Wellington (2015) and sources cited therein.

Other earlier attempts to improperly suppress recognition of scientific names with potentially negative conservation implications were made by Gans (1985), Grigg and Shine (1985), Heatwole (1985), King and Miller (1985), and Monteith (1985).

Fortunately, none of the relevant named taxa appear to be under any immediate threat, from factors outlined in Hoser (1989, 1991, 1993 and 1996) beyond the limited distributions for some and in the scheme of things their conservation status

should be presently treated as being of "least concern". Exceptional to the preceding is the newly named *Ah ha sp. nov.* from the north-side of the Perth metropolitan area, Western Australia, which could be under threat from severe habitat degradation in its limited distribution.

Tempering, my apparent relaxed attitude with regards to conservation risks for most newly named species herein is evidence obtained by myself (not yet published) that human activity has altered the balance of power among competing species of Australian small skink.

This causes dramatic changes in species number or composition in certain areas over periods spanning decades and at times and places that people, including herpetologists generally do not notice.

Also relevant to the ongoing conservation of the preceding species are the nomenclatural comments below.

A NOTE ON THE CHOICES OF NEW NAMES FOR THESE REPTILES

All the skinks in *Lerista sensu lato* are tiny burrowing species of virtually no interest to herpetologists.

Certainly, they have no role in the pet or hobbyist trade and are effectively unheard of as captives or in herpetoculture.

Some states, including Victoria, do not even have the relevant species on their "Schedules", meaning that keeping them captive is illegal, even if one were to want to.

They are not "sexy" as such and are of little interest to the

science community that is in reality mainly money driven and seeking grants and hand outs.

The successful conservation of *Lerista sensu lato* species at the present time is in spite of human actions and not because of them.

Habitats for species are overgrazed and generally destroyed across the Australian continent.

Over the past few decades, a number of complaints have been made with regard to scientific nomenclature.

This is not just with respect to names I have proposed, but scientific names generally.

One comment is that names descriptive of the animal should be done instead of patronyms (Hammer and Thiele, 2021).

That is fine in theory, but among tiny sliding skinks where there are over 100 species in *Lerista sensu lato*, and that is before we add other Australian genera like *Hemiergis* Wagler, 1830 and the like, there are only so many ways that you can say things in Latin like "small lizard", "slides a lot", "tiny", "dirt coloured", etc. before the meaning of the individual name is lost and ceases to have any real benefit.

After all, describing a skink as a slider when everything else like it is as well, really gives the species no individuality at all.

Then of course is the ongoing hazard of a nice descriptive name in Latin that has been used before and ends up being another homonym!

Then the animal needs to be renamed anyway!

Patronyms have an advantage in that besides being easy to say and pronounce words and having an inherently low risk of being a homonym, they also add a dimension to the name of the species in that a person or group with a connection to the species, where they live or have contributed something, gets honoured and becomes an added point of interest at a later time.

A common alleged problem is also the so-called "sameness" of long Latin names that are incredibly hard to pronounce or spell.

This is especially so among lay people or persons new to the hobby or sciences of herpetology.

In order to deal with all the preceding grievances, I have with respect of the skinks named in this paper, tried to accommodate ongoing demands for the following:

A/ Some names that in Latin describe the relevant lizards (e.g. *Labi gen. nov.* and *Miculia ruficauda sp. nov.*).

b/ Names that honour people who have made major contributions with respect of the said reptiles (e.g. *Tychismia valentici sp. nov.* and *Tychismia wellsei sp. nov.* in honour of two people who have made major contributions to herpetology in Australia).

C/ Names that have a connection to the original native inhabitants of the regions the taxa occur, noting they have had their lands stolen, been largely killed off, survivors and descendants stripped of economic or legal powers and are generally removed from society at large as well as the scientific process. Such names bring these victims of the past back into the fold of human progress (e.g. *Ollochirus arrente sp. nov.* and *Gaia pitjantjatjara sp. nov.*).

D/ Names that are short, easy to say, easy to remember and even make science fun (e.g. *O. kay sp. nov.*, *O. sheet sp. nov.*, *O. yes sp. nov*. etc. all of which will draw attention to the species that bear those names).

I can already hear people exclaim "what kind of a name is that?" and "What kind of animal is "Oh yes".

Yes, the usual suspects in the Wolfgang Wüster gang will complain.

They have done this countless times already.

For example at:

https://www.reddit.com/r/HobbyDrama/comments/hzxijy/ herpetologyexotic_pet_ownership_australian_man/

one of them blurted out their main grievance against my earlier names being that "*he's even named species after his dogs*".

Now other people would think that naming a taxon after a pet is not a bad thing, and I am sure its been done many times in the past, but when Raymond Hoser does it, it becomes cannon fodder.

It is notable however that while the Wolfgang Wüster gang will make a lot of noise over the names I give taxa (such as naming a snake after a pet dog), they are strangely silent on the merits or otherwise of my works and consistently refuse point blank to publish a shred of scientific evidence refuting any of the taxonomic proposals myself or their other targets publish.

Now if for example *O. sheet sp. nov.* does get undue attention over its name, maybe the entire "*dorsalis* group" may benefit from this attention in the form of proper surveys and a management plan for their long-term conservation.

Time for these things is well overdue!

See many strange scientific names here:

https://www.curioustaxonomy.net/puns/puns.html

It is also great to see even commissioners at the ICZN like Neal Evenhuis see eye to eye with me in terms of making scientific nomenclature a little more exciting with their own ICZN names like:

Carmenelectra shechisme Evenhuis, 2002

Meomyia Evenhuis, 1983

Pieza deresistans Evenhuis, 2002

Pieza kake Evenhuis, 2002

Pieza pi Evenhuis, 2002

Pieza rhea Evenhuis, 2002

For all those racists who complain about the fact that I have now given dozens of Australian taxa Aboriginal names in recent years and they resent the fact that Aboriginal names are now stamped over taxa from all over Australia, all I can say is "get used to it".

The world is no longer just "white" and the "white Australia" policy in Australia was quite publicly ditched in name to the global community at the time South Africa ditched their own "White only" policy.

Now is also a good time to ditch the unspoken white only policy for zoological nomenclature and without any compromise to the rules of scientific nomenclature as detailed in the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

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CONFLICT OF INTEREST

None.

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CURRENT GENUS AND SPECIES LIST FOR LERISTA SENSU LATO

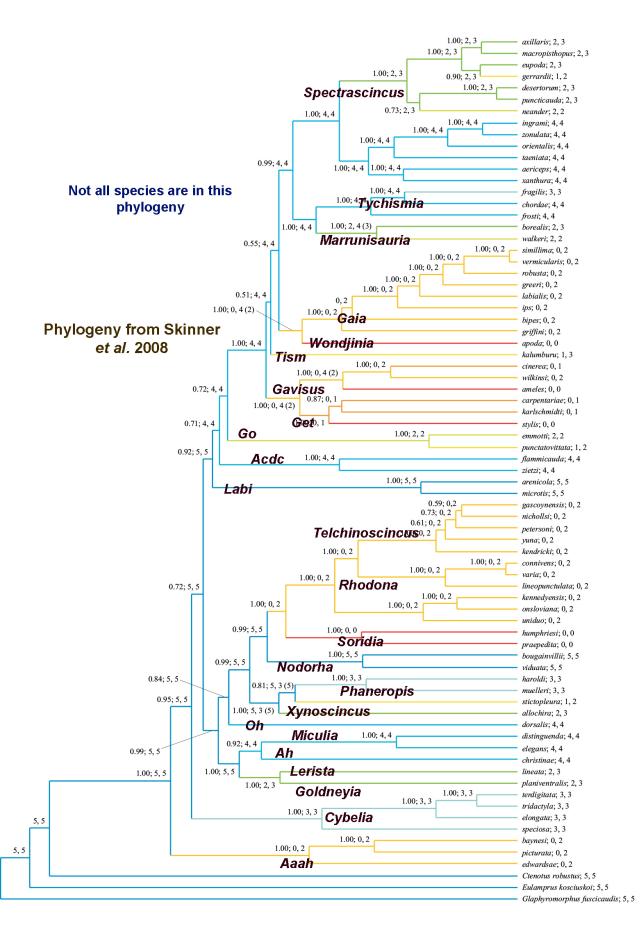
(Type species for each genus (using ICZN compliant priority species name) is listed first, then alphabetical)

LERISTA BELL, 1833 Lerista lineata Bell, 1833. RHODONA GRAY, 1839 Rhodona lineopunctulata (Dumeril and Bibron, 1839) Rhodona connivens (Storr, 1971) Rhodona praefrontalis (Greer, 1986) Rhodona varia (Storr, 1986) SORIDIA GRAY, 1839 Soridia praepedita (Boulenger, 1887) Soridia humphriesi (Storr, 1971) Soridia luxflavo sp. nov. MICULIA GRAY, 1845 Miculia elegans Gray, 1845 Miculia aericeps (Storr, 1986) Miculia christinae (Storr, 1979) Miculia distinguenda (Werner, 1910) Miculia ruficauda sp. nov. Miculia separanda (Storr, 1976) Miculia taeniata (Storr, 1986) Miculia xanthura (Storr, 1976) PHANEROPIS FISCHER, 1881 Phaneropis muelleri Fischer, 1881 Phaneropis amicorum (Smith and Adams, 2007) Phaneropis allochirus (Kendrick, 1989) Phaneropis clarus (Smith and Adams, 2007) Phaneropis haroldi (Storr, 1983) Phaneropis jacksoni (Smith and Adams, 2007) Phaneropis kingi (Smith and Adams, 2007) Phaneropis micra (Smith and Adams, 2007) Phaneropis nevinae (Smith and Adams, 2007) Phaneropis occultus (Smith and Adams, 2007) Phaneropis rhodonoides (Lucas and Frost, 1896) Phaneropis rolfei (Smith and Adams, 2007) Phaneropis timidus (De Vis, 1888) Phaneropis verhmens (Smith and Adams, 2007) **NODORHA MITTLEMAN, 1952** Nodorha bougainvillii (Duméril and Bibron, 1839) Nodorha absconditus Hoser, 2023 Nodorha cassandrae Wells and Wellington, 1984 Nodorha divergans Hoser, 2023 Nodorha hoserae Hoser. 2023 Nodorha insularis Hoser, 2023 Nodorha martinekae Hoser, 2023 Nodorha tasmaniensis Hoser, 2023 Nodorha viduata (Storr. 1991) **GAVISUS WELLS AND WELLINGTON, 1984** Gavisus wilkinsi (Parker, 1926) Gavisus alia (Amey, Couper and Worthington-Wilmer, 2019)

Gavisus allanae (Longman, 1937) Gavisus ameles (Greer, 1979) Gavisus anyara (Amey, Couper and Worthington-Wilmer, 2019) Gavisus cinereus (Greer, McDonald and Lawrie, 1983) Gavisus colliveri (Couper and Ingram, 1992) Gavisus hobsoni (Couper, Amey and Worthington-Wilmer, 2016) Gavisus karlschmidti (Marx and Hosmer, 1959) Gavisus parameles (Amey, Couper and Worthington-Wilmer, 2019) Gavisus rochfordensis (Amey and Couper, 2009) Gavisus storri (Greer, McDonald and Lawrie, 1983) Gavisus vanderduysi (Couper, Amey and Worthington-Wilmer, 2016) Gavisus vittatus (Greer, McDonald and Lawrie, 1983) TELCHINOSCINCUS WELLS AND WELLINGTON, 1984 Telchinoscincus nichollsi (Loveridge, 1933) Telchinoscincus gascoynensis (Storr, 1986) Telchinoscincus kendricki (Storr, 1991) Telchinoscincus kennedyensis (Kendrick, 1989) Telchinoscincus onsloviana (Storr, 1984) Telchinoscincus petersoni (Storr, 1976) Telchinoscincus uniduo (Storr, 1984) Telchinoscincus yuna (Storr, 1991) XYNOSCINCUS WELLS AND WELLINGTON, 1988 Xynoscincus stictopleurus (Storr, 1985) WONDJINIA WELLS, 2012 Wondjinia apoda (Storr, 1976) **APHRODITIA WELLS, 2012** Aphroditia macropisthopus (Werner, 1903) Aphroditia axillaris (Storr, 1991) Aphroditia bunglebungle (Storr, 1991 Aphroditia desertorum (Sternfeld, 1919 Aphroditia eupoda (Smith, 1996 Aphroditia fusciceps (Storr, 1991) Aphroditia galea (Storr, 1991) Aphroditia gerrardii (Gray, 1864) Aphroditia neander (Storr, 1971 Aphroditia puncticauda (Storr, 1991) Aphroditia remota (Storr, 1991) GAIA WELLS, 2012 Gaia bipes (Fischer, 1882) Gaia arrernte sp. nov. Gaia greeri (Storr, 1982) Gaia griffini (Storr, 1982 Gaia ips (Storr, 1980) Gaia kunja sp. nov. Gaia labialis (Storr, 1971)

Gaia oomph sp. nov. Gaia pitjantjatjara sp. nov. Gaia robusta (Storr, 1990) Gaia rolloi (Wells and Wellington, 1985) Gaia simillima (Storr, 1984) Gaia vermicularis (Storr, 1982) **MARRUNISAURIA WELLS, 2012** Marrunisauria borealis (Storr, 1971) Marrunisauria walkeri (Boulenger, 1891) Marrunisauria wam sp. nov. **GOLDNEYIA WELLS, 2012** Goldneyia planiventralis (Lucas and Frost, 1902) Goldneyia decora (Storr, 1978) Goldneyia maryani (Storr, 1991) CYBELIA WELLS, 2012 Cybelia terdigitatum (Parker, 1926) Cybelia elongata (Storr, 1990) Cybelia speciosa (Storr, 1990 Cybelia tridactyla (Storr, 1990) TYCHISMIA WELLS, 2012 *Tychismia chordae* (Amey, Kutt and Hutchinson 2005) Tychismia concolor (Storr, 1990) Tychismia fragilis (Gunther, 1876) Tychismia valentici sp. nov. Tychismia wellsei sp. nov. SPECTRASCINCUS WELLS, 2012 Spectrascincus ingrami (Storr, 1991) Spectrascincus hit sp. nov. Spectrascincus orientalis (De Vis, 1889) Spectrascincus thingi sp. nov. Spectrascincus zonulatus (Storr, 1991) AH GEN. NOV. Ah ha sp. nov. Ah christinae (Storr, 1979).

AAAH GEN. NOV. Aaah edwardsae (Storr, 1982) Aaah baynesi (Storr, 1972) Aaah picturata (Fry, 1914) OH GEN. NOV. Oh kay sp. nov. Oh dorsalis (Storr, 1985) Oh frosti (Zietz, 1895) Oh know sp. nov. Oh phuk sp. nov. Oh sheet sp. nov. Oh yes sp. nov. ACDC GEN. NOV. Tychismia zietzi (Wells and Wellington, 1985) Tychismia flammicauda (Storr, 1985) TISM GEN. NOV. Tism kalumburu (Storr, 1976) LABI GEN. NOV. Labi microtis (Gray, 1845) Labi arenicola (Storr, 1971) Labi schwaneri (Storr, 1991). GO GEN. NOV. Go punctatovittata (Günther, 1867) Go colliveri (Couper and Ingram, 1992) Go emmotti (Ingram, Couper and Donnellan, 1993). GET GEN. NOV. Get it sp. nov. Get carpentariae (Greer, 1983) Get intoit sp. nov. Get stylis (Mitchell, 1955)



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