

Ten new species within the Australian Water Skink genus *Eulamprus* Fitzinger, 1843 *sensu lato* all from mainland south-east and east Australia.

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ABSTRACT

The genus *Eulamprus* Fitzinger, 1843 *sensu lato* (as recognized in texts like Cogger 2014) was scrutinized for potentially unnamed taxa over a period spanning some decades.

Publication of this paper on the Australian Water Skinks (as a group) was delayed for some years to allow others with a stated interest in various species groups within the genus to have first options in terms of naming potentially unnamed forms.

This included most notably, Richard Wells and Glenn Shea, both of whom ultimately published their major works on relevant species in 2009 (Wells 2009) and 2018 (Pepper *et al.* 2018, listing Glenn Shea as a coauthor).

Following on from these earlier works and delaying any relevant publications pending them, in 2020, Hoser, named an obviously unnamed species, *E. paulwoolfi* within the *E. quoyii* complex from north Queensland.

Wells and Wellington (1985) and again in Wells (2009) proposed their new genus *Costinisauria* for the *Lygosoma* (*Hinulia*) *kosciuskoi* Kinghorn, 1923 group of species, herein recognized as a subgenus of *Eulamprus*, as is the newly named subgenus *Invaderskinkus subgen. nov.* for the *Lygosoma tympanum* Lönnberg and Andersson, 1923 group of species.

In order to stabilize the taxonomy of the putative species "*Hinulia gastrosticta* Gunther, 1865", 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"), this being BMNH 1946.8.4.99 at the Natural History Museum London, UK, from Kangaroo Island, South Australia for reasons given in this paper.

Postdating the Hoser 2020 paper on *Eulamprus* there remained a number of obviously unnamed forms within *Eulamprus* and this paper names ten of these species on the basis of previously well-established molecular separation as well as biogeographical and morphological divergences from one another.

The current (end 2024) most widely recognized taxonomy for the Water Skink genus *Eulamprus* Fitzinger, 1843 *sensu lato* is seen in Cogger (2014) and Peter Uetz's non ICZN, unscientific "The Reptile Database" recognizes just 5 species and is woefully inadequate. It is also biogeographically impossible for the reasons given in this paper.

The taxonomy proposed herein for this group of Australian Water Skinks, recognising 19 species, ten of which are new to science, is made without fear or favour or any conflict of interest and is the only sensible one based on the currently available evidence.

Keywords: Skink; taxonomy; nomenclature; Australia; Victoria; New South Wales; Queensland; lizard; Water skink; *Eulamprus*; *Costinisauria*; *Hinulia*; *Lygosoma*; *quoyii*; *paulwoolfi*; *tympanum*; *heatwolei*; *kosciuskoi*; *couperi*; *leuraensis*; *worrelli*; *herseyi*; *marnieae*; *gastrosticta*; new subgenus; *Invaderskinkus*; new species; *onethatwasoverlooked*; *yes*; *aha*; *gotit*; *nrl*; *afl*; *policecorruptionorum*; *gad*; *extinctionbusinessorum*; *corruptbureaucratorum*.

INTRODUCTION

As part of a wide-ranging audit of the Australasian herpetofauna spanning some decades, the genus *Eulamprus* Fitzinger, 1843 *sensu lato* was scrutinized for potentially unnamed taxa.

Publication of this paper on the Australian Water Skinks (as a specific group) was delayed for some years to allow others with a stated interest in various species groups within the genus to have first options in terms of naming potentially unnamed species.

This included most notably, Richard Wells and Glenn Shea, both of whom ultimately published their major works on relevant species in 2009 (Wells 2009) and 2018 (Pepper *et al.* 2018 with Glenn Shea as a listed coauthor).

Hoser (2020d) named an obviously unnamed species, *E. paulwoolffi* within the *E. quoyii* complex from north Queensland as part of the process in naming the remaining obviously unnamed forms.

Delays in naming other forms by me beyond 2020 was due to several factors including unlawful attacks by trademark infringing thieves stealing time better spent naming unnamed species.

The attacks included militarising police to raid and assault myself in my own home, led by one corrupt Victorian cop named Trevor Griffiths, stationed at the time at Diamond Creek Police Station, working with the equally corrupt Sergeant Wayne Spence in charge of the relevant police area, resulting in fake criminal charges by the dozens, almost all of which were beaten wholesale (first round) through the courts, but at high cost financially, emotionally and time-wise.

Police wasted tens of millions of dollars of taxpayer's money waging this "war" against me, while rapists, drug traffickers and wildlife traffickers continued to operate with full protection of this same cohort of corrupt police.

Injuries to me resulted in trips to the emergency and ICU wards of hospital, including open heart surgery, this being performed on me while I was fully awake and other extremely painful medical procedures.

As of the time this paper is being published, the physical injuries are still severe, debilitating, and a number are permanent.

Police officers Griffiths and Spence have corruptly protected a most egregious trademark infringing thief, who is effectively a card carrying member of the Wolfgang Wüster gang of thieves and a proud vocal and public supporter of their ongoing campaign to destroy the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended (2012) as outlined in Kaiser *et al.* (2013) (a copy of Wüster 2012) and later incarnations of the same manifesto in more recent years.

This evil person's name has been suppressed by the courts on his formal request and the police have dishonestly protected him from prosecution for the serious criminal charges of rapes, assaults, child abuse and so on, after he was found guilty in civil proceedings of these crimes and boasted to others of the civil findings against him.

He got suppression orders on his name being published after he lost an appeal of the civil findings against him in late 2020.

This person has run a number of illegal fundraisers and breaches of his own sought and got court suppression orders involving his family violence proceedings.

The same corrupt police have also repeatedly illegally protected others in this cohort of criminals from prosecution for serious crimes including stalking, harassment, threats to kill, repeated assaults, financial frauds, threatening and endangering lives and so on.

Other members of this same criminal cohort of police-protected criminals include the likes of Adam Britton, Wolfgang Wüster, Tony Harrison, Caleb Ott, Jamie Benbow, David John Williams, Michael Alexander and others, whose serious crimes (obviously not all) can be found by simple "Google" search and/or other simple enquiries.

See also at:

<https://www.smuggled.com/Adam-Britton-Bestiality-Wolfgang-Wüster-Gang.htm>

and

<https://www.smuggled.com/scientific-fraud-wolfgang-Wüster.htm> Spence and Griffiths also epitomise all that is wrong and corrupt in the evil Victorian Police force and are a good explanation for the scenes of mass migration of people out of Victoria and its state Capital of Melbourne in recent years postdating year 2000 to the present date (end 2024), with nearly a million refugees fleeing the crime, violence and corruption that is endemic in this Australian state and that spans most levels of government here. In fact "This outflow marks the largest net migration loss for Melbourne on record" according to

The Australian Government Centre for Population (2020).

Postdating the publication of Hoser (2020d) there remained a number of obviously unnamed forms within *Eulamprus*.

In addition to the above, extra fieldwork was planned and executed within the States of NSW, Victoria and Queensland, as well as the Australian Capital Territory by myself and others working with me, to collect and inspect specimens of potentially unnamed taxa within this species complex.

This included populations of relevant lizards in south-east Queensland, west of Sydney in New South Wales and also east of Melbourne in Victoria.

These were all areas in close proximity to State Capital cities of Brisbane, Sydney and Melbourne, which combined hold most of Australia's population (about 27 million as of end 2024 in all Australia) and yet where it seemed relevant unnamed species were to be found.

These had been erroneously labelled as other named forms in spite of deep genetic divergences at the species level identified by others including for example Pepper *et al.* (2018).

MATERIALS AND METHODS

Specimens of all species within the Australian Water Skink genus *Eulamprus* Fitzinger, 1843 *sensu lato*, as recognised by Cogger (2014) and Wilson and Swan (2021) were inspected from all parts of their known distributions. They were checked for morphological divergences and/or obvious biogeographical barriers separating the populations, including those flagged in papers such as Wells and Wellington (1985), Wells (2009) and Pepper *et al.* (2018).

Specimens inspected included dead and live specimens as well as images with good locality data.

To make it clear, many specimens were inspected in the field, as in *in situ* by me when conducting fieldwork throughout the relevant areas of distribution of the genus.

Molecular studies involving species within *Eulamprus* Fitzinger, 1843 *sensu lato* and other similarly distributed reptiles and frogs from southern Australia (noting that this genus in effect occupies southeast Australia only), were also reviewed to flag likely speciation points for wider-ranging putative taxa.

Published references and taxonomic treatments relevant to the preceding taxa were reviewed and those relevant to the taxonomic and nomenclatural conclusions in this paper included Annable and Metcalfe (2015a-b), Barbour (1914), Boulenger (1887), Brown (2014), Brygoo (1985), Cogger (2014), Cogger, *et al.* (1983), Done and Heatwole (1977), Doughty *et al.* (2003), Dubois *et al.* (2019), Duméril and Bibron, (1839), Fitzinger, (1843), Gemel *et al.* (2019), Guibé (1954), Günther (1875), Henle and Osborne (1986), Hoser (1989, 2007a, 2016a-b, 2018, 2019a-b, 2020a-g, 2021, 2022a-c, 2023a-e, 2024a-g), Hutchinson and Rawlinson (1995), ICZN (1991, 2001, 2012, 2021), King (1964), Kinghorn (1924, 1932), Law (1991), Law and Bradley (1990), Lönnberg and Andersson (1915), Lucas and Frost (1894), Mo (2015), Murphy (1994), O'Connor and Moritz (2003), Pearson and Shea (2008), Pepper *et al.* (2018), Pyron *et al.* (2013), Rawlinson (1969), Ride *et al.* (1999), Robert and Thompson (2000, 2001, 2007), Schwarzkopf (2005), Shea and Peterson (1985), Shea and Sadlier (1999), Singhal *et al.* (2018), Skinner *et al.* (2013), Swan *et al.* (2017), Veron (1969), Veron and Heatwole (1970), Wells (2019), Wells and Wellington (1984, 1985), Wilson (2015, 2022), Wilson and Booth (1998), Wilson and Knowles (2018), Wilson and Swan (2017, 2021) and sources cited therein.

RESULTS

The molecular results of Pepper *et al.* (2018) laid out quite clearly the likely taxonomy of the *Eulamprus* Fitzinger, 1843 *sensu lato* group of species.

In spite of this, their paper, being the most recent full treatise of the group failed to act on the results obtained.

It appears that in line with the previous practice of the group of authors, being associated with the Wolfgang Wüster gang of thieves, they did not want to use any taxonomy or nomenclature that forced them to recognise the findings, works and names of Wells and Wellington (1984, 1985) or Wells (2009), in any way, as per the doctrine of Kaiser *et al.* (2013), Rhodin *et al.* (2015) and later incarnations of the same mantra (see below).

By way of example, in spite of confirmation that "*Eulamprus leuraensis* Wells and Wellington, 1984" was a valid taxon, as were the other two species "*Costinisauria couperi* Wells, 2009" and "*Costinisauria worrelli* Wells and Wellington, 1985", Pepper *et al.* (2018) maintained the charade that they were in fact "*Eulamprus kosciuskoi* (Kinghorn, 1932)".

Noting that "*Eulamprus kosciuskoi*" is found in the South New South Wales (NSW) Great Dividing Range, the morphologically similar *E. leuraensis* from the Central NSW Great Dividing Range is recognized by all as a different species and according to Pepper *et al.* (2018) is more closely related to "*Eulamprus kosciuskoi*" than to the northern New South Wales Great Dividing Range "*Eulamprus kosciuskoi*" (named by Wells and Wellington as species "*Costinisauria couperi* Wells, 2009" and "*Costinisauria worrelli* Wells and Wellington, 1985"), failure to recognize these taxa is both untenable on their own results as well as biogeographically impossible.

Hence, as a practicing scientist, I have no choice but to recognize the validity of both species "*Costinisauria couperi* Wells, 2009" and "*Costinisauria worrelli* Wells and Wellington, 1985".

The only question herein is the genus-level placement, dealt with below.

That current herpetological reference texts in Australia including for example Cogger (2014) continue to maintain this charade, this being that "*Eulamprus kosciuskoi*" also occurs in north New South Wales and south-east Queensland, confirms that a sizeable chunk of Australia's so-called herpetologists are being dictated to by personality politics, their own small-minded egos and fraud, rather than cold, hard objective science, the latter being defined as a search for truth and facts.

The published molecular results of Pepper *et al.* (2018) have herein, in combination with the relevant biogeography and morphological divergence of the relevant specimens been taken as the template for the taxonomy formally used in this paper. Relying on earlier published phylogenies, including Skinner *et al.* (2013) at Fig. 2 and Pyron *et al.* (2013) which was not date calibrated, it is possible that all species within the Water Skinks of *Eulamprus* Fitzinger, 1843 *sensu lato* diverged from each other less than 10 MYA, meaning that on that basis alone, it is best all are currently conservatively treated as being within a single genus.

However, there are within this assemblage, three obviously divergent species groups, of which the putative genus *Costinisauria* Wells and Wellington, 1985 for the *Lygosoma* (*Hinulia*) *kosciuskoi* Kinghorn, 1923 group of species is only one of them.

Hence it is recognized herein as a valid subgenus.

The third species group (or second outside the nominate *Eulamprus* group), being the *Lygosoma tympanum* Lönnberg and Andersson, 1923 species group, is herein placed within the newly named subgenus *Invaderskinkus* subgen. nov..

The taxonomy proposed herein for this group of Australian Water Skinks is made without fear or favour or any conflict of interest and is the only sensible one based on the currently available evidence.



Adult *Eulamprus tympanum* of the type form from Apollo Bay, Victoria

CHANGES TO TAXONOMY AND NOMENCLATURE WITHIN RELEVANT SUBGENERA

Hoser (2020d) dealt with the taxonomy of the *E. quoyii* Duméril and Bibron, 1839 complex, by naming the most divergent north Queensland form as *E. paulwoolffi*.

Wells (2009) and Hoser (2020d) also dealt with the issue of the putative taxon *Hinulia gastrosticta* Günther, 1875 in terms of issues relevant to their papers.

Cogger *et al.* (1983) showed that *Hinulia gastrosticta* Günther, 1875 included a type series of specimens (being syntypes) from Kangaroo Island, South Australia, an unknown location in Queensland and another unnamed location in Queensland Australia.

This means that there are almost certainly at least two species within the type series.

In order to stabilize the taxonomy of the putative species "*Hinulia gastrosticta* Günther, 1865", 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"), this being BMNH 1946.8.4.99 from Kangaroo Island, South Australia. This action also effectively makes *Hinulia gastrosticta* conspecific with the type form of *E. quoyii* Duméril and Bibron, 1839 and therefore by the taxonomy adopted herein, it is a junior synonym of that taxon, in line with the concept made in Cogger *et al.* (1983) and all relevant texts published after that date to the present year (2024).

The ten newly named species are identified below:

SUBGENUS *EULAMPUS* FITZINGER, 1843

A new species from South-East Queensland, divergent from both *E. quoyii* of the type form including "*Hinulia gastrosticta* Günther, 1865" and *E. paulwoolffi* is formally named for the first time as *Eulamprus onethatwasoverlooked sp. nov.*

SUBGENUS *COSTINISAURIA* WELLS AND WELLINGTON, 1985

Excluding *Eulamprus leuraensis* Wells and Wellington, 1985, Pepper *et al.* (2018) recognised 7 separate divergent lineages within the samples of *E. kosciuskoi* (Kinghorn, 1932) that they inspected.

They did not take any taxonomic actions on their results, merely stating that *E. kosciuskoi* was "*paraphyletic*".

Pepper *et al.* (2018) ignored the previous species designations of two populations from northern New South Wales by Wells and Wellington (1985) for *E. worrelli* and Wells (2009) or *E. couperi*, which the earlier authors also placed in the subgenus *Costinisauria* Wells and Wellington, 1985 identifying it as a new genus in 1985.

This paper names all the other unnamed lineages as full species based on molecular divergence, biogeographic reality and the fact the relevant forms are quite easily diagnosable and divergent from one another.

They all look very different from one another!

Added to these four newly named forms as species is a fifth species formally named for the first time, being the population of putative *E. kosciuskoi* from Stanthorpe in the Granite Belt of south-east Queensland.

These five new species are as follows:

Eulamprus yes sp. nov. is from a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of "The flags", Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

E. gotit sp. nov. is the taxon within this subgenus currently only known from at or near Stanthorpe in south-east Queensland.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains uplands and which carries *E.*

kosciuskoi to the south by the Murrumbidgee and Snowy River Systems.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby Snowy Mountains uplands population of *E. kosciuskoi* to the north by the Upper Murray River basin.

THE NEW SPECIES IN THE SUBGENUS *INVADERSKINKUS* SUBGEN. NOV.

The newly named subgenus *Invaderskinkus subgen. nov.*, formally described later in this paper, constitutes the so-called *E. tympanum* Lönnberg and Andersson, 1913 group of species, including the closely associated composite of species lumped within *E. heatwolei* Wells and Wellington, 1984.

Four new species are formally named in this subgenus.

Three are within what are currently treated as putative *E. heatwolei* Wells and Wellington, 1984 and one is within putative *E. tympanum* Lönnberg and Andersson, 1913.

The rarely recognized *E. herseyi* Wells and Wellington, 1985 of the Upper Murray basin is recognized herein as valid based on morphology, biogeography and the molecular data of Pepper *et al.* (2018).

It would be sad for the species to expire due to official government neglect based on a pig-headed refusal of Australian herpetologists acting in an unscientific way and pretending that the species does not exist, simply out of unprofessional jealousy against Richard Wells and Ross Wellington, whom they have decided have named "too many" species and genera (as explicitly stated in Kaiser 2012a-b).

I also note here that the putative species *Eulamprus tympanum marnieae* Hutchinson and Rawlinson, 1995, of western Victoria, adopted and used as the same in Cogger (2014), but without a shred of evidence for doing so and numerous other reptile texts to the present date (2024), AKA *Eulamprus marnieae* Hutchinson and Rawlinson, 1995 as cited in Wells (2009) is not recognized herein, even as a subspecies based on the phylogenetic data of Pepper *et al.* (2018).

Biogeographic data and morphological inspection by myself of numerous specimens of live *E. tympanum* from the relevant area of distribution in numerous field trips to the area, do not support any taxonomic concept of species of these lizards beyond that of the type form of *E. tympanum* with a type locality of Melbourne, Victoria.

The taxon is continuously distributed as an invasive, weedy plague species from Melbourne in south-central Victoria to the relevant parts of south-west Victoria across various habitats, including the geologically recent basalt plains, where they are very abundant.

Populations of so-called *Eulamprus tympanum marnieae* contain specimens of darker dorsal colouration (more black on back) than the type form of Melbourne, but these same putative populations of *Eulamprus tympanum marnieae* also contain specimens of the type form colouration, indicating that the colour differentiation of some specimens is not of species or subspecies level significance.

This is most easily seen at the location of Stony Rises (in the Colac-Otways Shire) Latitude 38.1954 S., Longitude 143.1757 E. where both colour forms breed freely together and intermediately coloured individuals are also common.

For the first time ever, four new species are formally named in this subgenus of *Eulamprus*.

These are *E. policecorruptionorum sp. nov.* a taxon from the mainly eastern ranges of New South Wales north of the Hunter River valley, *E. gad sp. nov.*, a taxon apparently confined to a relatively small area in the Blue Mountains immediately west of the Sydney metropolitan area, *E. extinctionbusinessorum sp. nov.* a distinctive species that should have been formally identified and named a long time ago and from the Upper Goulburn River drainage in north-east Victoria and *E. corruptbureaucratorum sp. nov.* being a range restricted species from the Upper Murrumbidgee River basin in the Australian Capital Territory and potentially nearby parts of immediately adjacent New South

Wales.

The first three have until now been treated as populations of putative *E. heatwolei* with a type locality of Macquarie Rivulet, just east of Robertson, New South Wales, Australia and the fourth species, *E. corrupturaucratorum* sp. nov. as a population of *E. tympanum* with a type locality of the environs of Melbourne, Victoria.

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 27 December 2024, unless otherwise stated and were accurate in terms of the context cited herein as of that date.

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

References to tails are of original ones unless otherwise stated.

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.

In the unlikely event any "first reviser" seeks to merge two or more newly named taxa into one, then the name to be retained is that which is first by page priority as listed in the abstract keywords.

CONSERVATION

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

Therefore attempts by taxonomic vandals, pedophiles, serial rapists, animal abusers and wildlife traffickers like the members of 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, Naish 2013, as regularly altered and amended, Thiele *et al.* 2020, Hammer and Thiele 2021, Wüster *et al.* 2021, Foley and Rutter 2020) to unlawfully suppress the recognition of these taxa on the basis they have a personal dislike for the person who formally named it/them should be resisted (e.g. Ceriaco *et al.* 2023, Cogger 2014, Dubois *et al.* 2019, Hoser 2001a, Mosyakin 2022 and Wellington 2015). Claims by the Wüster gang against this paper and the descriptions herein will no doubt be no different to those the gang have made previously (see for example Shine 1987), all of which were discredited long ago as outlined by Ceriaco *et al.* (2023), Cogger (2014), Cotton (2014), Dubois *et al.* (2019), Hawkeswood (2021), Holyński (2020), Hoser, (2007a-b, 2009, 2012a, 2012b, 2013, 2015a-f, 2019a, 2019b, 2020a, 2021, 2023d, 2024g), ICZN (1991, 2001, 2021), Jiménez-Mejías *et al.* (2024), Kok (2023), Mosyakin (2022), Pethigayoda (2023), Wellington (2015), Winkler (2024), Zheng and Gold (2020) and sources cited therein.

Some material within descriptions is repeated to ensure each fully complies with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) and the 2012 amendments (ICZN 2012).

If the Australian government persists with its "Big Australia Policy", (see for example Saunders 2019 or Zaczek 2019), that being a long-term aim to increase the human population in

Australia to over 100 million people by year 2150 (from the 25

million as of 2019), all sorts of unforeseen threats to the survival of these species may emerge.

Attempts to engage in acts of scientific fraud to try to rename any of these newly named taxa should be exposed and dealt with appropriately, as was done with David Williams, when in 2001 he attempted to rename and/or claim name authority for the species *Pailsus rossignolii* Hoser, 2000.

He did this in the first instance in 2001, by altering versions of his online "paper" (as seen in Williams and Starkey 1999a, 1999b and 1999c), all of which were different and changed versions of a single paper originally published in the first form in 1999, claiming (without any evidence) to refute the existence of the species *Pailsus palsei* Hoser, 1998.

LECTOTYPE DESIGNATION FOR THE TAXON "HINULIA GASTROSTICTA GÜNTHER, 1875"

In order to stabilize the taxonomy of the putative species "*Hinula gastrosticta* Günther, 1875", 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 "*Hinula gastrosticta* Günther, 1875", a taxon from the east and south-east of Australia is being designated from a series of three or four syntypes of "*Hinula gastrosticta* Günther, 1875".

74.7.3. In terms of the putative taxon, "*Hinula gastrosticta* Günther, 1875", there were three or four Syntypes.

Based on stated collection localities, taken at face value, there must be at least two species involved, based on the published results of Wells (2009) and Pepper *et al.* (2018).

Cogger *et al.* (1983) and all publishing authors between that date and the time of authorship of this paper at end 2024 have treated "*Hinula gastrosticta* Günther, 1875" as a junior synonym of *Lygosoma quoyii* Duméril and Bibron, 1839, now placed in the genus *Eulamprus* Fitzinger, 1843.

To stabilize the nomenclature for the species *Eulamprus quoyii* and by extension the synonym "*Hinula gastrosticta* Günther, 1875", as currently understood by herpetologists in Australia and elsewhere, sensu Cogger *et al.* (1983),

74.7.2. I hereby designate as a Lectotype, specimen number BMNH 1946.8.4.99 at the Natural History Museum, London, United Kingdom, from Kangaroo Island, South Australia, Australia, as the Lectotype for the species. The specimen was included in a type series of specimens from Kangaroo Island, South Australia (1 specimen), and unknown location/s in Queensland and/or Australia (2 or 3 specimens).

EULAMPUS (EULAMPUS) ONETHATWASOVERLOOKED SP. NOV.

LSIDurn:lsid:zoobank.org:act:5A53E514-D00B-4C9E-9E51-6FBCCA28B2A2

Holotype: A preserved adult female specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J37004 collected from the Blackdown Tableland, Queensland, Australia, Latitude -23.8 S., Longitude 149.133333 E.

This government-owned facility allows access to its holdings.

Paratypes: Five preserved specimens at the Queensland Museum, Brisbane, Queensland, Australia, being specimen numbers J29114, J34293 (juvenile female), J34300, J34301 and J41983 all collected in the Mimosa Creek area of the Blackdown Tableland, Queensland, Australia, approximate Latitude -23.8 S., Longitude 149.133333 E.

Diagnosis: Until 2020 *Eulamprus paulwoolffi* Hoser, 2020 (Hoser 2020d) had been treated as a northern population of the well-known species *E. quoyii* (Duméril and Bibron, 1839).

Likewise for the newly named form herein *Eulamprus onethatwasoverlooked* sp. nov. from the Blackdown Tableland region of central west Queensland.

The two species *E. paulwoolffi* and *E. onethatwasoverlooked* sp. nov. are readily separated from the type (Sydney) form *E. quoyii* by the following characters:

1/ The original tail of *E. quoyii* is dominantly brown in colour with a series of black flecks and/or spots running mainly along the sides. By contrast the original tail of *E. paulwoolffi* is dominantly brown in colour on top and blackish on the sides and most notably has a series of white flecks or spots running mainly along the sides.

The original tail of *E. onethatwasoverlooked sp. nov.* has a largely unbroken black line along the dorsolateral edge, sometimes as a row of closely placed spots being on the upper lateral edge, with relatively evenly scattered small black spots on the rest of the lateral edges of the tail. There are no white spots of any sort on the dorsum of the body or any part of the tail.

E. quoyii is separated from *E. onethatwasoverlooked sp. nov.* by the fact that there is not a preponderance of black pigment on the dorsolateral edge on the upper flank.

2/ The throat of *E. quoyii* and *E. onethatwasoverlooked sp. nov.* is dominantly whitish, cream or light yellow in colour with limited black pigment or spots and never more than small spots either scattered or forming longitudinal lines.

By contrast the throat of *E. paulwoolffi* is heavily peppered and marked with black or very dark pigment, with white being limited to flecks, spots or otherwise limited areas.

3/ The upper labials of *E. paulwoolffi* have very distinct dark brown bars on them which is not the case in *E. quoyii* and *E. onethatwasoverlooked sp. nov.*. In these two species the upper labials are etched with a dull grey only. In *E. quoyii* the etching is wider away from the upper lip, whereas in *E. onethatwasoverlooked sp. nov.* the etching is narrow along the boundary of the entire upper labial and does not widen away from the lip.

4/ The dorsum of both *E. quoyii* and *E. paulwoolffi* has a prominent yellow stripe running from the eye to the middle or rear of the body, along the upper dorsolateral edge on either side. This is more prominent in *E. onethatwasoverlooked sp. nov.* and extends in prominent form to the pelvic region, versus fades in the other two species.

All three species are dark brown dorsally and with scattered black spots of varying number and intensity, depending on individual specimens. However, in *E. onethatwasoverlooked sp. nov.* this spotting is so reduced in size and number so as to appear to be almost absent, which is a condition rarely, but sometimes seen in the other two species.

The three species *E. paulwoolffi*, *E. onethatwasoverlooked sp. nov.* and *E. quoyii* are separated from other similar Australian species (and all other species in the same genus) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with limited spots or flecks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus of largish, fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. paulwoolffi in life in a photograph can be seen in Brown (2014) at page 525, top right and second from bottom on left and a photo by Robert Valentic can be seen online at:

<https://flickr.com/photos/gondwanareptileproductio ns/48369508457/>

(last downloaded on 27 December 2024)

The type form of *E. quoyii* from Sydney, NSW, in a photo by Andy Burton is online at:

<https://flickr.com/photos/burtonandy/4407753711>

(last downloaded on 27 December 2024)

The type form of *E. quoyii* is also depicted in life in Cogger (2014)

at page 562 (top right), Hoser (1989) at page 96 (middle), Wilson and Swan (2017) on page 305, being both images at top of page, Wilson (2015) at bottom of page and in Brown (2014) page 525 at second row from top (both images).

Eulamprus onethatwasoverlooked sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/127392361@N04/49441422837/in/photolist-2ijYduM>

and

<https://www.inaturalist.org/observations/160001365>

and

<https://www.inaturalist.org/observations/194475349>

and

<https://www.inaturalist.org/observations/67445548>

and

<https://www.inaturalist.org/observations/67445549>

(last downloaded on 27 December 2024).

Distribution: *Eulamprus paulwoolffi* is found in North Queensland along the coast, generally from at least Mackay in the south and Cairns in the north, including nearby coastal ranges, but usually at lower elevations, noting the species is usually associated with watercourses or sometimes in man-made gardens with watering points, where they often occur in large numbers.

Pepper *et al.* (2018) give Gladstone in Queensland as the apparent approximate southern limit for this taxon.

Eulamprus onethatwasoverlooked sp. nov. is apparently restricted to the Blackdown Tableland Region near Dingo in central west Queensland and potentially some areas south-east of this apparent outlier population.

Specimens have also been reported from Brisbane in Queensland, (Pepper *et al.* 2018) but it is unsure if all local to that area "Water Skinks" are of the *Eulamprus onethatwasoverlooked sp. nov.* species.

The type form of *E. quoyii* is found generally south of Fraser Island in Queensland, based on the data of Pepper *et al.* (2018) and includes all specimens of this nominate taxon found south of the New South Wales and Queensland border, including specimens from New South Wales and South Australia.

Etymology: This species has been overlooked by other taxonomists.

EULAMPRUS (COSTINISAURIA) YES SP. NOV.

LSIDurn:lsid:zoobank.org:act:1704875B-75C4-4871-9C30-54EC43C47B60

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.112314 collected from Nundle State Forest, New South Wales, Australia, Latitude -31.45 S., Longitude 151.333 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.112315 collected from Nundle State Forest, New South Wales, Australia, Latitude -31.45 S., Longitude 151.333 E.

2/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.1112306 collected from Hanging Rock State Forest, New South Wales, Australia, Latitude -31.483 S., Longitude 151.233 E.

Diagnosis: Until now *Eulamprus (Costinisauria) yes sp. nov.*, *E. aha sp. nov.* and *E. gotit sp. nov.* have been treated by most authors as northern populations of *E. kosciuskoi* (Kingham, 1932) a species with a type locality of Mount Kosciusko, southern New South Wales.

Exceptional to this has been Wells and Wellington (1985) and then Wells (2009) who ultimately recognized two populations of putative *E. kosciuskoi* from north of the Hunter Valley as being separate species, namely *E. worrelli* (Wells and Wellington, 1985), type locality of Barrington Tops, New South Wales, Australia and *E. couperi* (Wells, 2009) as a separate taxon, type locality of Waratah Swamp, Gibraltar Range National Park, New South Wales, Australia, Latitude 29.30 S., Longitude 152.19 E.

Wells (2009) put all the three preceding species and the morphologically similar *E. leuraensis* Wells and Wellington, 1984, type locality Leura, New South Wales, Australia, Latitude 33.43 S., Longitude 150.20 E into the genus *Costinisauria* Wells and Wellington, 1985, type species *Lygosoma (Hinulia) quoyii kosciuskoi* Kinghorn, 1932 by original designation.

With a divergence not exceeding 6 MYA from *E. quoyii* Duméril and Bibron, 1839, the type species for *Eulamprus* Fitzinger, 1843, based on the phylogeny of Skinner *et al.* (2013) at Fig 2, *Costinisauria* is herein treated as a subgenus.

These three preceding species all treated as putative *E. kosciuskoi* by Pepper *et al.* (2018) are separate to the otherwise widely recognized (and by them) *E. leuraensis*.

However, Pepper *et al.* (2018) stated that excluding *E. leuraensis* which they recognised as a separate species ““*Eulamprus kosciuskoi* comprises seven divergent lineages restricted to different mountain tops through NSW and eastern VIC (Figure 2b).”

These authors also failed to inspect specimens of putative *E. kosciuskoi* from Stanthorpe in south-east Queensland, that are quite obviously biogeographically separated and morphologically divergent as well.

In summary Wells (2009) has identified and assigned species names to the four most divergent clades including *E. leuraensis*, all recognised as valid herein.

This paper formally names the other divergent clades in this subgenus as full species, the most divergent of these being *E. yes sp. nov.*.

E. yes sp. nov. is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

It is separated from all other species and subspecies in the subgenus *Costinisauria* Wells and Wellington, 1985 by the following unique combination of characters:

Large black spots on the lower rear of each supralabial, sometimes merging on the lower edge to form a continuum on the lower edge, especially posterior to the eye, otherwise pale brown on the sides of the head and snout as well as the dorsum of the head.

Black on upper part of flank is less than a third of the surface and with a row of large, irregularly shaped yellowish blotches along the middle of the black zone. Lower two thirds of the flank not separated by a sharp boundary from the black zone and is a lightish brownish white in colour, being slightly lighter on the lower flank.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being half the width of the tympanum, being bounded top and bottom by a thick yellow or white edge, whereupon it begins to form the dark zone at the top of the flank.

Dorsum is brown in colour overall, with two rows of black dots, each near the dorsolateral edge, these dots almost merging to form a semi distinct line or otherwise as a row of dots, especially on the posterior part of the body.

Top of original tail is brown with only a few scattered dark flecks. The sides of the tail are brown, but overlain with two, sometimes three, rows of moderate-sized black dots along most of the length, excluding the far distal part where they fade and dissipate.

The top of the head is slightly yellowish in colour as opposed to the more chocolate brown neck on the upper surface and dorsum.

E. yes sp. nov. has limbs that have mainly light brown upper surfaces with black speckles, spots, blotches or markings, not in any obvious pattern or configuration.

Based on the genetic data of Pepper *et al.* (2018), the closest relative of *E. yes sp. nov.* is *E. worrelli* (Wells and Wellington, 1985), with a centre of distribution of Barrington Tops, New South Wales, Australia.

E. worrelli is readily separated from all other species in the genus by the following unique combination of characters:

The dark spots on the lower labials are more in the form of triangles than circular blotches as seen in *E. yes sp. nov.*.

The upper labials also have significant amounts of black peppering.

The black lines on the outer edges of the upper surface are thick and continuous. There are two or more rows of distinctive black dots forming longitudinal lines running down the dorsal surface of the anterior tail. The dark zone on the upper flank, expands to the lower flank in the form of broken black spots and blotches of irregular shape on an otherwise lighter background. The side of the tail has spotting enlarged to form black squares so that most of the sides of the tail are blackish in colour.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being nearly the full the width of the tympanum (versus about half the width only in *E. yes sp. nov.*), being bounded top and bottom by only a thin yellow or white edge, whereupon it begins to form the dark zone at the top of the flank. The yellow line along the dorsolateral edge is distinct and moderately thick.

The upper surfaces of the limbs are an even ratio of black and brown in the form of blotches and mottling.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

It is readily separated from all other species in the genus by the following unique combination of characters: Dark brown or black on the lower edges of the upper labials are formed into triangles, with the base at the lip and centred on each scale. Behind the eye, the head shields also have dark triangles within them, being on a lighter brown base.

Black occupies about half the surface of the flank, being the upper half. Within this zone of black are a series of large and distinctive golden yellow blotches of irregular shape, arranged longitudinally along the side.

Lower flanks are whitish or yellowish, with no black spots or speckles or only a limited amount of tiny black spots, which are slightly more prominent on the lower posterior of the body than anteriorly.

The dorsum itself is brown, but there are three well-defined and continuous, moderately thin black lines on it, one down the vertebral line and the others on the outer edge.

On the dorsolateral edge is a thin, well defined golden yellow stripe.

Top of the original tail is brown, with a few tiny black spots anteriorly. Sides of tail are heavily marked with black squares, slightly irregular in shape, but so close as to make the sides of the tail mainly black. Upper surfaces of the anterior limbs are mainly black with medium sized, well defined golden yellow spots, while the upper surfaces of the hind limbs are mottled black and brown with a similar ratio of each.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

E. couperi is similar in most respects to *E. aha sp. nov.* as described above (unless otherwise stated) but is separated from that species and all other species in the subgenus by the following characters:

The dark markings on the lower labials are ill defined and not formed into obvious triangles. Dorsal markings in the form of the longitudinal black lines are generally ill-defined and the yellow stripe running on the dorsolateral edge is ill-defined, especially posteriorly on the body.

E. couperi has most of the flank being black, this occupying the top two thirds of each flank. Within the black zone of the flank are evenly scattered small and ill-defined golden, yellow or white spots or bars of often irregular shape, but by far the bulk of the dark upper flank remains black in colour.

The black stripe from ear to flank is broad and roughly as wide as

the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are no small yellow or white spots in the centre of this line posterior to the ear.

E. gotit sp. nov. is a taxon only known from the Stanthorpe area in south-east Queensland. It is similar in most respects to *E. couperi* unless otherwise stated.

E. gotit sp. nov. is most readily separated from each of *E. couperi*, *E. aha* sp. nov., *E. worrelli* and *E. yes* sp. nov. by having 9 or 10 supraciliaries versus 7 in each of the other species in the subgenus from north of the Hunter Valley.

This taxon has scattered dark spots on the dorsum arranged in a linear manner, but no obvious lines on the dorsum. There is an apparently random scattering of black spots and flecks along the lateral edges of the otherwise dark brown (original) tail, which is plain brown dorsally.

As for *E. aha* sp. nov., in *E. gotit* sp. nov. the black stripe from ear to flank is broad and roughly as wide as the ear opening but it is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

Pearson and Shea (2008) give a detailed description of the only two known specimens of this species, these being the holotype and paratype as designated in this paper.

E. leuraensis (Wells and Wellington, 1984), type locality of Leura in the Blue Mountains of New South Wales, and known only from this general area (the upper Blue Mountains), including the Newnes Plateau, is readily separated from the other species in the subgenus by having a ground colour that is very dark brown or black and with strongly contrasting narrow, pale (white or yellow) longitudinal stripes. The original tail is black on the visible surfaces, with scattered golden spots of irregular shape dorsally and lighter yellow spots laterally.

Visible surfaces of the limbs are black with scattered, tiny and semi-distinct yellow or white spots or flecks.

Flanks are black with scattered yellow or white spots of irregular shape, arranged longitudinally, being more prominent on the lower flank than upper flank.

There is a black bar behind the ear, but due to the generally dark colour of the lizard, it is not as noticeable as seen in members of the genus found north of the Hunter Valley. The black bar usually has a series of medially placed small yellow-white spots.

Eulamprus kosciuskoi (Kinghorn, 1932), type locality of Mount Kosciusko, New South Wales, Australia is confined to the Snowy Mountains District of southern New South Wales and immediately adjacent Victoria in the Alpine National Park.

E. kosciuskoi, is readily separated from the other species in the subgenus by having a dorsum that is a mid-brown or yellowish brown in colour, versus chocolate brown in members of the genus from north of the Hunter Valley.

Significantly the dorsal pattern is unique in that it is a bold configuration of three bold black stripes running down the dorsum, in turn bound by four bold yellow-brown stripes, the outer ones forming the dorsolateral edge.

The flanks are black with large yellow spots or blotches of irregular shape that are vaguely longitudinally aligned.

Posterior to the ear is a black spot, but not a bar extending to the dark of the flank. The upper surface of the anterior of the tail has a black stripe running onto it, but this rapidly dissipates making most of the upper surface of the tail plain brown in colour. Extensive black spotting or blotches on the anterior lateral surfaces of the tail also dissipates as one moves towards the posterior, with the posterior end being brown all over.

Upper surfaces of limbs are mainly brown but with a moderate amount of black peppering or small spots.

Upper labials are light yellow brown, like most of the rest of the head. There is rarely any black on the upper labials and if so, barely visible and on the lower edges only.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian

Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains by the Murrumbidgee and Snowy River Systems.

It is separated from *E. kosciuskoi* and all other species in the subgenus by the following combination of characters:

The dorsum is a dark brown in colour and without the bold striping seen in *E. kosciuskoi*. Dorsal markings are not distinct, save for the thin yellow lines on the dorsolateral edges.

Most of the flanks are black, with numerous tiny, scattered semi-distinct yellow white spots that are arranged longitudinally in about 5 rows, with 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a more whitish appearance.

There is a black or dark bar running from ear to flank, this area being mottled yellow.

Upper surfaces of limbs are mottled dark brown and yellow in roughly even amounts.

Venter is yellowish and with scattered grey spots.

Upper labials are irregularly marked with black, mainly on the lower edges and sometimes triangular in shape, the dark pigment usually, but not always in the lower centre of each scale, this mainly being below and posterior to the eye, with the anterior upper labials usually immaculate brown.

The upper surface of the head is yellowish brown with dark etched scales, in this respect being similar to *E. kosciuskoi*.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin.

In many respects it is similar in appearance to *E. kosciuskoi*, unless otherwise stated.

However, *E. afl* sp. nov. is separated from *E. kosciuskoi* and all other species in the subgenus by the following suite of characters: Dorsum is a dark greyish brown with the dorsal stripes being poorly defined and not highly contrasting, versus the reverse in *E. kosciuskoi*.

The edges of the boundaries of the black stripes in particular, are not straight and well defined as seen in *E. kosciuskoi*.

Most of the flanks are black, with numerous tiny, scattered semi-distinct gold or yellow white spots that are arranged longitudinally in about 8 rows, with another 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a slightly more whitish appearance, but not the apparently whitish appearance as seen in *E. nrl* sp. nov..

The head of *E. afl* sp. nov. is an immaculate greyish brown in colour. Exceptional to this are a few tiny black spots on the lower margins of some posterior upper labials.

Upper surfaces of the limbs are mottled black and brown, being mainly black rather than brown.

In the original tail, the black stripe of the mid dorsum continues in a well-defined line about half the length of the tail before breaking up to disappear on the distal half.

The sides of the tail are heavily spotted or marked black, being mainly black and this remains the case for most of the tail length, the amount of black declining at the distal end.

As for *E. kosciuskoi* the black posterior to the ear is in the form of an irregularly shaped blotch rather than as a distinctive bar as seen in genus members north of the Hunter Valley.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with

one or more dark longitudinal stripes, sometimes that are only semi-distinct and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus of largish, fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. yes sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/127392361@N04/50705017142/>
and

<https://www.flickr.com/photos/58349528@N02/36639556244/>
and

<https://www.inaturalist.org/observations/139578932>
and

<https://www.inaturalist.org/observations/139953066>
and

<https://www.inaturalist.org/observations/139207146>

E. worrelli is depicted in life online at:

<https://biocache.ala.org.au/occurrences/0d144fb6-a5a6-4506-9989-8cf2098247de>
and

<https://www.flickr.com/photos/136643623@N03/26830092950/>
and

https://www.flickr.com/photos/ken_griffiths_photography/52384438764/
and

<https://www.flickr.com/photos/euprepiosaur/15774479086/>
and

<https://www.flickr.com/photos/euprepiosaur/15178204674/>
and

<https://www.flickr.com/photos/euprepiosaur/15612327609/>
and

<https://www.inaturalist.org/observations/128428192>
and

<https://www.inaturalist.org/observations/146516579>
and

<https://www.inaturalist.org/observations/220861423>
and

<https://www.inaturalist.org/observations/243302362>
and

<https://www.inaturalist.org/observations/146516689>

E. aha sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/ryanfrancis/53494191403/>
and

https://www.flickr.com/photos/ken_griffiths_photography/53738465258/
and

<https://www.flickr.com/photos/ryanfrancis/53493151552/>

E. leuraensis is depicted in life online at:

<https://www.flickr.com/photos/141679113@N08/49811498183/>
and

<https://www.flickr.com/photos/141679113@N08/49812043366/>
and

<https://www.flickr.com/photos/euprepiosaur/15669572423/>
and

<https://www.flickr.com/photos/58349528@N02/24199370591/>
and

<https://www.flickr.com/photos/stephenmahony/29294447618/>

Eulamprus kosciuskoi is depicted in life online at:

<https://biocache.ala.org.au/occurrences/e0e34650-141a-4111-bfa3-8e7ceafb60de>
and

<https://biocache.ala.org.au/occurrences/5c276aae-9c60-469e-a225-c573819199e6>
and

<https://www.flickr.com/photos/27026445@N06/25352942945/>
and

https://www.flickr.com/photos/ken_griffiths_photography/26146017657/
and

<https://www.inaturalist.org/photos/59720133>
and

<https://www.flickr.com/photos/julesfarquhar/47971421477/>
and

<https://www.flickr.com/photos/61702147@N05/46798364502/>

Eulamprus nrl sp. nov. is depicted in life online at:

<https://canberra.naturemapr.org/sightings/1966051>

Eulamprus afl sp. nov. is depicted in life in Brown (2014) at page 525, top left and online at:

<https://biocache.ala.org.au/occurrences/ec47c652-55f7-4109-9415-2dc1d5a912fc>

Distribution: *E. yes sp. nov.* is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

Etymology: When auditing the subgenus *Costinisauria* Wells and Wellington, 1985 and it became apparent that the relevant taxon was an undescribed species, my daughter assisting me exclaimed "yes".

So, in answer to an obvious question, my answer was "why not?" Hence the etymology for this taxon.

EULAMPRUS (COSTINISAURIA) AHA SP. NOV.

LSIDDurn:lsid:zoobank.org:act:20EE114A-C238-4EC5-B95A-04FA81960837

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.41545 collected from The New England National Park, New South Wales, Australia, Latitude -30.48944 S., Longitude 152.38082 E. This government-owned facility allows access to its holdings.

Paratypes: 1/ Six preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.41546, R.41547, R.41549, R.41556, R.41557 and R.41558 all collected from The New England National Park, New South Wales, Australia, Latitude -30.48944 S., Longitude 152.38082 E.

2/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.41545 collected from the Old Homestead, Marengo Station, New South Wales, Australia, Latitude -30.48944 S., Longitude 152.38082 E.

Diagnosis: Until now *Eulamprus (Costinisauria) yes sp. nov.*, *E. aha sp. nov.* and *E. gotit sp. nov.* have been treated by most authors as northern populations of *E. kosciuskoi* (Kinghorn, 1932) a species with a type locality of Mount Kosciusko, southern New South Wales.

Exceptional to this has been Wells and Wellington (1985) and then Wells (2009) who ultimately recognized two populations of putative *E. kosciuskoi* from north of the Hunter Valley as being separate species, namely *E. worrelli* (Wells and Wellington, 1985), type locality of Barrington Tops, New South Wales, Australia and *E. couperi* (Wells, 2009) as a separate taxon, type locality of Waratah Swamp, Gibraltar Range National Park, New South Wales, Australia, Latitude 29.30 S., Longitude 152.19 E.

Wells (2009) put all the three preceding species and the morphologically similar *E. leuraensis* Wells and Wellington, 1984, type locality Leura, New South Wales, Australia, Latitude 33.43 S., Longitude 150.20 E into the genus *Costinisauria* Wells and Wellington, 1985, type species *Lygosoma (Hinulia) quoyii kosciuskoi* Kinghorn, 1932 by original designation.

With a divergence not exceeding 6 MYA from *E. quoyii* Duméril and Bibron, 1839, the type species for *Eulamprus* Fitzinger, 1843, based on the phylogeny of Skinner *et al.* (2013) at Fig 2, *Costinisauria* is herein treated as a subgenus.

These three preceding species all treated as putative *E. kosciuskoi* by Pepper *et al.* (2018) are separate to the otherwise widely recognized (and by them) *E. leuraensis*.

However, Pepper *et al.* (2018) stated that excluding *E. leuraensis* which they recognised as a separate species ““*Eulamprus kosciuskoi* comprises seven divergent lineages restricted to different mountain tops through NSW and eastern VIC (Figure 2b).”

These authors also failed to inspect specimens of putative *E. kosciuskoi* from Stanthorpe in south-east Queensland, that are quite obviously biogeographically separated and morphologically divergent as well.

In summary Wells (2009) has identified and assigned species names to the four most divergent clades including *E. leuraensis*, all recognised as valid herein.

This paper formally names the other divergent clades in this subgenus as full species, the most divergent of these being *E. yes sp. nov.*.

E. yes sp. nov. is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

It is separated from all other species and subspecies in the subgenus *Costinisauria* Wells and Wellington, 1985 by the following unique combination of characters:

Large black spots on the lower rear of each supralabial, sometimes merging on the lower edge to form a continuum on the lower edge, especially posterior to the eye, otherwise pale brown on the sides of the head and snout as well as the dorsum of the head.

Black on upper part of flank is less than a third of the surface and with a row of large, irregularly shaped yellowish blotches along the middle of the black zone. Lower two thirds of the flank not separated by a sharp boundary from the black zone and is a lightish brownish white in colour, being slightly lighter on the lower flank.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being half the width of the tympanum, being bounded top and bottom by a thick yellow or white edge, whereupon it begins to form the dark zone at the top of the flank.

Dorsum is brown in colour overall, with two rows of black dots, each near the dorsolateral edge, these dots almost merging to form a semi distinct line or otherwise as a row of dots, especially on the posterior part of the body.

Top of original tail is brown with only a few scattered dark flecks. The sides of the tail are brown, but overlain with two, sometimes three, rows of moderate-sized black dots along most of the length, excluding the far distal part where they fade and dissipate.

The top of the head is slightly yellowish in colour as opposed to the more chocolate brown neck on the upper surface and dorsum.

E. yes sp. nov. has limbs that have mainly light brown upper surfaces with black speckles, spots, blotches or markings, not in any obvious pattern or configuration.

Based on the genetic data of Pepper *et al.* (2018), the closest relative of *E. yes sp. nov.* is *E. worrelli* (Wells and Wellington, 1985), with a centre of distribution of Barrington Tops, New South Wales, Australia.

E. worrelli is readily separated from all other species in the genus by the following unique combination of characters:

The dark spots on the lower labials are more in the form of triangles than circular blotches as seen in *E. yes sp. nov.*.

The upper labials also have significant amounts of black peppering.

The black lines on the outer edges of the upper surface are thick and continuous. There are two or more rows of distinctive black

dots forming longitudinal lines running down the dorsal surface of the anterior tail. The dark zone on the upper flank, expands to the lower flank in the form of broken black spots and blotches of irregular shape on an otherwise lighter background. The sides of the tail has spotting enlarged to form black squares so that most of the sides of the tail are blackish in colour.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being nearly the full the width of the tympanum (versus about half the width only in *E. yes sp. nov.*), being bounded top and bottom by only a thin yellow or white edge, whereupon it begins to form the dark zone at the top of the flank. The yellow line along the dorsolateral edge is distinct and moderately thick.

The upper surfaces of the limbs are an even ratio of black and brown in the form of blotches and mottling.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

It is readily separated from all other species in the genus by the following unique combination of characters: Dark brown or black on the lower edges of the upper labials are formed into triangles, with the base at the lip and centred on each scale. Behind the eye, the head shields also have dark triangles within them, being on a lighter brown base.

Black occupies about half the surface of the flank, being the upper half.

Within this zone of black are a series of large and distinctive golden yellow blotches of irregular shape, arranged longitudinally along the side.

Lower flanks are whitish or yellowish, with no black spots or speckles or only a limited amount of tiny black spots, which are slightly more prominent on the lower posterior of the body than anteriorly.

The dorsum itself is brown, but there are three well-defined and continuous, moderately thin black lines on it, one down the vertebral line and the others on the outer edge.

On the dorsolateral edge is a thin, well defined golden yellow stripe.

Top of the original tail is brown, with a few tiny black spots anteriorly. Sides of tail are heavily marked with black squares, slightly irregular in shape, but so close as to make the sides of the tail mainly black. Upper surfaces of the anterior limbs are mainly black with medium sized, well defined golden yellow spots, while the upper surfaces of the hind limbs are mottled black and brown with a similar ratio of each.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

E. couperi is similar in most respects to *E. aha sp. nov.* as described above (unless otherwise stated) but is separated from that species and all other species in the subgenus by the following characters:

The dark markings on the lower labials are ill defined and not formed into obvious triangles. Dorsal markings in the form of the longitudinal black lines are generally ill-defined and the yellow stripe running on the dorsolateral edge is ill-defined, especially posteriorly on the body.

E. couperi has most of the flank being black, this occupying the top two thirds of each flank.

Within the black zone of the flank are evenly scattered small and ill-defined golden, yellow or white spots or bars of often irregular shape, but by far the bulk of the dark upper flank remains black in colour.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are no small yellow or white spots in the centre of this line posterior to the ear.

E. gotit sp. nov. is a taxon only known from the Stanthorpe area in south-east Queensland. It is similar in most respects to *E. couperi* unless otherwise stated.

E. gotit sp. nov. is most readily separated from each of *E. couperi*, *E. aha* sp. nov., *E. worrelli* and *E. yes* sp. nov. by having 9 or 10 supraciliaries versus 7 in each of the other species in the subgenus from north of the Hunter Valley.

This taxon has scattered dark spots on the dorsum arranged in a linear manner, but no obvious lines on the dorsum. There is an apparently random scattering of black spots and flecks along the lateral edges of the otherwise dark brown (original) tail, which is plain brown dorsally.

As for *E. aha* sp. nov., in *E. gotit* sp. nov. the black stripe from ear to flank is broad and roughly as wide as the ear opening but it is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

Pearson and Shea (2008) give a detailed description of the only two known specimens of this species, these being the holotype and paratype as designated in this paper.

E. leuraensis (Wells and Wellington, 1984), type locality of Leura in the Blue Mountains of New South Wales, and known only from this general area (the upper Blue Mountains), including the Newnes Plateau, is readily separated from the other species in the subgenus by having a ground colour that is very dark brown or black and with strongly contrasting narrow, pale (white or yellow) longitudinal stripes. The original tail is black on the visible surfaces, with scattered golden spots of irregular shape dorsally and lighter yellow spots laterally.

Visible surfaces of the limbs are black with scattered, tiny and semi-distinct yellow or white spots or flecks.

Flanks are black with scattered yellow or white spots of irregular shape, arranged longitudinally, being more prominent on the lower flank than upper flank.

There is a black bar behind the ear, but due to the generally dark colour of the lizard, it is not as noticeable as seen in members of the genus found north of the Hunter Valley. The black bar usually has a series of medially placed small yellow-white spots.

Eulamprus kosciuskoi (Kinghorn, 1932), type locality of Mount Kosciusko, New South Wales, Australia is confined to the Snowy Mountains District of southern New South Wales and immediately adjacent Victoria in the Alpine National Park.

E. kosciuskoi, is readily separated from the other species in the subgenus by having a dorsum that is a mid-brown or yellowish brown in colour, versus chocolate brown in members of the genus from north of the Hunter Valley.

Significantly the dorsal pattern is unique in that it is a bold configuration of three bold black stripes running down the dorsum, in turn bound by four bold yellow-brown stripes, the outer ones forming the dorsolateral edge.

The flanks are black with large yellow spots or blotches of irregular shape that are vaguely longitudinally aligned.

Posterior to the ear is a black spot, but not a bar extending to the dark of the flank. The upper surface of the anterior of the tail has a black stripe running onto it, but this rapidly dissipates making most of the upper surface of the tail plain brown in colour. Extensive black spotting or blotches on the anterior lateral surfaces of the tail also dissipates as one moves towards the posterior, with the posterior end being brown all over.

Upper surfaces of limbs are mainly brown but with a moderate amount of black peppering or small spots.

Upper labials are light yellow brown, like most of the rest of the head. There is rarely any black on the upper labials and if so, barely visible and on the lower edges only.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains by the Murrumbidgee and Snowy River Systems.

It is separated from *E. kosciuskoi* and all other species in the

subgenus by the following combination of characters:

The dorsum is a dark brown in colour and without the bold striping seen in *E. kosciuskoi*. Dorsal markings are not distinct, save for the thin yellow lines on the dorsolateral edges.

Most of the flanks are black, with numerous tiny, scattered semi-distinct yellow white spots that are arranged longitudinally in about 5 rows, with 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a more whitish appearance.

There is a black or dark bar running from ear to flank, this area being mottled yellow.

Upper surfaces of limbs are mottled dark brown and yellow in roughly even amounts.

Venter is yellowish and with scattered grey spots.

Upper labials are irregularly marked with black, mainly on the lower edges and sometimes triangular in shape, the dark pigment usually, but not always in the lower centre of each scale, this mainly being below and posterior to the eye, with the anterior upper labials usually immaculate brown.

The upper surface of the head is yellowish brown with dark etched scales, in this respect being similar to *E. kosciuskoi*.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin. In many respects it is similar in appearance to *E. kosciuskoi*, unless otherwise stated.

However, *E. afl* sp. nov. is separated from *E. kosciuskoi* and all other species in the subgenus by the following suite of characters:

Dorsum is a dark greyish brown with the dorsal stripes being poorly defined and not highly contrasting, versus the reverse in *E. kosciuskoi*.

The edges of the boundaries of the black stripes in particular, are not straight and well defined as seen in *E. kosciuskoi*.

Most of the flanks are black, with numerous tiny, scattered semi-distinct gold or yellow white spots that are arranged longitudinally in about 8 rows, with another 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a slightly more whitish appearance, but not the apparently whitish appearance as seen in *E. nrl* sp. nov..

The head of *E. afl* sp. nov. is an immaculate greyish brown in colour. Exceptional to this are a few tiny black spots on the lower margins of some posterior upper labials.

Upper surfaces of the limbs are mottled black and brown, being mainly black rather than brown.

In the original tail, the black stripe of the mid dorsum continues in a well-defined line about half the length of the tail before breaking up to disappear on the distal half.

The sides of the tail are heavily spotted or marked black, being mainly black and this remains the case for most of the tail length, the amount of black declining at the distal end.

As for *E. kosciuskoi* the black posterior to the ear is in the form of an irregularly shaped blotch rather than as a distinctive bar as seen in genus members north of the Hunter Valley.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus

of largish, fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. yes sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/127392361@N04/50705017142/>

and

<https://www.flickr.com/photos/58349528@N02/36639556244/>

and

<https://www.inaturalist.org/observations/139578932>

and

<https://www.inaturalist.org/observations/139953066>

and

<https://www.inaturalist.org/observations/139207146>

E. worrelli is depicted in life online at:

<https://biocache.ala.org.au/occurrences/0d144fb6-a5a6-4506-9989-8cf2098247de>

and

<https://www.flickr.com/photos/136643623@N03/26830092950/>

and

https://www.flickr.com/photos/ken_griffiths_photography/52384438764/

and

<https://www.flickr.com/photos/euprepiosaur/15774479086/>

and

<https://www.flickr.com/photos/euprepiosaur/15178204674/>

and

<https://www.flickr.com/photos/euprepiosaur/15612327609/>

and

<https://www.inaturalist.org/observations/128428192>

and

<https://www.inaturalist.org/observations/146516579>

and

<https://www.inaturalist.org/observations/220861423>

and

<https://www.inaturalist.org/observations/243302362>

and

<https://www.inaturalist.org/observations/146516689>

E. aha sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/ryanfrancis/53494191403/>

and

https://www.flickr.com/photos/ken_griffiths_photography/53738465258/

and

<https://www.flickr.com/photos/ryanfrancis/53493151552/>

E. leuraensis is depicted in life online at:

<https://www.flickr.com/photos/141679113@N08/49811498183/>

and

<https://www.flickr.com/photos/141679113@N08/49812043366/>

and

<https://www.flickr.com/photos/euprepiosaur/15669572423/>

and

<https://www.flickr.com/photos/58349528@N02/24199370591/>

and

<https://www.flickr.com/photos/stephenmahony/29294447618/>

Eulamprus kosciuskoi is depicted in life online at:

<https://biocache.ala.org.au/occurrences/e0e34650-141a-4111-bfa3-8e7ceafb60de>

and

<https://biocache.ala.org.au/occurrences/5c276aae-9c60-469e-a225-c573819199e6>

and

<https://www.flickr.com/photos/27026445@N06/25352942945/>

and

https://www.flickr.com/photos/ken_griffiths_photography/26146017657/

and

<https://www.inaturalist.org/photos/59720133>

and

<https://www.flickr.com/photos/julesfarquhar/47971421477/>

and

<https://www.flickr.com/photos/61702147@N05/46798364502/>

Eulamprus nrl sp. nov. is depicted in life online at:

<https://canberra.naturemapr.org/sightings/1966051>

Eulkamprus afl sp. nov. is depicted in life in Brown (2014) at page 525, top left and online at:

<https://biocache.ala.org.au/occurrences/ec47c652-55f7-4109-9415-2dc1d5a912fc>

Distribution: *E. aha* sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

Etymology: When auditing the subgenus *Costinisauria* Wells and Wellington, 1985 and it became apparent that the relevant taxon was an undescribed species, my second daughter assisting me exclaimed “aha”.

So, in answer to an obvious question, my answer was, “why not?” Hence the etymology for this taxon.

EULAMPRUS (COSTINISAURIA) GOTIT SP. NOV.

LSIDDurn:lsid:zoobank.org:act:38DF3092-D080-4B1C-B502-33BFAF0E4750

Holotype: A preserved adult female specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J12227 collected from near Stanthorpe, Queensland, Australia, Latitude 28.40 S., Longitude 151.56 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved adult male specimen at the Queensland Museum, Brisbane, Queensland, Australia, specimen number J12228 collected from near Stanthorpe, Queensland, Australia, Latitude 28.40 S., Longitude 151.56 E.

Diagnosis: Until now *Eulamprus* (*Costinisauria*) *yes* sp. nov., *E. aha* sp. nov. and *E. gotit* sp. nov. have been treated by most authors as northern populations of *E. kosciuskoi* (Kingham, 1932) a species with a type locality of Mount Kosciusko, southern New South Wales.

Exceptional to this has been Wells and Wellington (1985) and then Wells (2009) who ultimately recognized two populations of putative *E. kosciuskoi* from north of the Hunter Valley as being separate species, namely *E. worrelli* (Wells and Wellington, 1985), type locality of Barrington Tops, New South Wales, Australia and *E. couperi* (Wells, 2009) as a separate taxon, type locality of Waratah Swamp, Gibraltar Range National Park, New South Wales, Australia, Latitude 29.30 S., Longitude 152.19 E.

Wells (2009) put all the three preceding species and the morphologically similar *E. leuraensis* Wells and Wellington, 1984, type locality Leura, New South Wales, Australia, Latitude 33.43 S., Longitude 150.20 E into the genus *Costinisauria* Wells and Wellington, 1985, type species *Lygosoma* (*Hinulia*) *quoyii kosciuskoi* Kinghorn, 1932 by original designation.

With a divergence not exceeding 6 MYA from *E. quoyii* Duméril and Bibron, 1839, the type species for *Eulamprus* Fitzinger, 1843, based on the phylogeny of Skinner *et al.* (2013) at Fig. 2, *Costinisauria* is herein treated as a subgenus.

These three preceding species all treated as putative *E. kosciuskoi* by Pepper *et al.* (2018) are separate to the otherwise widely recognized (and by them) *E. leuraensis*.

However, Pepper *et al.* (2018) stated that excluding *E. leuraensis* which they recognised as a separate species “*Eulamprus kosciuskoi* comprises seven divergent lineages restricted to different mountain tops through NSW and eastern VIC (Figure 2b).”

These authors also failed to inspect specimens of putative *E. kosciuskoi* from Stanthorpe in south-east Queensland, that are quite obviously biogeographically separated and morphologically divergent as well.

In summary Wells (2009) has identified and assigned species names to the four most divergent clades including *E. leuraensis*, all recognised as valid herein.

This paper formally names the other divergent clades in this subgenus as full species, the most divergent of these being *E. yes sp. nov.*

E. yes sp. nov. is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

It is separated from all other species and subspecies in the subgenus *Costinisauria* Wells and Wellington, 1985 by the following unique combination of characters:

Large black spots on the lower rear of each supralabial, sometimes merging on the lower edge to form a continuum on the lower edge, especially posterior to the eye, otherwise pale brown on the sides of the head and snout as well as the dorsum of the head.

Black on upper part of flank is less than a third of the surface and with a row of large, irregularly shaped yellowish blotches along the middle of the black zone. Lower two thirds of the flank not separated by a sharp boundary from the black zone and is a lightish brownish-white in colour, being slightly lighter on the lower flank.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being half the width of the tympanum, being bounded top and bottom by a thick yellow or white edge, whereupon it begins to form the dark zone at the top of the flank.

Dorsum is brown in colour overall, with two rows of black dots, each near the dorsolateral edge, these dots almost merging to form a semi distinct line or otherwise as a row of dots, especially on the posterior part of the body.

Top of original tail is brown with only a few scattered dark flecks. The sides of the tail are brown, but overlain with two, sometimes three, rows of moderate-sized black dots along most of the length, excluding the far distal part where they fade and dissipate.

The top of the head is slightly yellowish in colour as opposed to the more chocolate brown neck on the upper surface and dorsum.

E. yes sp. nov. has limbs that have mainly light brown upper surfaces with black speckles, spots, blotches or markings, not in any obvious pattern or configuration.

Based on the genetic data of Pepper *et al.* (2018), the closest relative of *E. yes sp. nov.* is *E. worrelli* (Wells and Wellington, 1985), with a centre of distribution of Barrington Tops, New South Wales, Australia.

E. worrelli is readily separated from all other species in the genus by the following unique combination of characters:

The dark spots on the lower labials are more in the form of triangles than circular blotches as seen in *E. yes sp. nov.*

The upper labials also have significant amounts of black peppering.

The black lines on the outer edges of the upper surface are thick and continuous. There are two or more rows of distinctive black dots forming longitudinal lines running down the dorsal surface of the anterior tail. The dark zone on the upper flank, expands to the lower flank in the form of broken black spots and blotches of irregular shape on an otherwise lighter background. The side of the tail has spotting enlarged to form black squares so that most of the sides of the tail are blackish in colour.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being nearly the full width of the tympanum (versus about half the width only in *E. yes sp. nov.*), being bounded top and bottom by only a thin yellow or white edge, whereupon it begins to form the dark zone at the top of the flank. The yellow line along the dorsolateral edge is distinct and

moderately thick.

The upper surfaces of the limbs are an even ratio of black and brown in the form of blotches and mottling.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

It is readily separated from all other species in the genus by the following unique combination of characters: Dark brown or black on the lower edges of the upper labials are formed into triangles, with the base at the lip and centred on each scale. Behind the eye, the head shields also have dark triangles within them, being on a lighter brown base.

Black occupies about half the surface of the flank, being the upper half.

Within this zone of black are a series of large and distinctive golden yellow blotches of irregular shape, arranged longitudinally along the side.

Lower flanks are whitish or yellowish, with no black spots or speckles or only a limited amount of tiny black spots, which are slightly more prominent on the lower posterior of the body than anteriorly.

The dorsum itself is brown, but there are three well-defined and continuous, moderately thin black lines on it, one down the vertebral line and the others on the outer edge.

On the dorsolateral edge is a thin, well defined golden yellow stripe.

Top of the original tail is brown, with a few tiny black spots anteriorly. Sides of tail are heavily marked with black squares, slightly irregular in shape, but so close as to make the sides of the tail mainly black. Upper surfaces of the anterior limbs are mainly black with medium sized, well defined golden yellow spots, while the upper surfaces of the hind limbs are mottled black and brown with a similar ratio of each.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

E. couperi is similar in most respects to *E. aha sp. nov.* as described above (unless otherwise stated) but is separated from that species and all other species in the subgenus by the following characters:

The dark markings on the lower labials are ill defined and not formed into obvious triangles. Dorsal markings in the form of the longitudinal black lines are generally ill-defined and the yellow stripe running on the dorsolateral edge is ill-defined, especially posteriorly on the body.

E. couperi has most of the flank being black, this occupying the top two thirds of each flank.

Within the black zone of the flank are evenly scattered small and ill-defined golden, yellow or white spots or bars of often irregular shape, but by far the bulk of the dark upper flank remains black in colour.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are no small yellow or white spots in the centre of this line posterior to the ear.

E. gotit sp. nov. is a taxon only known from the Stanthorpe area in south-east Queensland. It is similar in most respects to *E. couperi* unless otherwise stated.

E. gotit sp. nov. is most readily separated from each of *E. couperi*, *E. aha sp. nov.*, *E. worrelli* and *E. yes sp. nov.* by having 9 or 10 supraciliaries versus 7 in each of the other species in the subgenus from north of the Hunter Valley.

This taxon has scattered dark spots on the dorsum arranged in a linear manner, but no obvious lines on the dorsum.

There is an apparently random scattering of black spots and flecks along the lateral edges of the otherwise dark brown (original) tail, which is plain brown dorsally.

As for *E. aha* sp. nov., in *E. gotit* sp. nov. the black stripe from ear to flank is broad and roughly as wide as the ear opening but it is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

Pearson and Shea (2008) give a detailed description of the only two known specimens of this species, these being the holotype and paratype as designated in this paper.

E. leuraensis (Wells and Wellington, 1984), type locality of Leura in the Blue Mountains of New South Wales, and known only from this general area (the upper Blue Mountains), including the Newnes Plateau, is readily separated from the other species in the subgenus by having a ground colour that is very dark brown or black and with strongly contrasting narrow, pale (white or yellow) longitudinal stripes. The original tail is black on the visible surfaces, with scattered golden spots of irregular shape dorsally and lighter yellow spots laterally.

Visible surfaces of the limbs are black with scattered, tiny and semi-distinct yellow or white spots or flecks.

Flanks are black with scattered yellow or white spots of irregular shape, arranged longitudinally, being more prominent on the lower flank than upper flank.

There is a black bar behind the ear, but due to the generally dark colour of the lizard, it is not as noticeable as seen in members of the genus found north of the Hunter Valley. The black bar usually has a series of medially placed small yellow-white spots.

Eulamprus kosciuskoi (Kinghorn, 1932), type locality of Mount Kosciusko, New South Wales, Australia is confined to the Snowy Mountains District of southern New South Wales and immediately adjacent Victoria in the Alpine National Park.

E. kosciuskoi, is readily separated from the other species in the subgenus by having a dorsum that is a mid-brown or yellowish brown in colour, versus chocolate brown in members of the genus from north of the Hunter Valley.

Significantly the dorsal pattern is unique in that it is a bold configuration of three bold black stripes running down the dorsum, in turn bound by four bold yellow-brown stripes, the outer ones forming the dorsolateral edge.

The flanks are black with large yellow spots or blotches of irregular shape that are vaguely longitudinally aligned.

Posterior to the ear is a black spot, but not a bar extending to the dark of the flank. The upper surface of the anterior of the tail has a black stripe running onto it, but this rapidly dissipates making most of the upper surface of the tail plain brown in colour. Extensive black spotting or blotches on the anterior lateral surfaces of the tail also dissipates as one moves towards the posterior, with the posterior end being brown all over.

Upper surfaces of limbs are mainly brown but with a moderate amount of black peppering or small spots.

Upper labials are light yellow brown, like most of the rest of the head. There is rarely any black on the upper labials and if so, barely visible and on the lower edges only.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains by the Murrumbidgee and Snowy River Systems.

It is separated from *E. kosciuskoi* and all other species in the subgenus by the following combination of characters:

The dorsum is a dark brown in colour and without the bold striping seen in *E. kosciuskoi*. Dorsal markings are not distinct, save for the thin yellow lines on the dorsolateral edges.

Most of the flanks are black, with numerous tiny, scattered semi-distinct yellow white spots that are arranged longitudinally in about 5 rows, with 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a more whitish appearance.

There is a black or dark bar running from ear to flank, this area being mottled yellow.

Upper surfaces of limbs are mottled dark brown and yellow in roughly even amounts.

Venter is yellowish and with scattered grey spots.

Upper labials are irregularly marked with black, mainly on the lower edges and sometimes triangular in shape, the dark pigment usually, but not always in the lower centre of each scale, this mainly being below and posterior to the eye, with the anterior upper labials usually immaculate brown.

The upper surface of the head is yellowish brown with dark etched scales, in this respect being similar to *E. kosciuskoi*.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin.

In many respects it is similar in appearance to *E. kosciuskoi*, unless otherwise stated.

However, *E. afl* sp. nov. is separated from *E. kosciuskoi* and all other species in the subgenus by the following suite of characters:

Dorsum is a dark greyish brown with the dorsal stripes being poorly defined and not highly contrasting, versus the reverse in *E. kosciuskoi*.

The edges of the boundaries of the black stripes in particular, are not straight and well defined as seen in *E. kosciuskoi*.

Most of the flanks are black, with numerous tiny, scattered semi-distinct gold or yellow white spots that are arranged longitudinally in about 8 rows, with another 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a slightly more whitish appearance, but not the apparently whitish appearance as seen in *E. nrl* sp. nov..

The head of *E. afl* sp. nov. is an immaculate greyish brown in colour.

Exceptional to this are a few tiny black spots on the lower margins of some posterior upper labials.

Upper surfaces of the limbs are mottled black and brown, being mainly black rather than brown.

In the original tail, the black stripe of the mid dorsum continues in a well-defined line about half the length of the tail before breaking up to disappear on the distal half.

The sides of the tail are heavily spotted or marked black, being mainly black and this remains the case for most of the tail length, the amount of black declining at the distal end.

As for *E. kosciuskoi* the black posterior to the ear is in the form of an irregularly shaped blotch rather than as a distinctive bar as seen in genus members north of the Hunter Valley.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus of largish, fast moving, diurnally active skinks, characterised by pentadactyl limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. yes sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/127392361@N04/50705017142/>
 and
<https://www.flickr.com/photos/58349528@N02/36639556244/>
 and
<https://www.inaturalist.org/observations/139578932>
 and
<https://www.inaturalist.org/observations/139953066>
 and
<https://www.inaturalist.org/observations/139207146>
E. worrelli is depicted in life online at:
<https://biocache.ala.org.au/occurrences/0d144fb6-a5a6-4506-9989-8cf2098247de>
 and
<https://www.flickr.com/photos/136643623@N03/26830092950/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/52384438764/
 and
<https://www.flickr.com/photos/euprepiosaur/15774479086/>
 and
<https://www.flickr.com/photos/euprepiosaur/15178204674/>
 and
<https://www.flickr.com/photos/euprepiosaur/15612327609/>
 and
<https://www.inaturalist.org/observations/128428192>
 and
<https://www.inaturalist.org/observations/146516579>
 and
<https://www.inaturalist.org/observations/220861423>
 and
<https://www.inaturalist.org/observations/243302362>
 and
<https://www.inaturalist.org/observations/146516689>
E. aha sp. nov. is depicted in life online at:
<https://www.flickr.com/photos/ryanfrancis/53494191403/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/53738465258/
 and
<https://www.flickr.com/photos/ryanfrancis/53493151552/>
E. leuraensis is depicted in life online at:
<https://www.flickr.com/photos/141679113@N08/49811498183/>
 and
<https://www.flickr.com/photos/141679113@N08/49812043366/>
 and
<https://www.flickr.com/photos/euprepiosaur/15669572423/>
 and
<https://www.flickr.com/photos/58349528@N02/24199370591/>
 and
<https://www.flickr.com/photos/stephenmahony/29294447618/>
Eulamprus kosciuskoi is depicted in life online at:
<https://biocache.ala.org.au/occurrences/e0e34650-141a-4111-bfa3-8e7ceafb60de>
 and
<https://biocache.ala.org.au/occurrences/5c276aae-9c60-469e-a225-c573819199e6>
 and
<https://www.flickr.com/photos/27026445@N06/25352942945/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/26146017657/
 and
<https://www.inaturalist.org/photos/59720133>
 and
<https://www.flickr.com/photos/julesfarquhar/47971421477/>
 and

<https://www.flickr.com/photos/61702147@N05/46798364502/>
Eulamprus nrl sp. nov. is depicted in life online at:
<https://canberra.naturemapr.org/sightings/1966051>
Eulkamprus afl sp. nov. is depicted in life in Brown (2014) at page 525, top left and online at:
<https://biocache.ala.org.au/occurrences/ec47c652-55f7-4109-9415-2dc1d5a912fc>
Distribution: *E. gotit* sp. nov. is the taxon within this subgenus currently only known from at or near Stanthorpe in south-east Queensland.
Etymology: When auditing the subgenus *Costinisauria* Wells and Wellington, 1985 and it became apparent that the relevant taxon was an undescribed species, my wife assisting me exclaimed "got it".
 So, in answer to an obvious question, my answer was, "why not?" Hence the etymology for this taxon.
EULAMPBUS (COSTINISAURIA) NRL SP. NOV.
LSIDurn:lsid:zoobank.org:act:62239F50-EAF4-407E-9F08-CA81E803F88F
Holotype: A preserved specimen at the Australian National Wildlife Collection (Commonwealth Scientific and Industrial Research Organisation, AKA CSIRO), Canberra, ACT, Australia, specimen number R12258 collected from Mount Bimberi, New South Wales, Australia, Latitude -35.6593 S., Longitude 148.7905 E.
 This government-owned facility allows access to its holdings.
Paratypes: 1/ Two preserved specimens at the Australian National Wildlife Collection (Commonwealth Scientific and Industrial Research Organisation, AKA CSIRO), Canberra, ACT, Australia, specimen numbers R05795 and R05796 both collected from Murray's Gap, Bimbiri Range, Kosciusko Range National Park, New South Wales, Australia, Latitude -35.5161 S., Longitude 148.8 E.
 2/ A preserved specimen at the Australian National Wildlife Collection (Commonwealth Scientific and Industrial Research Organisation, AKA CSIRO), Canberra, ACT, Australia, specimen number R12259 collected from Ginini Flats, Namadgi National Park, Australian Capital Territory, Australia, Latitude -35.5161 S., Longitude 148.7831 E.
Diagnosis: Until now *Eulamprus (Costinisauria) yes* sp. nov., *E. aha* sp. nov. and *E. gotit* sp. nov. have been treated by most authors as northern populations of *E. kosciuskoi* (Kinghorn, 1932) a species with a type locality of Mount Kosciusko, southern New South Wales.
 Exceptional to this has been Wells and Wellington (1985) and then Wells (2009) who ultimately recognized two populations of putative *E. kosciuskoi* from north of the Hunter Valley as being separate species, namely *E. worrelli* (Wells and Wellington, 1985), type locality of Barrington Tops, New South Wales, Australia and *E. couperi* (Wells, 2009) as a separate taxon, type locality of Waratah Swamp, Gibraltar Range National Park, New South Wales, Australia, Latitude 29.30 S., Longitude 152.19 E. Wells (2009) put all the three preceding species and the morphologically similar *E. leuraensis* Wells and Wellington, 1984, type locality Leura, New South Wales, Australia, Latitude 33.43 S., Longitude 150.20 E into the genus *Costinisauria* Wells and Wellington, 1985, type species *Lygosoma (Hinulia) quoyii kosciuskoi* Kinghorn, 1932 by original designation.
 With a divergence not exceeding 6 MYA from *E. quoyii* Duméril and Bibron, 1839, the type species for *Eulamprus* Fitzinger, 1843, based on the phylogeny of Skinner *et al.* (2013) at Fig. 2, *Costinisauria* is herein treated as a subgenus.
 These three preceding species all treated as putative *E. kosciuskoi* by Pepper *et al.* (2018) are separate to the otherwise widely recognized (and by them) *E. leuraensis*.
 However, Pepper *et al.* (2018) stated that excluding *E. leuraensis* which they recognised as a separate species "Eulamprus kosciuskoi comprises seven divergent lineages restricted to different mountain tops through NSW and eastern VIC (Figure

2b).”

These authors also failed to inspect specimens of putative *E. kosciuskoi* from Stanthorpe in south-east Queensland, that are quite obviously biogeographically separated and morphologically divergent as well.

In summary Wells (2009) has identified and assigned species names to the four most divergent clades including *E. leuraensis*, all recognised as valid herein.

This paper formally names the other divergent clades in this subgenus as full species, the most divergent of these being *E. yes sp. nov.*.

E. yes sp. nov. is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

It is separated from all other species and subspecies in the subgenus *Costinisauria* Wells and Wellington, 1985 by the following unique combination of characters:

Large black spots on the lower rear of each supralabial, sometimes merging on the lower edge to form a continuum on the lower edge, especially posterior to the eye, otherwise pale brown on the sides of the head and snout as well as the dorsum of the head.

Black on upper part of flank is less than a third of the surface and with a row of large, irregularly shaped yellowish blotches along the middle of the black zone. Lower two thirds of the flank not separated by a sharp boundary from the black zone and is a lightish brownish white in colour, being slightly lighter on the lower flank.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being half the width of the tympanum, being bounded top and bottom by a thick yellow or white edge, whereupon it begins to form the dark zone at the top of the flank. Dorsum is brown in colour overall, with two rows of black dots, each near the dorsolateral edge, these dots almost merging to form a semi distinct line or otherwise as a row of dots, especially on the posterior part of the body.

Top of original tail is brown with only a few scattered dark flecks. The sides of the tail are brown, but overlain with two, sometimes three, rows of moderate-sized black dots along most of the length, excluding the far distal part where they fade and dissipate.

The top of the head is slightly yellowish in colour as opposed to the more chocolate brown neck on the upper surface and dorsum.

E. yes sp. nov. has limbs that have mainly light brown upper surfaces with black speckles, spots, blotches or markings, not in any obvious pattern or configuration.

Based on the genetic data of Pepper *et al.* (2018), the closest relative of *E. yes sp. nov.* is *E. worrelli* (Wells and Wellington, 1985), with a centre of distribution of Barrington Tops, New South Wales, Australia.

E. worrelli is readily separated from all other species in the genus by the following unique combination of characters:

The dark spots on the lower labials are more in the form of triangles than circular blotches as seen in *E. yes sp. nov.*.

The upper labials also have significant amounts of black peppering.

The black lines on the outer edges of the upper surface are thick and continuous. There are two or more rows of distinctive black dots forming longitudinal lines running down the dorsal surface of the anterior tail. The dark zone on the upper flank, expands to the lower flank in the form of broken black spots and blotches of irregular shape on an otherwise lighter background. The side of the tail has spotting enlarged to form black squares so that most of the sides of the tail are blackish in colour.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being nearly the full width of the tympanum (versus about half the width only in *E. yes sp. nov.*), being bounded top and bottom by only a thin yellow or white edge, whereupon it begins to form the dark zone at the top of the flank.

The yellow line along the dorsolateral edge is distinct and moderately thick.

The upper surfaces of the limbs are an even ratio of black and brown in the form of blotches and mottling.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

It is readily separated from all other species in the genus by the following unique combination of characters: Dark brown or black on the lower edges of the upper labials are formed into triangles, with the base at the lip and centred on each scale. Behind the eye, the head shields also have dark triangles within them, being on a lighter brown base.

Black occupies about half the surface of the flank, being the upper half.

Within this zone of black are a series of large and distinctive golden yellow blotches of irregular shape, arranged longitudinally along the side.

Lower flanks are whitish or yellowish, with no black spots or speckles or only a limited amount of tiny black spots, which are slightly more prominent on the lower posterior of the body than anteriorly.

The dorsum itself is brown, but there are three well-defined and continuous, moderately thin black lines on it, one down the vertebral line and the others on the outer edge.

On the dorsolateral edge is a thin, well defined golden yellow stripe.

Top of the original tail is brown, with a few tiny black spots anteriorly. Sides of tail are heavily marked with black squares, slightly irregular in shape, but so close as to make the sides of the tail mainly black. Upper surfaces of the anterior limbs are mainly black with medium sized, well defined golden yellow spots, while the upper surfaces of the hind limbs are mottled black and brown with a similar ratio of each.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

E. couperi is similar in most respects to *E. aha sp. nov.* as described above (unless otherwise stated) but is separated from that species and all other species in the subgenus by the following characters:

The dark markings on the lower labials are ill defined and not formed into obvious triangles. Dorsal markings in the form of the longitudinal black lines are generally ill-defined and the yellow stripe running on the dorsolateral edge is ill-defined, especially posteriorly on the body.

E. couperi has most of the flank being black, this occupying the top two thirds of each flank.

Within the black zone of the flank are evenly scattered small and ill-defined golden, yellow or white spots or bars of often irregular shape, but by far the bulk of the dark upper flank remains black in colour.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are no small yellow or white spots in the centre of this line posterior to the ear.

E. gotit sp. nov. is a taxon only known from the Stanthorpe area in south-east Queensland. It is similar in most respects to *E. couperi* unless otherwise stated.

E. gotit sp. nov. is most readily separated from each of *E. couperi*, *E. aha sp. nov.*, *E. worrelli* and *E. yes sp. nov.* by having 9 or 10 supraciliaries versus 7 in each of the other species in the subgenus from north of the Hunter Valley.

This taxon has scattered dark spots on the dorsum arranged in a linear manner, but no obvious lines on the dorsum. There is an apparently random scattering of black spots and flecks along the lateral edges of the otherwise dark brown (original) tail, which is

plain brown dorsally.

As for *E. aha* sp. nov., in *E. gotit* sp. nov. the black stripe from ear to flank is broad and roughly as wide as the ear opening but it is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

Pearson and Shea (2008) give a detailed description of the only two known specimens of this species, these being the holotype and paratype as designated in this paper.

E. leuraensis (Wells and Wellington, 1984), type locality of Leura in the Blue Mountains of New South Wales, and known only from this general area (the upper Blue Mountains), including the Newnes Plateau, is readily separated from the other species in the subgenus by having a ground colour that is very dark brown or black and with strongly contrasting narrow, pale (white or yellow) longitudinal stripes. The original tail is black on the visible surfaces, with scattered golden spots of irregular shape dorsally and lighter yellow spots laterally.

Visible surfaces of the limbs are black with scattered, tiny and semi-distinct yellow or white spots or flecks.

Flanks are black with scattered yellow or white spots of irregular shape, arranged longitudinally, being more prominent on the lower flank than upper flank.

There is a black bar behind the ear, but due to the generally dark colour of the lizard, it is not as noticeable as seen in members of the genus found north of the Hunter Valley. The black bar usually has a series of medially placed small yellow-white spots.

Eulamprus kosciuskoi (Kinghorn, 1932), type locality of Mount Kosciusko, New South Wales, Australia is confined to the Snowy Mountains District of southern New South Wales and immediately adjacent Victoria in the Alpine National Park.

E. kosciuskoi, is readily separated from the other species in the subgenus by having a dorsum that is a mid-brown or yellowish brown in colour, versus chocolate brown in members of the genus from north of the Hunter Valley.

Significantly the dorsal pattern is unique in that it is a bold configuration of three bold black stripes running down the dorsum, in turn bound by four bold yellow-brown stripes, the outer ones forming the dorsolateral edge.

The flanks are black with large yellow spots or blotches of irregular shape that are vaguely longitudinally aligned.

Posterior to the ear is a black spot, but not a bar extending to the dark of the flank. The upper surface of the anterior of the tail has a black stripe running onto it, but this rapidly dissipates making most of the upper surface of the tail plain brown in colour.

Extensive black spotting or blotches on the anterior lateral surfaces of the tail also dissipates as one moves towards the posterior, with the posterior end being brown all over.

Upper surfaces of limbs are mainly brown but with a moderate amount of black peppering or small spots.

Upper labials are light yellow brown, like most of the rest of the head. There is rarely any black on the upper labials and if so, barely visible and on the lower edges only.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains by the Murrumbidgee and Snowy River Systems.

It is separated from *E. kosciuskoi* and all other species in the subgenus by the following combination of characters:

The dorsum is a dark brown in colour and without the bold striping seen in *E. kosciuskoi*. Dorsal markings are not distinct, save for the thin yellow lines on the dorsolateral edges.

Most of the flanks are black, with numerous tiny, scattered semi-distinct yellow white spots that are arranged longitudinally in about 5 rows, with 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a more whitish appearance.

There is a black or dark bar running from ear to flank, this area

being mottled yellow.

Upper surfaces of limbs are mottled dark brown and yellow in roughly even amounts.

Venter is yellowish and with scattered grey spots.

Upper labials are irregularly marked with black, mainly on the lower edges and sometimes triangular in shape, the dark pigment usually, but not always in the lower centre of each scale, this mainly being below and posterior to the eye, with the anterior upper labials usually immaculate brown.

The upper surface of the head is yellowish brown with dark etched scales, in this respect being similar to *E. kosciuskoi*.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin.

In many respects it is similar in appearance to *E. kosciuskoi*, unless otherwise stated.

However, *E. afl* sp. nov. is separated from *E. kosciuskoi* and all other species in the subgenus by the following suite of characters:

Dorsum is a dark greyish brown with the dorsal stripes being poorly defined and not highly contrasting, versus the reverse in *E. kosciuskoi*.

The edges of the boundaries of the black stripes in particular, are not straight and well defined as seen in *E. kosciuskoi*.

Most of the flanks are black, with numerous tiny, scattered semi-distinct gold or yellow white spots that are arranged longitudinally in about 8 rows, with another 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a slightly more whitish appearance, but not the apparently whitish appearance as seen in *E. nrl* sp. nov..

The head of *E. afl* sp. nov. is an immaculate greyish brown in colour. Exceptional to this are a few tiny black spots on the lower margins of some posterior upper labials.

Upper surfaces of the limbs are mottled black and brown, being mainly black rather than brown.

In the original tail, the black stripe of the mid dorsum continues in a well-defined line about half the length of the tail before breaking up to disappear on the distal half.

The sides of the tail are heavily spotted or marked black, being mainly black and this remains the case for most of the tail length, the amount of black declining at the distal end.

As for *E. kosciuskoi* the black posterior to the ear is in the form of an irregularly shaped blotch rather than as a distinctive bar as seen in genus members north of the Hunter Valley.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus of largish, fast moving, diurnally active skinks, characterised by pentadactyl limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. yes sp. nov. is depicted in life online at:

<https://www.flickr.com/photos/127392361@N04/50705017142/>
 and
<https://www.flickr.com/photos/58349528@N02/36639556244/>
 and
<https://www.inaturalist.org/observations/139578932>
 and
<https://www.inaturalist.org/observations/139953066>
 and
<https://www.inaturalist.org/observations/139207146>
E. worrelli is depicted in life online at:
<https://biocache.ala.org.au/occurrences/0d144fb6-a5a6-4506-9989-8cf2098247de>
 and
<https://www.flickr.com/photos/136643623@N03/26830092950/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/52384438764/
 and
<https://www.flickr.com/photos/euprepiosaur/15774479086/>
 and
<https://www.flickr.com/photos/euprepiosaur/15178204674/>
 and
<https://www.flickr.com/photos/euprepiosaur/15612327609/>
 and
<https://www.inaturalist.org/observations/128428192>
 and
<https://www.inaturalist.org/observations/146516579>
 and
<https://www.inaturalist.org/observations/220861423>
 and
<https://www.inaturalist.org/observations/243302362>
 and
<https://www.inaturalist.org/observations/146516689>
E. aha sp. nov. is depicted in life online at:
<https://www.flickr.com/photos/ryanfrancis/53494191403/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/53738465258/
 and
<https://www.flickr.com/photos/ryanfrancis/53493151552/>
E. leuraensis is depicted in life online at:
<https://www.flickr.com/photos/141679113@N08/49811498183/>
 and
<https://www.flickr.com/photos/141679113@N08/49812043366/>
 and
<https://www.flickr.com/photos/euprepiosaur/15669572423/>
 and
<https://www.flickr.com/photos/58349528@N02/24199370591/>
 and
<https://www.flickr.com/photos/stephenmahony/29294447618/>
Eulamprus kosciuskoi is depicted in life online at:
<https://biocache.ala.org.au/occurrences/e0e34650-141a-4111-bfa3-8e7ceafb60de>
 and
<https://biocache.ala.org.au/occurrences/5c276aae-9c60-469e-a225-c573819199e6>
 and
<https://www.flickr.com/photos/27026445@N06/25352942945/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/26146017657/
 and
<https://www.inaturalist.org/photos/59720133>
 and
<https://www.flickr.com/photos/julesfarquhar/47971421477/>
 and

<https://www.flickr.com/photos/61702147@N05/46798364502/>
Eulamprus nrl sp. nov. is depicted in life online at:
<https://canberra.naturemapr.org/sightings/1966051>
Eulkamprus afl sp. nov. is depicted in life in Brown (2014) at page 525, top left and online at:
<https://biocache.ala.org.au/occurrences/ec47c652-55f7-4109-9415-2dc1d5a912fc>
Distribution: *E. nrl sp. nov.* is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains uplands by the Murrumbidgee and Snowy River Systems.
Etymology: The taxon *E. nrl sp. nov.* was named in honour of the Australian National Rugby League (AKA NRL) in recognition of their services to Australian sport and sport entertainment. The choice of taxon for this name is deliberate as it occurs in New South Wales and the Australian Capital Territory. These regions are strongholds of the game Rugby League, as opposed to Australian Rules Football (main league being the Australian Football League AKA AFL), which is a sport played mainly in Victoria, Tasmania, South Australia, Western Australia and the Northern Territory.
 The name should be pronounced as spelt "N"+"R"+"L" = "NRL" = "enarell".

EULAMPUS (COSTINISAURIA) AFL SP. NOV.

LSIDurn:lsid:zoobank.org:act:973454BF-5316-4476-AE12-A80624AEA125

Holotype: A preserved juvenile specimen at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, specimen number D69500 collected from west of Rocky Valley, Falls Creek, Victoria, Australia, Latitude -36.8765 S., Longitude 147.258 E.

This government-owned facility allows access to its holdings.

Paratypes: Six preserved specimens at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, being specimen numbers D70893 and D70894 both collected from approximately 1 km east southeast of Mount McKay, Victoria, Australia, Latitude -36.8745 S., Longitude 147.252 E., specimen numbers D55111, D56465, D56466 and D69501 all from the Mount Cope area, Victoria, Australia, Latitude -36.9 S., Longitude 147.28 E.

Diagnosis: Until now *Eulamprus (Costinisauria) yes sp. nov.*, *E. aha sp. nov.* and *E. gotit sp. nov.* have been treated by most authors as northern populations of *E. kosciuskoi* (Kingham, 1932) a species with a type locality of Mount Kosciusko, southern New South Wales.

Exceptional to this has been Wells and Wellington (1985) and then Wells (2009) who ultimately recognized two populations of putative *E. kosciuskoi* from north of the Hunter Valley as being separate species, namely *E. worrelli* (Wells and Wellington, 1985), type locality of Barrington Tops, New South Wales, Australia and *E. couperi* (Wells, 2009) as a separate taxon, type locality of Waratah Swamp, Gibraltar Range National Park, New South Wales, Australia, Latitude 29.30 S., Longitude 152.19 E.

Wells (2009) put all the three preceding species and the morphologically similar *E. leuraensis* Wells and Wellington, 1984, type locality Leura, New South Wales, Australia, Latitude 33.43 S., Longitude 150.20 E into the genus *Costinisauria* Wells and Wellington, 1985, type species *Lygosoma (Hinulia) quoyii kosciuskoi* Kinghorn, 1932 by original designation.

With a divergence not exceeding 6 MYA from *E. quoyii* Duméril and Bibron, 1839, the type species for *Eulamprus* Fitzinger, 1843, based on the phylogeny of Skinner *et al.* (2013) at Fig. 2, *Costinisauria* is herein treated as a subgenus.

These three preceding species all treated as putative *E. kosciuskoi* by Pepper *et al.* (2018) are separate to the otherwise widely recognized (and by them) *E. leuraensis*.

However, Pepper *et al.* (2018) stated that excluding *E. leuraensis* which they recognised as a separate species ""*Eulamprus kosciuskoi* comprises seven divergent lineages restricted to

different mountain tops through NSW and eastern VIC (Figure 2b)."

These authors also failed to inspect specimens of putative *E. kosciuskoi* from Stanthorpe in south-east Queensland, that are quite obviously biogeographically separated and morphologically divergent as well.

In summary Wells (2009) has identified and assigned species names to the four most divergent clades including *E. leuraensis*, all recognised as valid herein.

This paper formally names the other divergent clades in this subgenus as full species, the most divergent of these being *E. yes sp. nov.*.

E. yes sp. nov. is a taxon confined to a small area of high altitude between Tamworth and Port Macquarie, currently only known from the area bounded by and including the locations of The flags, Werrikimbe National Park, Nundle State Forest and Riamukka State Forest, all in New South Wales, Australia.

It is separated from all other species and subspecies in the subgenus *Costinisauria* Wells and Wellington, 1985 by the following unique combination of characters:

Large black spots on the lower rear of each supralabial, sometimes merging on the lower edge to form a continuum on the lower edge, especially posterior to the eye, otherwise pale brown on the sides of the head and snout as well as the dorsum of the head.

Black on upper part of flank is less than a third of the surface and with a row of large, irregularly shaped yellowish blotches along the middle of the black zone. Lower two thirds of the flank not separated by a sharp boundary from the black zone and is a lightish brownish white in colour, being slightly lighter on the lower flank.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being half the width of the tympanum, being bounded top and bottom by a thick yellow or white edge, whereupon it begins to form the dark zone at the top of the flank.

Dorsum is brown in colour overall, with two rows of black dots, each near the dorsolateral edge, these dots almost merging to form a semi distinct line or otherwise as a row of dots, especially on the posterior part of the body.

Top of original tail is brown with only a few scattered dark flecks. The sides of the tail are brown, but overlain with two, sometimes three, rows of moderate-sized black dots along most of the length, excluding the far distal part where they fade and dissipate.

The top of the head is slightly yellowish in colour as opposed to the more chocolate brown neck on the upper surface and dorsum.

E. yes sp. nov. has limbs that have mainly light brown upper surfaces with black speckles, spots, blotches or markings, not in any obvious pattern or configuration.

Based on the genetic data of Pepper *et al.* (2018), the closest relative of *E. yes sp. nov.* is *E. worrelli* (Wells and Wellington, 1985), with a centre of distribution of Barrington Tops, New South Wales, Australia.

E. worrelli is readily separated from all other species in the genus by the following unique combination of characters:

The dark spots on the lower labials are more in the form of triangles than circular blotches as seen in *E. yes sp. nov.*.

The upper labials also have significant amounts of black peppering.

The black lines on the outer edges of the upper surface are thick and continuous. There are two or more rows of distinctive black dots forming longitudinal lines running down the dorsal surface of the anterior tail. The dark zone on the upper flank, expands to the lower flank in the form of broken black spots and blotches of irregular shape on an otherwise lighter background. The sides of the tail has spotting enlarged to form black squares so that most of the sides of the tail are blackish in colour.

A distinctive black line runs from the middle of the ear to the top of the forelimb, being nearly the full the width of the tympanum (versus about half the width only in *E. yes sp. nov.*), being bounded top and bottom by only a thin yellow or white edge,

whereupon it begins to form the dark zone at the top of the flank. The yellow line along the dorsolateral edge is distinct and moderately thick.

The upper surfaces of the limbs are an even ratio of black and brown in the form of blotches and mottling.

E. aha sp. nov. is a taxon with a distribution centred on the New England National Park, New South Wales, Australia, just south of Dorrigo on the New South Wales coastal highlands.

It is readily separated from all other species in the genus by the following unique combination of characters: Dark brown or black on the lower edges of the upper labials are formed into triangles, with the base at the lip and centred on each scale. Behind the eye, the head shields also have dark triangles within them, being on a lighter brown base.

Black occupies about half the surface of the flank, being the upper half.

Within this zone of black are a series of large and distinctive golden yellow blotches of irregular shape, arranged longitudinally along the side.

Lower flanks are whitish or yellowish, with no black spots or speckles or only a limited amount of tiny black spots, which are slightly more prominent on the lower posterior of the body than anteriorly.

The dorsum itself is brown, but there are three well-defined and continuous, moderately thin black lines on it, one down the vertebral line and the others on the outer edge.

On the dorsolateral edge is a thin, well defined golden yellow stripe.

Top of the original tail is brown, with a few tiny black spots anteriorly. Sides of tail are heavily marked with black squares, slightly irregular in shape, but so close as to make the sides of the tail mainly black. Upper surfaces of the anterior limbs are mainly black with medium sized, well defined golden yellow spots, while the upper surfaces of the hind limbs are mottled black and brown with a similar ratio of each.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

E. couperi is similar in most respects to *E. aha sp. nov.* as described above (unless otherwise stated) but is separated from that species and all other species in the subgenus by the following characters:

The dark markings on the lower labials are ill defined and not formed into obvious triangles. Dorsal markings in the form of the longitudinal black lines are generally ill-defined and the yellow stripe running on the dorsolateral edge is ill-defined, especially posteriorly on the body.

E. couperi has most of the flank being black, this occupying the top two thirds of each flank.

Within the black zone of the flank are evenly scattered small and ill-defined golden, yellow or white spots or bars of often irregular shape, but by far the bulk of the dark upper flank remains black in colour.

The black stripe from ear to flank is broad and roughly as wide as the ear opening but is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are no small yellow or white spots in the centre of this line posterior to the ear.

E. gotit sp. nov. is a taxon only known from the Stanthorpe area in south-east Queensland. It is similar in most respects to *E. couperi* unless otherwise stated.

E. gotit sp. nov. is most readily separated from each of *E. couperi*, *E. aha sp. nov.*, *E. worrelli* and *E. yes sp. nov.* by having 9 or 10 supraciliaries versus 7 in each of the other species in the subgenus from north of the Hunter Valley.

This taxon has scattered dark spots on the dorsum arranged in a linear manner, but no obvious lines on the dorsum. There is an apparently random scattering of black spots and flecks along the

lateral edges of the otherwise dark brown (original) tail, which is plain brown dorsally.

As for *E. aha* sp. nov., in *E. gotit* sp. nov. the black stripe from ear to flank is broad and roughly as wide as the ear opening but it is irregular in shape as in the upper and lower boundary is not straight. Also, as a rule (rarely broken) there are small yellow or white spots in the centre of this line posterior to the ear.

Pearson and Shea (2008) give a detailed description of the only two known specimens of this species, these being the holotype and paratype as designated in this paper.

E. leuraensis (Wells and Wellington, 1984), type locality of Leura in the Blue Mountains of New South Wales, and known only from this general area (the upper Blue Mountains), including the Newnes Plateau, is readily separated from the other species in the subgenus by having a ground colour that is very dark brown or black and with strongly contrasting narrow, pale (white or yellow) longitudinal stripes. The original tail is black on the visible surfaces, with scattered golden spots of irregular shape dorsally and lighter yellow spots laterally.

Visible surfaces of the limbs are black with scattered, tiny and semi-distinct yellow or white spots or flecks.

Flanks are black with scattered yellow or white spots of irregular shape, arranged longitudinally, being more prominent on the lower flank than upper flank.

There is a black bar behind the ear, but due to the generally dark colour of the lizard, it is not as noticeable as seen in members of the genus found north of the Hunter Valley. The black bar usually has a series of medially placed small yellow-white spots.

Eulamprus kosciuskoi (Kinghorn, 1932), type locality of Mount Kosciusko, New South Wales, Australia is confined to the Snowy Mountains District of southern New South Wales and immediately adjacent Victoria in the Alpine National Park.

E. kosciuskoi, is readily separated from the other species in the subgenus by having a dorsum that is a mid-brown or yellowish brown in colour, versus chocolate brown in members of the genus from north of the Hunter Valley.

Significantly the dorsal pattern is unique in that it is a bold configuration of three bold black stripes running down the dorsum, in turn bound by four bold yellow-brown stripes, the outer ones forming the dorsolateral edge.

The flanks are black with large yellow spots or blotches of irregular shape that are vaguely longitudinally aligned.

Posterior to the ear is a black spot, but not a bar extending to the dark of the flank. The upper surface of the anterior of the tail has a black stripe running onto it, but this rapidly dissipates making most of the upper surface of the tail plain brown in colour. Extensive black spotting or blotches on the anterior lateral surfaces of the tail also dissipates as one moves towards the posterior, with the posterior end being brown all over.

Upper surfaces of limbs are mainly brown but with a moderate amount of black peppering or small spots.

Upper labials are light yellow brown, like most of the rest of the head. There is rarely any black on the upper labials and if so, barely visible and on the lower edges only.

E. nrl sp. nov. is a taxon confined to the Brindabella Ranges that straddle the border of New South Wales and the Australian Capital Territory. It is an upland area biogeographically separated from the main Snowy Mountains by the Murrumbidgee and Snowy River Systems.

It is separated from *E. kosciuskoi* and all other species in the subgenus by the following combination of characters:

The dorsum is a dark brown in colour and without the bold striping seen in *E. kosciuskoi*. Dorsal markings are not distinct, save for the thin yellow lines on the dorsolateral edges.

Most of the flanks are black, with numerous tiny, scattered semi-distinct yellow white spots that are arranged longitudinally in about 5 rows, with 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a more whitish appearance.

There is a black or dark bar running from ear to flank, this area being mottled yellow.

Upper surfaces of limbs are mottled dark brown and yellow in roughly even amounts.

Venter is yellowish and with scattered grey spots.

Upper labials are irregularly marked with black, mainly on the lower edges and sometimes triangular in shape, the dark pigment usually, but not always in the lower centre of each scale, this mainly being below and posterior to the eye, with the anterior upper labials usually immaculate brown.

The upper surface of the head is yellowish brown with dark etched scales, in this respect being similar to *E. kosciuskoi*.

E. afl sp. nov. is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin. In many respects it is similar in appearance to *E. kosciuskoi*, unless otherwise stated.

However, *E. afl* sp. nov. is separated from *E. kosciuskoi* and all other species in the subgenus by the following suite of characters: Dorsum is a dark greyish brown with the dorsal stripes being poorly defined and not highly contrasting, versus the reverse in *E. kosciuskoi*.

The edges of the boundaries of the black stripes in particular, are not straight and well defined as seen in *E. kosciuskoi*.

Most of the flanks are black, with numerous tiny, scattered semi-distinct gold or yellow white spots that are arranged longitudinally in about 8 rows, with another 2, 3 or 4 more closely arranged rows of whitish spots on the lower flank with spots more numerous and forming the boundary between the flank and the venter, giving this part of the lower flank a slightly more whitish appearance, but not the apparently whitish appearance as seen in *E. nrl* sp. nov..

The head of *E. afl* sp. nov. is an immaculate greyish brown in colour. Exceptional to this are a few tiny black spots on the lower margins of some posterior upper labials.

Upper surfaces of the limbs are mottled black and brown, being mainly black rather than brown.

In the original tail, the black stripe of the mid dorsum continues in a well-defined line about half the length of the tail before breaking up to disappear on the distal half.

The sides of the tail are heavily spotted or marked black, being mainly black and this remains the case for most of the tail length, the amount of black declining at the distal end.

As for *E. kosciuskoi* the black posterior to the ear is in the form of an irregularly shaped blotch rather than as a distinctive bar as seen in genus members north of the Hunter Valley.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is a genus of largish, fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. yes sp. nov. is depicted in life online at:
<https://www.flickr.com/photos/127392361@N04/50705017142/>
 and
<https://www.flickr.com/photos/58349528@N02/36639556244/>
 and
<https://www.inaturalist.org/observations/139578932>
 and
<https://www.inaturalist.org/observations/139953066>
 and
<https://www.inaturalist.org/observations/139207146>
E. worrelli is depicted in life online at:
<https://biocache.ala.org.au/occurrences/0d144fb6-a5a6-4506-9989-8cf2098247de>
 and
<https://www.flickr.com/photos/136643623@N03/26830092950/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/52384438764/
 and
<https://www.flickr.com/photos/euprepiosaur/15774479086/>
 and
<https://www.flickr.com/photos/euprepiosaur/15178204674/>
 and
<https://www.flickr.com/photos/euprepiosaur/15612327609/>
 and
<https://www.inaturalist.org/observations/128428192>
 and
<https://www.inaturalist.org/observations/146516579>
 and
<https://www.inaturalist.org/observations/220861423>
 and
<https://www.inaturalist.org/observations/243302362>
 and
<https://www.inaturalist.org/observations/146516689>
E. aha sp. nov. is depicted in life online at:
<https://www.flickr.com/photos/ryanfrancis/53494191403/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/53738465258/
 and
<https://www.flickr.com/photos/ryanfrancis/53493151552/>
E. leuraensis is depicted in life online at:
<https://www.flickr.com/photos/141679113@N08/49811498183/>
 and
<https://www.flickr.com/photos/141679113@N08/49812043366/>
 and
<https://www.flickr.com/photos/euprepiosaur/15669572423/>
 and
<https://www.flickr.com/photos/58349528@N02/24199370591/>
 and
<https://www.flickr.com/photos/stephenmahony/29294447618/>
Eulamprus kosciuskoi is depicted in life online at:
<https://biocache.ala.org.au/occurrences/e0e34650-141a-4111-bfa3-8e7ceafb60de>
 and
<https://biocache.ala.org.au/occurrences/5c276aae-9c60-469e-a225-c573819199e6>
 and
<https://www.flickr.com/photos/27026445@N06/25352942945/>
 and
https://www.flickr.com/photos/ken_griffiths_photography/26146017657/
 and
<https://www.inaturalist.org/photos/59720133>
 and
<https://www.flickr.com/photos/julesfarquhar/47971421477/>

and
<https://www.flickr.com/photos/61702147@N05/46798364502/>
Eulamprus nrl sp. nov. is depicted in life online at:
<https://canberra.naturemapr.org/sightings/1966051>
Eulkamprus afl sp. nov. is depicted in life in Brown (2014) at page 525, top left and online at:
<https://biocache.ala.org.au/occurrences/ec47c652-55f7-4109-9415-2dc1d5a912fc>

Distribution: *E. afl sp. nov.* is a taxon apparently confined to the Bogong High Plain in northeast Victoria and separated from the nearby population of *E. kosciuskoi* by the Upper Murray River basin.

Etymology: The taxon *E. afl sp. nov.* was named in honour the Australian Football League, as opposed to the National Rugby League (AKA NRL) in recognition of their services to Australian sport and sport entertainment.

The choice of taxon for this name is deliberate as it occurs in Victoria and not in New South Wales and the Australian Capital Territory that are strongholds of the game Rugby League, as opposed to Australian Rules Football (main league being the Australian Football League AKA AFL), which is a sport played mainly in Victoria (where this taxon occurs), Tasmania, South Australia, Western Australia and the Northern Territory.

The name should be pronounced as spelt "A"+"F"+"L" = "ayeffell".

INVADERSKINKUS SUBGEN. NOV.

LSIDurn:lsid:zoobank.org:act:E136713F-857C-4B13-99F0-5CEE87FF8A34

Type species: *Lygosoma tympanum* Lönnberg and Anderson, 1913.

Diagnosis: Skinks within the subgenus *Invaderskinkus subgen. nov.* are separated from other members of the genus *Eulamprus* Fitzinger, 1843, type species *Lygosoma quoyii* Duméril and Bibron, 1839 by original designation, by the following combination of characters:

Top of head is heavily spotted and flecked with black, cheeks, temples and sides of neck are invariably flecked with white or yellow. Dorsum is spotted black and usually quite heavily, but most of the time without any obvious longitudinal stripes (or if present always broken by brown speckling or similar, as opposed to a clean immaculate line as seen within species in the subgenus *Costinisauria* Wells and Wellington, 1985), excluding sometimes a semi distinct yellowish dorsolateral stripe at the anterior part of the body, extending down from above the eye and dissipating posteriorly (either wholly or at least to some extent) along the upper body on the dorsolateral edge. Venter of body is all or mainly immaculate white, cream or light yellow. Does not exceed 90 mm snout-vent length in adults.

The nominate subgenus *Eulamprus* Fitzinger, 1843 comprises the three species *E. paulwoolfi* Hoser, 2020 (see Hoser 2020d), *E. onethatwasoverlooked sp. nov.* (this paper) and the type species *E. quoyii* (Duméril and Bibron, 1839). They are separated from other similar Australian species (and all other species in the same genus, as in the other two subgenera) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent, versus 80 mm or less in the other two subgenera) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with very limited spots or flecks.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes sp. nov.*, *E. aha sp. nov.*, *E. gotit sp. nov.*, *E. nrl sp. nov.* and *E. afl sp. nov.* being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited

amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct (but invariably immaculate) and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is as follows: It is a genus of largish (80-110 mm snout-vent in adults), fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

The rarely recognized *E. herseyi* Wells and Wellington, 1985 is recognized herein as valid based on morphology, biogeography and the molecular data of Pepper *et al.* (2018).

It would be sad for the species to expire due to official government neglect based on a pig-headed refusal of Australian herpetologists acting in an unscientific way and pretending that the species does not exist, simply out of unprofessional jealousy against Richard Wells and Ross Wellington, whom they have decided have named "too many" species and genera.

I also note here that the putative species *Eulamprus tympanum marnieae* Hutchinson and Rawlinson, 1995, adopted and used as the same in Cogger (2014), but without a shred of evidence for doing so and numerous other reptile texts to the present date (2024), AKA *Eulamprus marnieae* Hutchinson and Rawlinson, 1995 as cited in Wells (2009) is not recognized herein, even as a subspecies based on the phylogenetic data of Pepper *et al.* (2018).

Biogeographic data and morphological inspection of by myself of numerous specimens of live *E. tympanum* from the relevant area of distribution by myself in numerous field trips to the area, do not support any taxonomic concept of species of these lizards beyond that of the type form of *E. tympanum* with a type locality of Melbourne, Victoria and continuously distributed as a plague species to the relevant parts of south-west Victoria across various habitats, including the geologically recent basalt plains, where they are abundant.

Distribution: Wetter and mainly cooler parts of New South Wales (mainly in the east), including the Australian Capital Territory, south and south-east Victoria, with some isolated populations in far south-east South Australia.

Etymology: The lizards in this subgenus are invasive of disturbed and altered habitats, including man-made ones. They are aggressive to other lizards, especially smaller ones and when in numbers can literally exterminate competitors. They rapidly colonise and occupy cleared forests and human built rock and water gardens. The biogeographical evidence of Pepper *et al.* (2018) confirms that species in this subgenus invade and occupy habitats shutting out competitors including quite often other species in the same genus, and in the case of the subgenus *Costinisauria* Wells and Wellington, 1985 *Invaderskinkus* gen. nov. populations have quite obviously isolated populations of *Costinisauria* facilitating speciation between them.

As the species in the newly named subgenus *Invaderskinkus* subgen. nov. are invasive skinks, the name is entirely appropriate for them.

Biogeographic evidence strongly suggests that the populations of *E. tympanum* in south-west Victoria in particular are a recent invasion in geological terms and it is noted that none occur in northwest Tasmania or islands in between, being a stark contrast to more archaic species such as *Limnodynastes cameronganti* Hoser, 2020 (See Hoser 2020b).

I am surprised that this name has not to date been proposed for any other group of similarly invasive skinks and view it as a privilege to be able to assign such a memorable name to an abundant and highly visible group of skinks.

Content: *Eulamprus (Invaderskinkus) tympanum* (Lönnerberg and Anderson, 1913) (type species); *E. (Invaderskinkus) corruptbureaucratorum* sp. nov.; *E. (Invaderskinkus) gad* sp. nov.; *E. (Invaderskinkus) heatwolei* Wells and Wellington, 1985; *E. (Invaderskinkus) herseyi* Wells and Wellington, 1985; *E. (Invaderskinkus) policecorruptionorum* sp. nov.; *E. (Invaderskinkus) extinctionbusinessorum* sp. nov..

**EULAMPRUS (INVADERSKINKUS)
POLICECORRUPTIONORUM SP. NOV.**

LSIDurn:lsid:zoobank.org:act:817BFA42-FEC8-46AC-8728-02D1BF2297AC

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.148214 collected from the Grundy Fire Tower Area in the north side of the Riamukka State Forest, New South Wales, Australia, Latitude -31.327439 S., Longitude 151.65583 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Three preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.148214 collected from Plateau Beech, Werrikimbe National Park, New South Wales, Australia, Latitude -31.18304 S., Longitude 152.31888 E.,

2/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R. 153808 collected from 10 km south of the junction of Youall's and Cobhams Track Via Cobhams Track, Werrikimbe National Park, New South Wales, Australia, Latitude -31.24527 S., Longitude 152.15972 E.,

3/ Two preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.70318 and R.84910 both collected from Oxley Hwy near Pablo Road, in the Doyles River State Forest, New South Wales, Australia, Latitude -31.333 S., Longitude 152.133 E.,

4/ Four preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.153796, R.153798, 153799 and R.153810 all collected from Racecourse Trail, Werrikimbe National Park, New South Wales, Australia, Latitude -31.12 S., Longitude 152.24 E.

Diagnosis: This until now, unnamed species has been recognized as distinct and separate from its closest relative, *Eulamprus (Invaderskinkus) heatwolei* Wells and Wellington, 1984 for at least 15 years.

At page 9 of Wells (2009), Richard Wells stated:

"Variation in morphology suggests that this species (*E. heatwolei*) may be composite. In particular the isolated populations on the Fleurieu Peninsula in South Australia, and more significantly, those on the New England Plateau, NSW appear to me to be distinct morphologically from topotypic *E. heatwolei* of the NSW Southern Highlands in their body-form and colouration and so should be more closely studied.

This population from the New England Plateau in NSW has been frequently misidentified in a number of publications as either *Eulamprus quoyii* or *Eulamprus tympanum*. I was intending to describe this species some years ago but never got around to it due to other matters.

Fortunately, Dr Glenn Shea has indicated that he will be describing this very distinctive water skink as a new species as soon as possible."

As a listed coauthor of Pepper *et al.* (2018) Glenn Shea did not seize the opportunity to formally name this taxon, even though their molecular results quite explicitly confirmed the species level divergence of this taxon. See also Hoser (2023d).

With another six years elapsed and the taxon still unnamed, I have taken the opportunity to formally name it as *Eulamprus (Invaderskinkus) policecorruptionorum* sp. nov..

Eulamprus (Invaderskinkus) policecorruptionorum sp. nov. is a taxon restricted to higher altitude coastal ranges north of the Hunter Valley and south of the Queensland border in New South Wales.

E. heatwolei Wells and Wellington, 1984, type locality of Robertson, New South Wales, Australia on the southern

Highlands is a taxon confined to the region generally south of the Hunter Valley in New South Wales, but extending from the Coolah Tops in the north-west, south-east to include the western Blue Mountains (e.g. Kanangra Boyd National Park), as well as the southern highlands of New South Wales, and north-east Victoria, east of the Great Dividing Range.

E. gad sp. nov. until now also treated as *E. heatwolei* is confined to the upper Blue Mountains in the area of Bullaburra and nearby Wentworth Falls and appears to be a range-restricted endemic, worthy of consideration for conservation significance and management.

E. extinctionbusinessorum sp. nov. also until now also treated as *E. heatwolei* is a taxon apparently endemic to the upper Goulburn River drainage system, in north-east Victoria, north of the Great Dividing Range, being a situation in line with at least two locally endemic tree frog species, namely *Fiacumminganura timdalei* Hoser, 2020 (see Hoser 2020f) and *Rawlinsonia paraewingi* (Watson, Loftus-Hills and Littlejohn, 1971), both similarly disassociated with sibling species further north (west and east of the Great Dividing Range) and south of the Great Dividing Range in the same region of the State of Victoria.

The four preceding species are separated from one another by the following four unique combinations of characters:

E. policecorruptionorum sp. nov. has a dorsum that is generally brown all over with few if any black specks or spotting. Spots, if present are only tiny and widely scattered and in no apparent order.

The same applies to the upper surface of the anterior of the tail. The upper surfaces of the forelimbs are a combination of black and yellow markings, being mainly black above and mainly yellow on the sides. The upper surfaces of the hindlimbs are a reticulatum of dark brown over light brown.

The sides of the original tail at the anterior end have a smattering of black spots and squares arranged to form a sort of reticulatum that is continuous for most of the tail's length.

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small brown spots of irregular shape, arranged longitudinally and continue in reduced size and number along the flank becoming whitish or white and faded in colour.

The lower flank is mainly a whitish grey in colour and without bold or distinctive markings or contrasting colours.

E. gad sp. nov. is a distinctive taxon among the four relevant species in that the dorsum has an extremely high density of black spotting on an otherwise metallic brown background. Along either side of the mid-dorsal line this black spotting is so dense that it forms two obvious mid dorsal lines but in turn overlap with numerous scattered brown blotches (a contrast to species within the subgenus *Costinisauria* Wells and Wellington, 1985, where specimens have well defined mid dorsal lines that are neither broken or overlain with scattered brown specks, spots, or blotches).

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small whitish or white spots of irregular shape, arranged longitudinally and continue in reduced size and greater number along the flank in 2 or 3 rows, being bold and white in colour.

This black line of the flank continues along the flank of the anterior tail, but rapidly breaks up along the upper and lower edges to give it a mottled black appearance on the sides of the anterior tail, rather than as a distinctive black line or zone. Most of the tail (all the posterior part) is an immaculate brown in colour.

Upper surfaces of limbs are black and light brown marked, relatively boldly so, being mainly black for the forelimbs and less

so for the hind limbs.

E. heatwolei of the type form is readily separated from the two preceding taxa by the fact that the black line running from snout to flank is greatly reduced. It is wholly non-existent anterior to the eye and posterior to the eye and between eye and ear hole the scales are mainly brown and with only restricted areas of black, these being in the form of dark patches on the lower parts of the rear upper labials and along the dorsolateral edge of the back of the head.

Behind the ear the black upper lateral band forms and continues along (almost) the upper half of the flank.

This black band along the upper flank has small brown, yellow or white spots, being of irregular shape, arranged in 3-4 rows (but hard to see such an arrangement on cursory glance) and are somewhat faded.

The lower half of the flank is yellowish to white and with the posterior edges of some scales slightly black edged.

The colours and markings of the upper and lower flank tend to merge to form the colouration on the lateral parts of the anterior of the tail.

The dorsum is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement. Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal half of the tail generally all brown other than for some specimens having reduced black spotting on the flanks at the distal end.

Upper surfaces of the limbs are black and brown arranged to form a semi-banded reticulum on each limb. Fore and hind limbs have similar amounts of black and brown pigment on them.

The dorsolateral edge is jagged being black (below) and brown above, and while jaggedness applies to this area in all species in this group, it is more pronounced in *E. heatwolei* as compared to both *E. policecorruptionorum sp. nov.* and *E. gad sp. nov.*, but far less so than in *E. extinctionbusinessorum sp. nov.*

E. extinctionbusinessorum sp. nov. is by far the most distinctive species in the complex.

It has a relatively bold and distinct colouration all over with a particularly strong infusion of yellow in most specimens.

This species is readily identified by the distinctive and well-defined black barring over the sutures of the otherwise immaculate light brown anterior upper labials.

This black expands under the eye and posterior to it forms the wide black zone of the side of the head and onto the anterior of the flank.

Immediately behind the eye is invariably a patch of reddish/yellow brown, surrounded on all sides by black, the patch being of irregular shape.

The black of the flank is expanded in area forming most of the flank.

Both upper and lower edges of the black zone are bounded by immaculate yellow, slightly faded in colour or whitish in aged adults on the lower flank, with the black zone extending in sections to the belly, giving the sides a tiger-like appearance.

Within the black zone of the main part of each flank, the only spotting is a well-defined series of about 12 relatively large yellow spots of irregular shape coordinated with the narrowest points of the black lateral band (as in not where the black extends to the belly).

The top of the head, especially posterior to the eyes is mainly black pigment, boldly etched with brown on the edges of the eyes and snout area. Scales anterior to the eyes on the top of the head are also strongly and boldly etched black.

Upper surfaces of the limbs are boldly marked black medium brown, almost banded and with forelimbs with more black than the hindlimbs

Flank pattern breaks up rapidly along the anterior part of the tail

and the distal two thirds has no black at all, being a light brown in colour and much lighter than the background colour of the body. In line with *E. heatwolei*, the dorsum of *E. extinctionbusinessorum* sp. nov. is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement.

Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal two thirds of the tail generally all brown in this taxon.

The four preceding species, *E. heatwolei*, *E. extinctionbusinessorum* sp. nov., *E. policecorruptionorum* sp. nov. and *E. gad* sp. nov. are separated from other species in the subgenus *Invaderskinkus* subgen. nov. by having prominent dark streaks, markings or reticulations on the throat (underside of the head), versus not so in the other species.

Skinks within the subgenus *Invaderskinkus* subgen. nov. are separated from other members of the genus *Eulamprus* Fitzinger, 1843, type species *Lygosoma quoyii* Duméril and Bibron, 1839 by original designation, by the following combination of characters:

Top of head is heavily spotted and flecked with black, cheeks, temples and sides of neck are invariably flecked with white or yellow. Dorsum is spotted black and usually quite heavily, but most of the time without any obvious longitudinal stripes (or if present always broken by brown speckling or similar, as opposed to a clean immaculate line as seen within species in the subgenus *Costinisauria* Wells and Wellington, 1985), excluding sometimes a semi distinct yellowish dorsolateral stripe at the anterior part of the body, extending down from above the eye and dissipating posteriorly along the upper body on the dorsolateral edge. Venter of body is all or mainly immaculate white, cream or light yellow. Does not exceed 90 mm snout-vent length in adults.

The nominate subgenus *Eulamprus* Fitzinger, 1843 comprises the three species *E. paulwoolfi* Hoser, 2020, *E. onethatwasoverlooked* sp. nov. (this paper) and the type species *E. quoyii* (Duméril and Bibron, 1839). They are separated from other similar Australian species (and all other species in the same genus, as in the other two subgenera) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent, versus 80 mm or less in the other two subgenera) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with very limited spots or flecks.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. aff* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct (but invariably immaculate) and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is as follows: It is a genus of largish (80-110 mm snout-vent in adults), fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from

Cogger, 2014).

E. policecorruptionorum sp. nov. is depicted in life online at: <https://www.flickr.com/photos/stephenmahony/8184297494/>

and <https://www.flickr.com/photos/julesfarquhar/52450152316/>

and <https://www.flickr.com/photos/ryanfrancis/53497035215/>

and <https://www.flickr.com/photos/88708273@N03/50709529021/>

E. heatwolei is depicted in life online at: <https://www.inaturalist.org/observations/105588068>

and <https://www.inaturalist.org/observations/168786737>

and <https://www.flickr.com/photos/23031163@N03/40316380670/>

E. gad sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/202365145>

and <https://www.inaturalist.org/observations/195554944>

and <https://www.inaturalist.org/observations/251849630>

and <https://www.flickr.com/photos/kristianbell/10729193054/>

E. extinctionbusinessorum sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/256252584>

and <https://www.inaturalist.org/observations/256252540>

and <https://www.inaturalist.org/observations/256252129>

and <https://www.inaturalist.org/observations/256252235>

and <https://www.flickr.com/photos/gondwanareptileproductio/53254732079/>

and <https://www.flickr.com/photos/gondwanareptileproductio/51702654777/>

and <https://www.flickr.com/photos/gondwanareptileproductio/37001011770/>

Distribution: *Eulamprus* (*Invaderskinkus*) *policecorruptionorum* sp. nov. is a taxon restricted to higher altitude coastal ranges north of the Hunter Valley and south of the Queensland border in New South Wales.

Etymology: New South Wales, Australia has long been known to have "the best police force MONEY CAN BUY" with reference to the endemic corruption within this government department.

In a lifetime spent trying to combat the endemic corruption in the police forces of Australia, I can say with full confidence that the corruption and misconduct in Australian police forces is worse than ever and wholly endemic.

Police officers in their corruption, besides doing the things one would expect of crooked cops, as in drug dealing, violence, sex offences, bribery, corruption, court fixing and the like, do some other strange things as part of their non-stop corruption and dishonesty.

One thing these lying crooks seek to do is run false narratives about most things, including how there is no police corruption in Australia and how anyone who dares assert this fact is a nutter or a conspiracy theorist.

Part of their false narrative is their corrupt seeking of recognition for all the good things they never do, and this they do through various awards and honours systems.

This is done through Australia day Awards (celebrating the genocide of the native Aboriginals on 26 January each year) and British King's Birthday Honours handed out to corrupt government employees and their mates in the middle of every year.

The bent cops nominate themselves for "Order of Australia", Knighthoods and the like for their great "services to the community" and similar such things.

These are rubber stamped of course by their mates in government to whom they sell drugs and protect from prosecution for various heinous crimes.

As the corrupt New South Wales police are always seeking recognition for the great things they do not do, I think it is fitting that I recognize their endemic corruption as an organisation and as individuals by naming a lizard in honour of what is arguably one of the most corrupt police forces on the planet.

There is plenty of literature detailing police corruption in New South Wales including in Hoser (1989, 1991, 1993, 1994, 1996, 1999a, 1999b, 2001b, 2001c) and sources cited therein.

Hoser (2001b) remains banned by the police in New South Wales as of 2024 and any copies located in that State are ordered to be seized and destroyed by way of a written standing order.

EULAMPRUS (INVADERSKINKUS) GAD SP. NOV.

LSIDurn:lsid:zoobank.org:act:65CE70AA-0AEE-409B-81A4-F1CA4671022F

Holotype: A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R.149571 collected from Red Gum Park, De Quency Rd, Bullaburra, New South Wales, Australia, Latitude -33.73054 S., Longitude 150.40972 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Four preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.4836, R.4837, R.65779 and R.65780 all collected from Wentworth Falls, New South Wales, Australia, Latitude -33.716 S., Longitude 150.366 E.,

2/ Two preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R.103464 and R.175967 both collected from Wentworth Falls Lake, New South Wales, Australia, Latitude -33.7 S., Longitude 150.366 E.

Diagnosis: Until now, *Eulamprus (Invaderskinkus) pollicorruptionorum sp. nov.* had been an unnamed species and yet was recognized as distinct and separate from its closest relative, *Eulamprus (Invaderskinkus) heatwolei* Wells and Wellington, 1984 for at least 15 years.

At page 9 of Wells (2009), Richard Wells stated:

"Variation in morphology suggests that this species (*E. heatwolei*) may be composite. In particular the isolated populations on the Fleurieu Peninsula in South Australia, and more significantly, those on the New England Plateau, NSW appear to me to be distinct morphologically from topotypic *E. heatwolei* of the NSW Southern Highlands in their body-form and colouration and so should be more closely studied.

This population from the New England Plateau in NSW has been frequently misidentified in a number of publications as either *Eulamprus quoyii* or *Eulamprus tympanum*. I was intending to describe this species some years ago but never got around to it due to other matters.

Fortunately, Dr Glenn Shea has indicated that he will be describing this very distinctive water skink as a new species as soon as possible."

As a listed coauthor of Pepper *et al.* (2018) Glenn Shea did not seize the opportunity to formally name this taxon, even though their molecular results quite explicitly confirmed the species level divergence of this taxon. See also Hoser (2023d).

With another six years elapsed and the taxon still unnamed, I have taken the opportunity to formally name it as *Eulamprus (Invaderskinkus) pollicorruptionorum sp. nov.*

Eulamprus (Invaderskinkus) pollicorruptionorum sp. nov. is a taxon restricted to higher altitude coastal ranges north of the Hunter Valley and south of the Queensland border in New South Wales.

E. heatwolei Wells and Wellington, 1984, type locality of Robertson, New South Wales, Australia on the southern Highlands is a taxon confined to the region generally south of the

Hunter Valley in New South Wales, but extending from the Coolah Tops in the north-west, south-east to include the western Blue Mountains (e.g. Kanangra Boyd National Park), as well as the southern highlands of New South Wales, and north-east Victoria, east of the Great Dividing Range.

E. gad sp. nov. until now also treated as *E. heatwolei* is another obviously unnamed species confined to the upper Blue Mountains in the area of Bullaburra and nearby Wentworth Falls and appears to be a range-restricted endemic, worthy of consideration for conservation significance and management.

E. extinctionbusinessorum sp. nov. also until now also treated as *E. heatwolei* is a taxon apparently endemic to the upper Goulburn River drainage system, in north-east Victoria, north of the Great Dividing Range, being a situation in line with at least two locally endemic tree frog species, namely *Fiacumminganura timdalei* Hoser, 2020 (see Hoser 2020f) and *Rawlinsonia paraewingi* (Watson, Loftus-Hills and Littlejohn, 1971), both similarly disassociated with sibling species further north (west and east of the Great Dividing Range) and south of the Great Dividing Range in the same region of the State of Victoria.

It is a very distinctive looking and divergent member of the complex, and I am surprised that no one had flagged it as an unnamed species previously, save for the molecular results of Pepper *et al.* (2018),

The four preceding species are separated from one another by the following four unique combinations of characters:

E. pollicorruptionorum sp. nov. has a dorsum that is generally brown all over with few if any black specks or spotting. Spots, if present are only tiny and widely scattered and in no apparent order.

The same applies to the upper surface of the anterior of the tail. The upper surfaces of the forelimbs are a combination of black and yellow markings, being mainly black above and mainly yellow on the sides. The upper surfaces of the hindlimbs are a reticulatum of dark brown over light brown.

The sides of the original tail at the anterior end have a smattering of black spots and squares arranged to form a sort of reticulatum that is continuous for most of the tail's length.

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small brown spots of irregular shape, arranged longitudinally and continue in reduced size and number along the flank becoming whitish or white and faded in colour.

The lower flank is mainly a whitish grey in colour and without bold or distinctive markings or contrasting colours.

E. gad sp. nov. is a relatively distinctive taxon among the four relevant species in that the dorsum has an extremely high density of black spotting on an otherwise metallic brown background. Along either side of the mid-dorsal line this black spotting is so dense that it forms two quite obvious mid dorsal lines but in turn overlain with numerous scattered brown blotches (a contrast to species within the subgenus *Costinisauria* Wells and Wellington, 1985, where specimens have well defined mid dorsal lines that are neither broken or overlain with scattered brown specks, spots, or blotches).

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small whitish or white spots of irregular shape, arranged longitudinally and continue in reduced size and greater number along the flank in 2 or 3 rows, being bold and white in colour.

This black line of the flank continues along the flank of the anterior tail, but rapidly breaks up along the upper and lower edges to give it a mottled black appearance on the sides of the anterior tail, rather than as a distinctive black line or zone. Most of

the tail (all the posterior part) is an immaculate brown in colour. Upper surfaces of limbs are black and light brown marked, relatively boldly so, being mainly black for the forelimbs and less so for the hind limbs.

E. heatwolei of the type form is readily separated from the two preceding taxa by the fact that the black line running from snout to flank is greatly reduced. It is wholly non-existent anterior to the eye and posterior to the eye and between eye and ear hole the scales are mainly brown and with only restricted areas of black, these being in the form of dark patches on the lower parts of the rear upper labials and along the dorsolateral edge of the back of the head.

Behind the ear the black upper lateral band forms and continues along (almost) the upper half of the flank.

This black band along the upper flank has small brown, yellow or white spots, being of irregular shape, arranged in 3-4 rows (but hard to see such an arrangement on cursory glance) and are somewhat faded.

The lower half of the flank is yellowish to white and with the posterior edges of some scales slightly black edged.

The colours and markings of the upper and lower flank tend to merge to form the colouration on the lateral parts of the anterior of the tail.

The dorsum is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement. Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal half of the tail generally all brown other than for some specimens having reduced black spotting on the flanks at the distal end.

Upper surfaces of the limbs are black and brown arranged to form a semi-banded reticulum on each limb. Fore and hind limbs have similar amounts of black and brown pigment on them.

The dorsolateral edge is jagged being black (below) and brown above, and while jaggedness applies to this area in all species in this group, it is more pronounced in *E. heatwolei* as compared to both *E. policecorruptionorum* sp. nov. and *E. gad* sp. nov., but far less so than in *E. extinctionbusinessorum* sp. nov..

E. extinctionbusinessorum sp. nov. is by far the most distinctive species in the complex.

It has a relatively bold and distinct colouration all over with a particularly strong infusion of yellow in most specimens.

This species is readily identified by the distinctive and well-defined black barring over the sutures of the otherwise immaculate light brown anterior upper labials.

This black expands under the eye and posterior to it forms the wide black zone of the side of the head and onto the anterior of the flank.

Immediately behind the eye is invariably a patch of reddish/yellow brown, surrounded on all sides by black, the patch being of irregular shape.

The black of the flank is expanded in area forming most of the flank.

Both upper and lower edges of the black zone are bounded by immaculate yellow, slightly faded in colour or whitish in aged adults on the lower flank, with the black zone extending in sections to the belly, giving the sides a tiger-like appearance.

Within the black zone of the main part of each flank, the only spotting is a well-defined series of about 12 relatively large yellow spots of irregular shape coordinated with the narrowest points of the black lateral band (as in not where the black extends to the belly).

The top of the head, especially posterior to the eyes is mainly black pigment, boldly etched with brown on the edges of the eyes and snout area.

Scales anterior to the eyes on the top of the head are also strongly and boldly etched black.

Upper surfaces of the limbs are boldly marked black medium brown, almost banded and with forelimbs with more black than the hindlimbs

Flank pattern breaks up rapidly along the anterior part of the tail and the distal two thirds has no black at all, being a light brown in colour and much lighter than the background colour of the body.

In line with *E. heatwolei*, the dorsum of *E. extinctionbusinessorum* sp. nov. is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement.

Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal two thirds of the tail generally all brown in this taxon.

The four preceding species, *E. heatwolei*, *E.*

extinctionbusinessorum sp. nov., *E. policecorruptionorum* sp.

nov. and *E. gad* sp. nov. are separated from other species in the subgenus *Invaderskinkus* subgen. nov. by having prominent dark streaks, markings or reticulations on the throat (underside of the head), versus not so in the other species.

Skinks within the subgenus *Invaderskinkus* subgen. nov. are separated from other members of the genus *Eulamprus* Fitzinger, 1843, type species *Lygosoma quoyii* Duméril and Bibron, 1839 by original designation, by the following combination of characters:

Top of head is heavily spotted and flecked with black, cheeks, temples and sides of neck are invariably flecked with white or yellow. Dorsum is spotted black and usually quite heavily, but most of the time without any obvious longitudinal stripes (or if present always broken by brown speckling or similar, as opposed to a clean immaculate line as seen within species in the subgenus *Costinisauria* Wells and Wellington, 1985), excluding sometimes a semi distinct yellowish dorsolateral stripe at the anterior part of the body, extending down from above the eye and dissipating posteriorly along the upper body on the dorsolateral edge. Venter of body is all or mainly immaculate white, cream or light yellow. Does not exceed 90 mm snout-vent length in adults.

The nominate subgenus *Eulamprus* Fitzinger, 1843 comprises the three species *E. paulwoolffi* Hoser, 2020, *E. onethatwasoverlooked* sp. nov. (this paper) and the type species *E. quoyii* (Duméril and Bibron, 1839). They are separated from other similar Australian species (and all other species in the same genus, as in the other two subgenera) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent, versus 80 mm or less in the other two subgenera) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with very limited spots or flecks.

The nine species, *Eulamprus kosciuskoi* (Kingham, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov., *E. aha* sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp. nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct (but invariably immaculate) and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is as follows: It is a genus of largish (80-110 mm snout-vent in adults), fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the

lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. pollicecorruptionorum sp. nov. is depicted in life online at: <https://www.flickr.com/photos/stephenmahony/8184297494/>

and <https://www.flickr.com/photos/julesfarquhar/52450152316/>

and <https://www.flickr.com/photos/ryanfrancis/53497035215/>

and <https://www.flickr.com/photos/88708273@N03/50709529021/>

E. heatwolei is depicted in life online at:

<https://www.inaturalist.org/observations/105588068>

and <https://www.inaturalist.org/observations/168786737>

and <https://www.flickr.com/photos/23031163@N03/40316380670/>

E. gad sp. nov. is depicted in life online at:

<https://www.inaturalist.org/observations/202365145>

and <https://www.inaturalist.org/observations/195554944>

and <https://www.inaturalist.org/observations/251849630>

and <https://www.flickr.com/photos/kristianbell/10729193054/>

E. extinctionbusinessorum sp. nov. is depicted in life online at:

<https://www.inaturalist.org/observations/256252584>

and <https://www.inaturalist.org/observations/256252540>

and

<https://www.inaturalist.org/observations/256252129>

and

<https://www.inaturalist.org/observations/256252235>

and

<https://www.flickr.com/photos/gondwanareptileproductions/53254732079/>

and

<https://www.flickr.com/photos/gondwanareptileproductions/51702654777/>

and

<https://www.flickr.com/photos/gondwanareptileproductions/37001011770/>

Distribution: *E. gad* sp. nov. until now also treated as *E. heatwolei* is confined to the upper Blue Mountains in the area of Bullaburra and nearby Wentworth Falls in New South Wales, Australia and appears to be a range-restricted endemic, worthy of consideration for conservation significance and management.

Etymology: When mentioning to a number of my collaborators that there was an undescribed species of *Eulamprus* endemic to a small region in the upper Blue Mountains of New South Wales, literally on the edge of Sydney, the largest and most important metropolis in Australia, this location, literally being in the most heavily tracked part of Australia, a few exclaimed "*E Gad*", which is taken to mean an expression of surprise, anger, or emphasis, along the lines of "*how is this possible?*" or "*isn't that a surprise?*" As the word "*Gad*" is short and easy to remember and ties in with the genus name abbreviation "*E.*" this (*Gad*) is the chosen etymology for the species.

The short name "*gad*" also appeases those who whinge about scientific names being too long, hard to pronounce or confusing.



An approximately 9 month old *Eulamprus extinctionbusinessorum* sp. nov. from Stony Creek about 2 km north of Jamieson, Victoria (same animal as on cover of this journal). Caught under rock in dry creek bed at 12.15 AM (15 past midnight).

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**EULAMPRUS (INVADERSKINKUS)
EXTINCTIONBUSINESSORUM SP. NOV.**

LSIDurn:lsid:zoobank.org:act:EB5511E8-A479-413F-845D-8224A8C9F5EB

Holotype: A preserved specimen at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, specimen number D71536 collected from Mount Sugarloaf, Cathedral Ranges, Buxton, Victoria, Australia, Latitude -37.37 S., Longitude 145.73 E.

This government-owned facility allows access to its holdings.

Paratypes: 1/ Six preserved specimens at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, being specimen numbers D33296, D33297, D66023, D66024, D66025 and D66026 all collected from the vicinity of the Snobs Creek Trout Hatchery, Victoria, Australia, Latitude -37.25 S., Longitude 145.95 E., being a Victorian Government Wildlife Department owned site where the feral bureaucrats mass breed pest fish such as North American Brook Trout *Salvelinus fontinalis* (Mitchill, 1814), North American Rainbow Trout *Oncorhynchus mykiss* (Walbaum, 1792) and Eurasian Brown Trout *Salmo trutta* Linnaeus, 1758, to release into waterways across the State of Victoria to overrun habitats and wipe out native species of fish and frogs.

They then enact "laws" to "protect" (AKA Ban) these threatened native species, whereupon through their controlled business enterprise "Zoos Victoria" they monopolize the declining species and "manage" them to extinction (in line with the scientific name for the species of Water Skink from this location).

This is all done while scamming taxpayer funded cash grants to line the pockets of the corrupt wildlife bureaucrats and government employees of their monopolistic and dysfunctional "Zoos Victoria" business.,

2/ Two preserved specimens at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, being specimen numbers D36908 and D36909 both collected from Snobs Creek, Victoria, Australia, Latitude -37.27 S., Longitude 145.87 E.

3/ A preserved specimen at the Museums Victoria Herpetology Collection, Melbourne, Victoria, Australia, specimen number D34368 collected from Eildon, Victoria, Australia, Latitude -37.23 S., Longitude 145.92 E.

Diagnosis: Until now, *Eulamprus (Invaderskinkus) pollicecorruptionorum sp. nov.* had been an unnamed species and yet was recognized as distinct and separate from its closest relative, *Eulamprus (Invaderskinkus) heatwolei* Wells and Wellington, 1984 for at least 15 years.

At page 9 of Wells (2009), Richard Wells stated:

"Variation in morphology suggests that this species (*E. heatwolei*) may be composite. In particular the isolated populations on the Fleurieu Peninsula in South Australia, and more significantly, those on the New England Plateau, NSW appear to me to be distinct morphologically from topotypic *E. heatwolei* of the NSW Southern Highlands in their body-form and colouration and so should be more closely studied.

This population from the New England Plateau in NSW has been frequently misidentified in a number of publications as either *Eulamprus quoyii* or *Eulamprus tympanum*. I was intending to describe this species some years ago but never got around to it due to other matters.

Fortunately, Dr Glenn Shea has indicated that he will be describing this very distinctive water skink as a new species as soon as possible."

As a listed coauthor of Pepper *et al.* (2018) Glenn Shea did not seize the opportunity to formally name this taxon, even though their molecular results quite explicitly confirmed the species level divergence of this taxon. See also Hoser (2023d).

With another six years elapsed and the taxon still unnamed, I have taken the opportunity to formally name it as *Eulamprus (Invaderskinkus) pollicecorruptionorum sp. nov.*

Eulamprus (Invaderskinkus) pollicecorruptionorum sp. nov. is

a taxon restricted to higher altitude coastal ranges north of the Hunter Valley and south of the Queensland border in New South Wales.

E. heatwolei Wells and Wellington, 1984, type locality of Robertson, New South Wales, Australia on the southern Highlands is a taxon confined to the region generally south of the Hunter Valley in New South Wales, but extending from the Coolah Tops in the north-west, south-east to include the western Blue Mountains (e.g. Kanangra Boyd National Park), as well as the southern highlands of New South Wales, and north-east Victoria, east of the Great Dividing Range.

E. gad sp. nov. until now also treated as *E. heatwolei* is another obviously unnamed species confined to the upper Blue Mountains in the area of Bullaburra and nearby Wentworth Falls and appears to be a range-restricted endemic, worthy of consideration for conservation significance and management.

E. extinctionbusinessorum sp. nov. also until now also treated as *E. heatwolei* is a taxon apparently endemic to the upper Goulburn River drainage system, in north-east Victoria, north of the Great Dividing Range, being a situation in line with at least two locally endemic tree frog species, namely *Fiacumminganura timdalei* Hoser, 2020 (see Hoser 2020f) and *Rawlinsonia paraewingi* (Watson, Loftus-Hills and Littlejohn, 1971), both similarly disassociated with sibling species further north (west and east of the Great Dividing Range) and south of the Great Dividing Range in the same region of the State of Victoria.

It is a very distinctive looking and divergent member of the complex, and I am surprised that no one had flagged it as an unnamed species previously, save for the molecular results of Pepper *et al.* (2018),

The four preceding species are separated from one another by the following four unique combinations of characters:

E. pollicecorruptionorum sp. nov. has a dorsum that is generally brown all over with few if any black specks or spotting. Spots, if present are only tiny and widely scattered and in no apparent order.

The same applies to the upper surface of the anterior of the tail. The upper surfaces of the forelimbs are a combination of black and yellow markings, being mainly black above and mainly yellow on the sides. The upper surfaces of the hindlimbs are a reticulatum of dark brown over light brown.

The sides of the original tail at the anterior end have a smattering of black spots and squares arranged to form a sort of reticulatum that is continuous for most of the tail's length.

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small brown spots of irregular shape, arranged longitudinally and continue in reduced size and number along the flank becoming whitish or white and faded in colour.

The lower flank is mainly a whitish grey in colour and without bold or distinctive markings or contrasting colours.

E. gad sp. nov. is a relatively distinctive taxon among the four relevant species in that the dorsum has an extremely high density of black spotting on an otherwise metallic brown background. Along either side of the mid-dorsal line this black spotting is so dense that it forms two quite obvious mid dorsal lines but in turn overlain with numerous scattered brown blotches (a contrast to species within the subgenus *Costinisauria* Wells and Wellington, 1985, where specimens have well defined mid dorsal lines that are neither broken or overlain with scattered brown specks, spots, or blotches).

There is a thick black line that runs from snout (where it is faint and brownish in colour), through eye and ear (wider than both and where it becomes black) and including over the entirety of the upper labials and up to nearly the boundary of the dorsolateral edge, which is a light golden colour and sharp etched. This black line has scattered small whitish or white spots of irregular shape, arranged longitudinally and continue in reduced size and greater



An approximately 9 month old *Eulamprus extinctionbusinessorum* sp. nov. from Stony Creek about 2 km north of Jamieson, Victoria (same animal as front cover of this journal). Found under rock in dry creek bed at 15 past midnight.



Hoser 2025 - Australasian Journal of Herpetology 72:3-39, 64.

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number along the flank in 2 or 3 rows, being bold and white in colour.

This black line of the flank continues along the flank of the anterior tail, but rapidly breaks up along the upper and lower edges to give it a mottled black appearance on the sides of the anterior tail, rather than as a distinctive black line or zone. Most of the tail (all the posterior part) is an immaculate brown in colour.

Upper surfaces of limbs are black and light brown marked, relatively boldly so, being mainly black for the forelimbs and less so for the hind limbs.

E. heatwolei of the type form is readily separated from the two preceding taxa by the fact that the black line running from snout to flank is greatly reduced. It is wholly non-existent anterior to the eye and posterior to the eye and between eye and ear hole the scales are mainly brown and with only restricted areas of black, these being in the form of dark patches on the lower parts of the rear upper labials and along the dorsolateral edge of the back of the head.

Behind the ear the black upper lateral band forms and continues along (almost) the upper half of the flank.

This black band along the upper flank has small brown, yellow or white spots, being of irregular shape, arranged in 3-4 rows (but hard to see such an arrangement on cursory glance) and are somewhat faded.

The lower half of the flank is yellowish to white and with the posterior edges of some scales slightly black edged.

The colours and markings of the upper and lower flank tend to merge to form the colouration on the lateral parts of the anterior of the tail.

The dorsum is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement.

Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal half of the tail generally all brown other than for some specimens having reduced black spotting on the flanks at the distal end.

Upper surfaces of the limbs are black and brown arranged to form a semi-banded reticulum on each limb. Fore and hind limbs have similar amounts of black and brown pigment on them.

The dorsolateral edge is jagged being black (below) and brown above, and while jaggedness applies to this area in all species in this group, it is more pronounced in *E. heatwolei* as compared to both *E. policecorruptionorum* sp. nov. and *E. gad* sp. nov., but far less so than in *E. extinctionbusinessorum* sp. nov..

E. extinctionbusinessorum sp. nov. is by far the most distinctive species in the complex.

It has a relatively bold and distinct colouration all over with a particularly strong infusion of yellow in most specimens.

This species is readily identified by the distinctive and well-defined black barring over the sutures of the otherwise immaculate light brown anterior upper labials.

This black expands under the eye and posterior to it forms the wide black zone of the side of the head and onto the anterior of the flank.

Immediately behind the eye is invariably a patch of reddish/yellow brown, surrounded on all sides by black, the patch being of irregular shape.

The black of the flank is expanded in area forming most of the flank.

Both upper and lower edges of the black zone are bounded by immaculate yellow, slightly faded in colour or whitish in aged adults on the lower flank, with the black zone extending in sections to the belly, giving the sides a tiger-like appearance.

Within the black zone of the main part of each flank, the only spotting is a well-defined series of about 12 relatively large yellow spots of irregular shape coordinated with the narrowest points of the black lateral band (as in not where the black extends to the

belly).

The top of the head, especially posterior to the eyes is mainly black pigment, boldly etched with brown on the edges of the eyes and snout area.

Scales anterior to the eyes on the top of the head are also strongly and boldly etched black.

Upper surfaces of the limbs are boldly marked black medium brown, almost banded and with forelimbs with more black than the hindlimbs

Flank pattern breaks up rapidly along the anterior part of the tail and the distal two thirds has no black at all, being a light brown in colour and much lighter than the background colour of the body.

In line with *E. heatwolei*, the dorsum of *E. extinctionbusinessorum* sp. nov. is a chocolate brown colour with numerous faded black spots or small squares running on it in an arrangement that is both irregular and tending towards a longitudinal arrangement.

Because of the size of the black pigment spots, their faded nature and arrangement, one does not get any inclination of any longitudinal lines on the dorsum on a cursory inspection.

Spotting on the dorsum of the tail at the anterior end is also scattered and faded and barely noticeable, with the distal two thirds of the tail generally all brown in this taxon.

The four preceding species, *E. heatwolei*, *E.*

extinctionbusinessorum sp. nov., *E. policecorruptionorum* sp.

nov. and *E. gad* sp. nov. are separated from other species in the subgenus *Invaderskinkus* subgen. nov. by having prominent dark streaks, markings or reticulations on the throat (underside of the head), versus not so in the other species.

Skinks within the subgenus *Invaderskinkus* subgen. nov. are separated from other members of the genus *Eulamprus* Fitzinger, 1843, type species *Lygosoma quoyii* Duméril and Bibron, 1839 by original designation, by the following combination of characters:

Top of head is heavily spotted and flecked with black, cheeks, temples and sides of neck are invariably flecked with white or yellow. Dorsum is spotted black and usually quite heavily, but most of the time without any obvious longitudinal stripes (or if present always broken by brown speckling or similar, as opposed to a clean immaculate line as seen within species in the subgenus *Costinisauria* Wells and Wellington, 1985), excluding sometimes a semi distinct yellowish dorsolateral stripe at the anterior part of the body, extending down from above the eye and dissipating posteriorly along the upper body on the dorsolateral edge. Venter of body is all or mainly immaculate white, cream or light yellow. Does not exceed 90 mm snout-vent length in adults.

The nominate subgenus *Eulamprus* Fitzinger, 1843

comprises the three species *E. paulwoolffi* Hoser, 2020, *E. onethatwasoverlooked* sp. nov. (this paper) and the type species

E. quoyii (Duméril and Bibron, 1839). They are separated from other similar Australian species (and all other species in the same genus, as in the other two subgenera) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent, versus 80 mm or less in the other two subgenera) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with very limited spots or flecks.

The nine species, *Eulamprus kosciuskoi* (Kingham, 1932), type species for the subgenus *Costinisauria* Wells and Wellington,

1985 and the other eight species in the same subgenus being

E. leuraensis Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes* sp. nov.,

E. aha sp. nov., *E. gotit* sp. nov., *E. nrl* sp. nov. and *E. afl* sp.

nov. being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the

genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct (but invariably immaculate) and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is as

follows: It is a genus of largish (80-110 mm snout-vent in adults), fast moving, diurnally active skinks, characterised by pentadactyle limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. pollicecorruptionorum sp. nov. is depicted in life online at:
<https://www.flickr.com/photos/stephenmahony/8184297494/>
 and

<https://www.flickr.com/photos/julesfarquhar/52450152316/>
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<https://www.flickr.com/photos/ryanfrancis/53497035215/>
 and

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 and

<https://www.flickr.com/photos/23031163@N03/40316380670/>

E. gad sp. nov. is depicted in life online at:

<https://www.inaturalist.org/observations/202365145>
 and

<https://www.inaturalist.org/observations/195554944>
 and

<https://www.inaturalist.org/observations/251849630>
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 and

<https://www.flickr.com/photos/gondwanareptileproduction/51702654777/>
 and

<https://www.flickr.com/photos/gondwanareptileproduction/37001011770/>

and also on the back cover (page 64) of this journal issue.

Distribution: *E. extinctionbusinessorum* sp. nov. until now has been treated as *E. heatwolei*.

It is a taxon apparently endemic to the upper Goulburn River drainage system, in north-east Victoria, north of the Great Dividing Range, being a situation in line with at least two locally endemic tree frog species, namely *Fiacumminganura timdalei* Hoser, 2020 (see Hoser 2020f) and *Rawlinsonia paraewingi* (Watson, Loftus-Hills and Littlejohn, 1971), both similarly disassociated with sibling species further north (west and east of the Great Dividing Range) and south of the Great Dividing Range in the same region of the State of Victoria.

Etymology: As mentioned, or inferred in the etymology of *E. pollicecorruptionorum* sp. nov. elsewhere in this paper, corrupt public servants seek to run fake narratives of the great job they are not doing.

This is being done non-stop by wildlife department officials in the Australian state of Victoria who spend lots of time putting out

propaganda telling people about their great work protecting the environment, while in fact doing the exact opposite.

Like corrupt cops, they regularly nominate themselves for Australia Day Awards, Knighthoods and the like in the form of King's or Australian Government awards and honours in what is perhaps the most nepotistic honours system on the planet.

Symbolic of this is a species of lizard occupying a biogeographically significant river system, being the Goulburn River drainage in north-east Victoria, noting that the Wildlife Department and associated government agencies have done all they can to destroy the relevant ecosystems and the more vulnerable wildlife species within it.

Emblematic of this is the fact that the department entrusted to protect and manage native species still as of 2024 tries to deliberately introduce known feral species and breed them in the local environment with a view to displacing and exterminating threatened species.

The Victorian Government Wildlife Department, this week (late 2024) calling itself the "Conservation Regulator" (an oxymoron to end all oxymorons), are now spending millions of dollars to mass breed pest fish such as North American Brook Trout *Salvelinus fontinalis* (Mitchill, 1814), North American Rainbow Trout *Oncorhynchus mykiss* (Walbaum, 1792) and Eurasian Brown Trout *Salmo trutta* Linnaeus, 1758, to release into waterways across the State of Victoria including the Goulburn River basin to overrun habitats and wipe out native species of fish and frogs, including the now endangered *Fiacumminganura timdalei* Hoser, 2020 (see Hoser 2020f).

All this ecological carnage is so a few of their redneck employees can spend a few days in waders trying to catch the feral fish they put into the streams!

Same applies for the Eurasian Deer and Blackberries they introduced to the local bush in the same area, both of which are now overrunning the habitat at the expense of what native mammals and native vegetation remains.

The same corrupt bureaucrats then enact "laws" to "protect" (AKA Ban) these threatened native species facing extinction to prevent any member of the public from trying to save them.

Penalty for doing so is financial ruin and jail.

The wildlife department's own controlled business enterprise "Zoos Victoria" then monopolize the declining species and "manage" them to extinction over time frames spanning decades.

This is all done while scamming taxpayer funded cash grants to line the pockets of the corrupt wildlife bureaucrats and government employees of their monopolistic and dysfunctional "Zoos Victoria" business.

They then put out North Korean style propaganda detailing their world leading "conservation work" and captive breeding programs, including through the various state-controlled media outlets that dominate Australian media and using full time staff dedicated to flooding the internet and social media with the same web of lies and deceit.

As corrupt members of the Victorian Government wildlife department seek to be honoured for the good work they do not do, I think it is fitting that an etymology for a Goulburn River basin species be made that draws attention to the evil people hastening the decline of native species in this region and hence the species name *E. extinctionbusinessorum* sp. nov. in honour of the Victorian Government wildlife department, this week calling itself the "Conservation Regulator" and their monopolistic and dysfunctional business "Zoos Victoria".

In another oxymoron "Zoos Victoria" and the "Conservation Regulator" aggressively claims and monopolizes the Australian registered trademark "Fighting extinction" (see Australian trademark number 1470848) to ensure that no one else in this country can even claim they are "fighting extinction".

This is because of a very real fear of being trademark bullied and bankrupted by the Victorian Government Solicitor lawyers and various cocaine addicted judicial figures acting for the dysfunctional "Zoos Victoria" and "Conservation Regulator" businesses.

A business owned by wildlife conservation icon Maryann Martinek was deregistered after the predecessor in name for the "Conservation Regulator" then called "Department of Sustainability and Environment" AKA DSE, took trademark action against her in the period following the Black Saturday bushfires in 2009.

**EULAMPRUS (INVADERSKINKUS)
CORRUPTBUREAUCRATORUM SP. NOV.**

LSIDDurn:lsid:zoobank.org:act:1FE39504-D949-4A86-AA90-5753138D2D59

Holotype: A preserved specimen at the Australian National Wildlife Collection, Commonwealth Scientific and Industrial Research Organisation (AKA CSIRO), Canberra, ACT, Australia, specimen number R12050 collected from Square Rocks trail, near the car park, in the Namadgi National Park, Australian Capital Territory, Australia, Latitude -35.5193 S., Longitude 148.9139 E.

This government-owned facility allows access to its holdings.

Paratype: A preserved specimen at the Australian National Wildlife Collection, Commonwealth Scientific and Industrial Research Organisation (AKA CSIRO), Canberra, ACT, Australia, specimen number R12001 collected from Square Rocks trail, near car park, Namadgi National Park, Australian Capital Territory, Australia, Latitude -35.5193 S., Longitude 148.9139 E.

Diagnosis: The putative taxon *Eulamprus (Invaderskinkus) tympanum* has been variously subdivided by recent authors to include up to three species.

These are (as cited and recognized in Wells 2009) the following:

1/ *E. tympanum* (Lönnerberg and Andersson, 1913) with a type locality of near Melbourne, Victoria;

2/ *E. marnieae* Hutchinson and Rawlinson, 1995, with a type locality of 5.5 km east of Dreeite, Victoria

Latitude 38.11 S., Longitude 143.34 E., being a taxon ostensibly from the volcanic plains of West Victoria, and

3/ *E. herseyi* Wells and Wellington, 1985 type locality of Dora Dora National Park proposal near Albury, New South Wales, Latitude 35.55 S., Longitude 147.35 E., being a species of the upper Murray River system.

The molecular results of Pepper *et al.* (2018) show no basis to recognize *E. marnieae* even at the subspecies level, which accords with my own experience with *E. tympanum* from west Victoria.

That is the local variation within specimens there is little different to those found in other parts of the range of the species throughout much of Victoria and the usual individual variation in most populations.

Colder areas, including those on top of cold hills and higher ranges (e.g. the higher Otways) tend to have specimens with more black on their dorsum.

Eulamprus herseyi Wells and Wellington, 1985 also appears to be a questionable taxon on the basis of the molecular results of Pepper *et al.* (2018) but has a stronger basis of recognition.

As it appears to be an independently evolving and divergent lineage of the Upper Murray River drainage basin, I recognize this species herein and separate it from the newly described taxon herein, being *Eulamprus (Invaderskinkus) corruptbureaucratorum sp. nov.*

E. corruptbureaucratorum sp. nov. is a taxon largely confined to the upper Murrumbidgee River system in the Australian Capital Territory, Australia and both morphologically and on the published results of Pepper *et al.* (2018) is in fact species-level divergent from the other taxa, *E. tympanum* and the closely allied *E. herseyi*.

The three species are separated from one another by the following unique combinations of characters:

E. corruptbureaucratorum sp. nov. is a lizard with a light yellowish-brown dorsum and an immaculate bright yellow coloured head. Exceptional to this are a series of small dark brown triangles at the rear and base of each upper labial (often except the most anterior), with the base of each triangle on the lower edge of each labial and these triangles increasing in size as one moves to

further back upper labials.

There are no similar such triangles on the upper labials of either *E. tympanum* or the closely allied *E. herseyi*.

The original tail of *E. corruptbureaucratorum sp. nov.* is heavily spotted along all or most of its length, especially on the flanks. Between eye and ear is no obvious black bar, the relevant scales being either brown or sometimes smudged with some black or an irregular black mark on a small part of the area only.

Posterior to the ear, a black line about two thirds as wide as the ear hole extends back and widens to become the black zone occupying slightly more than half of the upper flank. On this black zone are scattered small brownish-yellow spots that are vaguely arranged in a longitudinal manner forming 1, 2, or 3 vague series of spots. The lower flank is mottled a dusky grey, white and yellow.

Top of the tail is brownish, especially anteriorly and more yellowish, with heavy black markings at the anterior flanks.

By about halfway along the tail, heading distally, the black dissipates, to become a series of small spots running along the latter half of the tail.

The top of the rear of the head had semi-distinct ill-defined black markings which become slightly more well defined, but still ill defined on the dorsum of the body.

Upper surfaces of limbs are light purple brown with ill defined blackish markings, slightly less in area than the lighter background and of similar intensity on both fore and hind limbs.

E. tympanum and the closely allied *E. herseyi* are similar in most respects to *E. corruptbureaucratorum sp. nov.* but are separated from one another as follows:

In *E. herseyi* the black on the back concentrates on the dorsal midline (the vertebral line) forming a continuous black line that is of varying thickness and has ill defined edges. This is not seen in *E. tympanum* or *E. corruptbureaucratorum sp. nov.*

On the anterior part of the tail, black spotting is mainly single along the midline in *E. herseyi*, versus somewhat paired in *E. tympanum* or wholly irregular in *E. corruptbureaucratorum sp. nov.*

The three species, *E. tympanum*, *E. corruptbureaucratorum sp. nov.* and *E. herseyi* are separated from the other four species within the subgenus *Invaderskinkus subgen. nov.* by having an immaculate throat with at most a few pale grey spots or streaks, versus thick dark grey or black streaks, blotches or reticulations in the other species.

Those four species are *E. heatwolei* Wells and Wellington, 1984 *E. policecorruptionorum sp. nov.*, *E. gad sp. nov.*, and *E. extinctionbusinessorum sp. nov.*

Skinks within the subgenus *Invaderskinkus subgen. nov.* are separated from other members of the genus *Eulamprus* Fitzinger, 1843, type species *Lygosoma quoyii* Duméril and Bibron, 1839 by original designation, by the following combination of characters:

Top of head is heavily spotted and flecked with black, cheeks, temples and sides of neck are invariably flecked with white or yellow. Dorsum is spotted black and usually quite heavily, but most of the time without any obvious longitudinal stripes (or if present always broken by brown speckling or similar, as opposed to a clean immaculate line as seen within species in the subgenus *Costinisauria* Wells and Wellington, 1985), excluding sometimes a semi distinct yellowish dorsolateral stripe at the anterior part of the body, extending down from above the eye and dissipating posteriorly along the upper body on the dorsolateral edge. Venter of body is all or mainly immaculate white, cream or light yellow. Does not exceed 90 mm snout-vent length in adults.

The nominate subgenus *Eulamprus* Fitzinger, 1843 comprises the three species *E. paulwoolffi* Hoser, 2020, *E. onethatwasoverlooked sp. nov.* (this paper) and the type species *E. quoyii* (Duméril and Bibron, 1839). They are separated from other similar Australian species (and all other species in the same genus, as in the other two subgenera) as follows: They are defined as a large Australian water skink (adults reaching over 110 mm snout-vent, versus 80 mm or less in the other two

subgenera) with sharply-defined narrow pale yellow dorsolateral stripes but without a black vertebral stripe and a top of head that is either immaculate (one colour) or with only with very limited spots or flecks.

The nine species, *Eulamprus kosciuskoi* (Kinghorn, 1932), type species for the subgenus *Costinisauria* Wells and Wellington, 1985 and the other eight species in the same subgenus being *E. leuraensis* Wells and Wellington, 1984, *E. worrelli* (Wells and Wellington, 1985), *E. couperi* (Wells, 2009), *E. yes sp. nov.*, *E. aha sp. nov.*, *E. gotit sp. nov.*, *E. nrl sp. nov.* and *E. aff sp. nov.* being the entirety of the subgenus *Costinisauria* Wells and Wellington, 1985 are separated from other species within the genus *Eulamprus* Fitzinger 1843 (as in the other two subgenera) by having a cream, white or pale yellow belly with no or limited amounts of mottling and no obvious grey blotches; a dorsum with one or more dark longitudinal stripes, sometimes that are only semi-distinct (but invariably immaculate) and a throat that is immaculate or at most with a few pale grey spots or streaks.

The diagnosis for the genus *Eulamprus* Fitzinger, 1843 is as follows: It is a genus of largish (80-110 mm snout-vent in adults), fast moving, diurnally active skinks, characterised by pentadactyl limbs; smooth scales; anterior ear lobules absent; lower eyelid moveable and scaly; parietal scales in contact behind the interparietal; fourth toe much longer than the third; base of fourth toe is broad with three or more granules or lamellae between the lateral scales and all or some of the lamellae including the distal ones divided; surfaces of the tail and the rump are not flushed with red, pink or blue; hindlimb is long being at least 40 per cent of snout-vent length; live bearing (derived and modified from Cogger, 2014).

E. corruptburaucratorum sp. nov. is depicted in life online at: <https://canberra.naturemapr.org/sightings/4535227>

and <https://www.inaturalist.org/observations/217571>

and

<https://canberra.naturemapr.org/sightings/4588328>

and

<https://www.flickr.com/photos/11701520@N03/16515864920/>

E. herseyi is depicted in life online at:

<https://www.inaturalist.org/observations/256252367>

and

<https://www.inaturalist.org/observations/234281477>

and

<https://www.inaturalist.org/observations/25664328>

and

<https://www.inaturalist.org/observations/36425951>

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

<https://www.inaturalist.org/observations/256253228>

and

<https://www.inaturalist.org/observations/256253280>

and

<https://www.flickr.com/photos/gondwanareptileproduction/52521836800/>

and

<https://www.inaturalist.org/observations/77223675>

and

<https://www.inaturalist.org/observations/139718516>

and

<https://www.inaturalist.org/observations/152579055>

Distribution: *E. corruptburaucratorum sp. nov.* is a taxon largely confined to the upper Murrumbidgee River system in the Australian Capital Territory, Australia.

Eymology: An old proverb says that the fish rots from the head. The centre of government and corruption in Australia appears to be the public service city of Canberra in the Australian Capital Territory.

No one is asserting that all public servants are crooks but suffice to say that the culture here is toxic and corruption certainly rules

supreme.

One only needs to see English King's birthday honours lists for Australia, who gets "State Funerals" and so on and one realises the extent of the extensive corruption and nepotism in the Australian public service.

As many corrupt bureaucrats crave a false narrative seeking recognition for all the good things that they never do, including through the building of obscene monuments, statues and puff pieces in the state-controlled media, I think it is fitting that corrupt bureaucrats are honoured with an etymology for the things they do in fact make happen.

That is corruption.

It is particularly fitting that in a city and territory in the form of the Australian Capital Territory, where pretty much every bit of real estate is named in honour of some dishonest and corrupt politician, public servant or overpaid "law enforcement" officer that runs crime instead of enforcing the law, that the collective corruption in this group is recognised in the etymology of a relatively common local skink species in the form of *E. corruptburaucratorum sp. nov.*

E. corruptburaucratorum sp. nov. is also a range-restricted taxon and may ultimately become extinct as a result of the idiot Australian government policy of mass overpopulation of humans in the near term.

While one hopes that one day Australia will be rid of the scourge of a corrupt bureaucracy, it is to be hoped that it is never ridded of the species *E. corruptburaucratorum sp. nov.*

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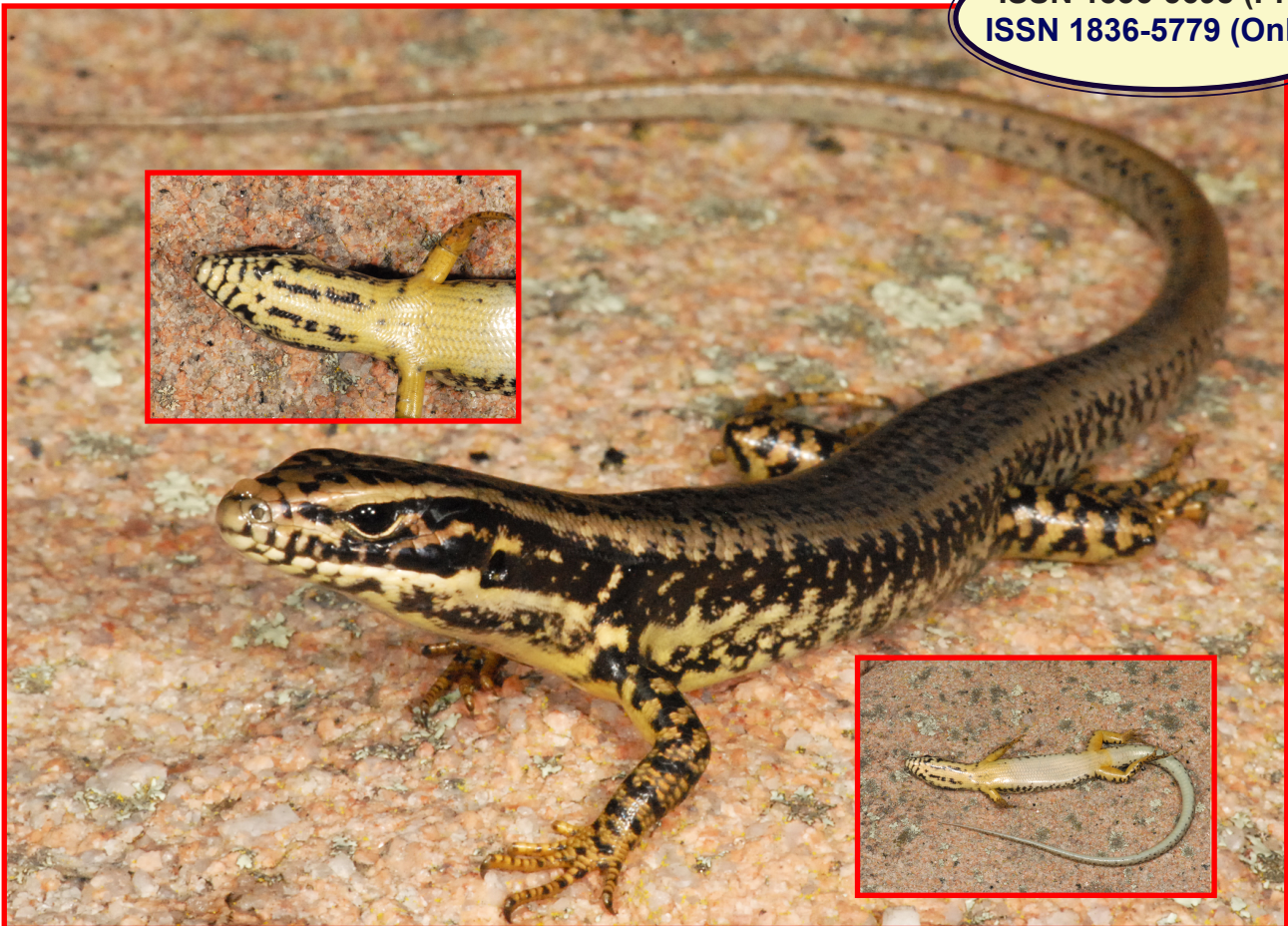
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CONFLICTS OF INTEREST

None.

Below: An adult *Eulamprus extinctionbusinessorum* sp. nov. in situ at Gooram Falls (between Merton and Euroa), Victoria.





An adult male *Eulamprus extinctionbusinessorum* sp. nov. from Gooram Falls (between Merton and Euroa), Victoria and habitat at site (below), where the species is seen active in large numbers during favourable weather conditions.



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Contents on page 2