

Issue 54, 14 October 2021

ISSN 1836-5698 (Print)  
ISSN 1836-5779 (Online)

# *Australasian Journal of Herpetology*



Hoser, R. T. 2021. Clawing their way out of synonymy! *Cyrtodactylus* Gray, 1827 *sensu lato*: The overdue break up of a large assemblage of pan-Asian geckos. *Australasian Journal of Herpetology* 54:1-64.



## Clawing their way out of synonymy! *Cyrtodactylus* Gray, 1827 *sensu lato*: The overdue break up of a large assemblage of pan-Asian geckos.

LSIDURN:LSID:ZOOBANK.ORG:PUB:00AC23B8-351A-4AF6-9DAC-BB1E4485295B

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Received 1 August 2021, Accepted 24 September 2021, Published 14 October 2021.

### ABSTRACT

For nearly 200 years the genus *Cyrtodactylus* Gray, 1827 has been relatively untouched by taxonomists at the genus level. This is in spite of the fact that over 300 species have been formally named and recognized as distinct as of 2020 with more than 120 other identified species awaiting formal description and naming.

Other than highly divergent species groups misplaced in *Cyrtodactylus*, long recognized as separate genera, a small number of species groups within *Cyrtodactylus* as generally recognized in 2021 have been split off into various genera, but these have invariably been synonymised by later authors.

Numerous other so-called "species groups" have been recognized for decades.

Molecular studies have shown the radiation of *Cyrtodactylus* Gray, 1827 *sensu lato* to be archaic and warranting genus-level splits if the species within relevant groups are to be treated in the same way as other geckos.

To that end, this paper splits *Cyrtodactylus* into a total of 45 of logical species groups based on historical and morphological divergence at the genus level. 40 of these are formally named for the first time as are 12 new subgenera in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended since.

All are formally placed within the tribe Tetenditnguini *tribe nov.*, formally named for the first time.

Eighteen species are also formally named for the first time.

Following this paper, there remains in excess of 100 unnamed species in the tribe, with the formal naming of dozens of others deferred to others who have stated an intent on naming these in the near future, this being done in accordance with the recommendations of the *International Code of Zoological Nomenclature*.

There is also a warning in relation to taxonomic vandalism and flagrant disregard for the rules of the *International Code of Zoological Nomenclature* by a band of law breakers improperly seeking self-gratification.

**Keywords:** taxonomy; nomenclature; taxonomy; gecko; lizard; Asia; Gekkonidae; *Cyrtodactylus*; *Puellula*; *Geckoella*; *Siwaligekko*; *Quantasia*; new tribe: Tetenditnguini; new genus; *Tetenditnguini*;

*Tibetgekko*; *Aeschtgekko*; *Ahyonggekko*; *Balleriogekko*; *Bertlinggekko*; *Bouchardgekko*; *Bourgoingekko*; *Dmitrievgekko*; *Evenhuisgekko*; *Grygierekko*; *Kottelatgekko*; *Cuprumcinctim*; *Kullandergekko*; *Papegekko*; *Lyalgekko*; *Macrolyalgekko*; *Pylegekko*; *Arunachalgekko*; *Rheindtgekko*; *Rosenberggekko*; *Welterschultesgekko*; *Zhiqiangzhanggekko*; *Maculagekko*; *Morotaigekko*; *Infigo*; *Russetocolore*; *Nigricansalvum*; *Facileoccultatur*; *Fasciacorpus*; *Brunneisocolura*; *Linguarosea*; *Albatubercula*; *Graysongekko*; *Obscuramacula*; *Vinculatigris*; *Spinagekko*; *Maculatumetglobum*; *Tuberculatasinus*; *Fasciaincompletum*; new subgenus; *Parapuellula*; *Elegansgekko*; *Purpurabrunusgekko*; *Exilgekko*; *Claragekko*; *Tenuisalbavincula*; *Terrenusgekko*; *Arenosumgekko*; *Triavincula*; *Macrolyalgekko*; *Melanogekko*; *Purpuraoculus*; new species; *hoserae*; *gedyei*; *oxyi*; *wijenayakai*; *rowvillewilsonorum*; *rosswellingtoni*; *richardwellsi*; *trevorhawkeswoodi*; *wennigae*; *caudatenuis*; *merceicai*; *alexanderdudleyi*; *fritzmaarteni*; *keilleri*; *scottgranti*; *michaelsmythi*; *tomcottoni*; *jackyhoserae*.

## INTRODUCTION

For nearly 200 years the genus *Cyrtodactylus* Gray, 1827, better known as the bent-toed geckos has been relatively untouched by taxonomists at the genus level. This is in spite of the fact that over 300 species have been formally named and recognized as distinct as of 2020 with over 120 known species awaiting formal description and naming.

A small number of species groups have been split off into various genera, including *Puellula* Blyth, 1860, *Geckoella* Gray, 1867, *Siwaligekko* Khan, 2003 and *Quantasia* Wells and Wellington, 1985. However these have mainly been synonymised by later authors.

Numerous other so-called "species groups", some including the preceding groups, have been recognized for decades by numerous authors including by Agarwal and Karanth (2015), Bauer *et al.* (2013), Brennan *et al.* (2017), Davis *et al.* (2020), Grismer and Davis (2018), Grismer and Grismer (2017), Grismer *et al.* (2012, 2013, 2014a, 2014b, 2021), Harvey *et al.* (2016), Kraus (2008), Luu *et al.* (2017), Murdoch *et al.* (2019), Nazarov *et al.* (2008, 2012), Ngo *et al.* (2017), Nguyen *et al.* (2013, 2017), Oliver *et al.* (2012), Quah *et al.* (2019), Rösler *et al.* (2007), Shea *et al.* (2011), Sumontha *et al.* (2012), Tallowin *et al.* (2018), Welton *et al.* (2010a, 2010b), and Wood *et al.* (2012, 2020).

Molecular studies have shown the radiation of *Cyrtodactylus* Gray, 1827 *sensu lato* to be archaic (e.g. Tallowin *et al.* 2018, Grismer *et al.* 2021a) and warranting genus-level splits if the species within relevant groups are to be treated in the same way as other geckos.

That a formal break up of this massive group of species is long overdue is a statement of the obvious.

19 years back, Wells (2002) wrote:

*"To my way of thinking the genus Cyrtodactylus must be regarded as polyphyletic given the vast divergences between some species groups, and its break-up is long overdue I think."*

To that end, this paper formally splits *Cyrtodactylus* into 45 logical species groups at the genus level based on historical and morphological divergence. 40 of these are formally named for the first time as either genera or subgenera in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) as amended since. 12 new subgenera are also formally named, as are 19 previously unnamed species.

All are formally placed within the tribe, *Tetenditunguini* *tribe nov.*, formally named for the first time.

Wells (2002) also wrote:

*"Cyrtodactylus it seems, is one of those sacred-cow genera that herpetologists are uncomfortable messing with because there are just too many species living across a vast area of the Earth - from south-eastern Europe, across Asia to Australia - and the available generic synonymy is substantial and not without its own problems."*

To paraphrase a well-known TV Space series (Star Trek) I say:

*"I hereby take the bold step of going where no herpetologist has gone before and dismember the genus Cyrtodactylus by splitting it 45 ways."*

## MATERIALS AND METHODS

Relevant literature on the entire genus *Cyrtodactylus* Gray, 1827 *sensu lato* current to 2020, with material added in the later review stages of this paper in 2021 was scrutinized to confirm the likelihood of potentially unnamed taxa at the genus or species level. In the first instance there were numerous genera and species flagged as unrecognized or not yet named in most recent taxonomic treatments.

An online publication known as "The Reptile Database" (at: <http://www.reptile-database.org>), managed by Peter Uetz of the USA, with a near complete synonymy list for extant species contains numerous flaws, but is a useful means by which to find available names for divergent forms that are not necessarily recognized by the authors of other relevant publications.

In other words, Uetz's site has a near complete list of available synonyms, including self-evidently, some of which can be resurrected.

A wide literature search (see citations below) also filled in further potential gaps in terms of potential synonyms.

Flagged genera for which there appeared to be unnamed genus-level divergent species or species-level divergent species were numerous, but on crude audit, was quickly culled to reveal a lesser number of unnamed taxa at both genus and species levels.

This was still dozens of genera and hundreds of candidate species.

Over 100 putative species-level taxa were excluded from further scrutiny in terms of this paper on the basis I was aware of people working on the said forms, or that others had claimed to be working on them. I had no desire to intrude on, or in any way disrupt the ongoing works of others, including persons who claimed to be working on relevant forms, but may in fact not be.

For all relevant taxa, each were also compared with the available literature, any available molecular data and/or sequences published or publicly available, specimens, photos, known synonymies and all other relevant and available means of checking.

In summary dozens of genera were flagged that appeared to have divergent and unnamed genus or subgenus-level splits.

This audit included every known species in *Cyrtodactylus* Gray, 1827 *sensu lato* as well as dozens of yet to be named forms, including within many species groups, these often being labelled as "candidate species".

Forms described and named in late 2020 and 2021 were added to this treatment as fast as I was made aware of them.

For most of these, the awareness of newly named taxa was effectively contemporaneous with publication due to wide promotion of the relevant papers online.

Zoobank at <http://zoobank.org> was also regularly checked for newly named taxa relevant to this paper.

All taxa within the putative genus *Cyrtodactylus* were flagged and inspected with a view to see if they needed to be formally named for the first time according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

In terms of each taxon, all available publications relevant to them were inspected.

If the taxa checked out as appearing to be unnamed, not being worked on by another person (or alleged to be), specimens of each were inspected to see if they appeared to fit the relevant criteria for division at the relevant taxonomic level.

As stated already, this was also matched with all available information, be it genetic studies, morphological studies, effects of known biogeographic barriers, climate changes in the past and any other factors deemed worthy of consideration.

Beyond their original formal descriptions, many species had not been examined by taxonomists since.

In terms of the taxa identified within this paper, the auditing process took some years and the taxonomic acts taken herein were made only on the basis of overwhelming scientific evidence and an abundance of caution.

This was however coupled with the important need to identify unnamed taxa in a timely manner, knowing full well that as a group, individual species within *Cyrtodactylus* Gray, 1827 *sensu lato* are among the most threatened small lizards on the planet.

This is due to a number of factors, but invariably related to ongoing human overpopulation and associated activities aggravated by the high number of small range restricted species in the complex, coupled with the vulnerability of their habitat to ongoing or potential human exploitation.

The potential longer-term threat posed by invasive "weedy species" should not be underestimated.

The papers and other published material relevant to the decision to name various forms at any level are cited in the results section of this paper.

Material not relied upon in any way is generally excluded from citation unless relevant in some way to the decisions made herein. Papers that duplicate earlier findings, but do not change the status quo in any way or add anything further are generally not cited in this paper.

## RESULTS

These are self evident in the material that follows and are therefore not summarized in detail under this heading as may be expected in a paper of this nature.

This is done for the reason to avoid unnecessary duplication of the same information.

In summary, *Cyrtodactylus* Gray, 1827 *sensu lato* is herein treated as a tribe within the Gekkonidae.

The tribe is formally named *Tetenditnguini* *tribe nov.*

*Cyrtodactylus* Gray, 1827 *sensu lato* is split into 45 genera, 40 being named for the first time as well as 12 new subgenera also all formally named for the first time.

Grismer *et al.* (2021a) fully aware that I was intending to be naming dozens of species within *Cyrtodactylus* Gray, 1827 *sensu lato* in this paper, pre-emptively made ambit claims across numerous species groups, claiming to be working on them or intending to name the relevant candidate species.

While some of these claims are highly questionable, I do not want to be seen to be rushing to “scoop” others in asserting name authority for taxa and so have made the decision not to publish new names of the over 100 affected relevant species, being the majority of species intended to be formally named.

Monopolizing unnamed species and then not naming them in a timely manner is not just contrary to the recommendations in the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), Appendix A2, but also potentially risky for the conservation of the relevant taxa.

In the case of unnamed species effectively “claimed” by Grismer *et al.* (2021a) are a large number of forms restricted to limestone formations at risk of exploitation by cement companies operating in the relevant parts of South-east Asia.

It is hoped that my refusal to name affected forms, following the ambit claims of Grismer *et al.* (2021a) does not in fact ultimately lead to the extinctions of any of the relevant forms before they even get named.

All the relevant unnamed forms, effectively ignored in the genus-level treatment herein comprise species within the relevant newly named genera or pre-existing genera.

As far as I can make out, there are after this paper, no unnamed genus-level groups left within this assemblage (this tribe).

A limited number of undescribed forms that no person has indicated intent to formally name, have been formally named within this paper, totalling 18 species in total.

While there have been numerous phylogenies produced for various species groups or geographical regions within *Cyrtodactylus* Gray, 1827 *sensu lato* (now treated as *Tetenditnguini* *tribe nov.*) none have attempted to deal with all known species within this assemblage.

Grismer *et al.* (2021a) did their proposed phylogeny for the group, but omitted about 70 described species, most of which were simply ignored.

This paper is the first which deals with all described forms (over 310) as of mid 2021 and is the first full assessment of the group. Some species recently named were not on the Uetz database (see above), but properly named and registered with Zoobank at <http://zoobank.org> and therefore accepted as validly named entities, as were a small number of forms treated as synonyms by Uetz.

All species are allocated to named (herein) or previously named genera that are herein resurrected from synonymy.

The “species groups” of Grismer *et al.* (2021a) largely match genera within this paper, but there are a number of differences.

While these are self-evident in the descriptions that follow, examples include the division of the majority of species on the Indian subcontinent into multiple genera, as opposed to a single species group in Grismer *et al.* (2021a), or the correction of some of their obvious inexplicable errors, such as the placement of “*Cyrtodactylus spinosus* Linkem, McGuire, Hayden, Setiadi, Bickford and Brown, 2008” in their so-called “*yathepyanensis* group” even though it is not closely related to the species “*Cyrtodactylus yathepyanensis* Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017”.

In this paper the two are in very separate genera.

In terms of genus-level placements, the criteria for making them has been clear published evidence suggesting a divergence of more than 10 MYA (usually far in excess of this) from nearest relative in another genus (identified herein), based on previously published molecular data and estimates by the relevant authors and/or extreme morphological divergence indicating a timeline of divergence in excess of 10 MYA if and when molecular data is absent.

I note herein that this preceding criteria alone is reason for the different treatment of species from the Indian subcontinent, by way of genus-level splitting herein as opposed to the treatment by Grismer *et al.* (2021a) who put all in a single species group.

Even so called “lumpers” must concede that the genus *Cyrtodactylus* as recognized by most herpetologists pre-dating this paper contains genus-level lineages worthy of taxonomic recognition and so should at least recognise all genera identified herein bar *Cyrtodactylus* at the subgenus level.

Separate to new genera formally named within this paper, the subgenera named within this paper are generally identified as less divergent than lineages identified as genera. In many cases where divergence estimates have been published, they have generally been in the range of 10-13 MYA.

For genera identified herein in which divergence estimates have been published, they have usually been in excess of 13 MYA, notwithstanding my statement herein that 10 MYA was treated as a minimum point of divergence.

These divergence dates match genus-level recognition for other species groups within the Reptilia and including other geckos.

Literature relevant to the taxonomic conclusions within this paper include Agarwal and Praveen Karanth (2014), Agarwal (2016), Agarwal *et al.* (2014a, 2014b, 2016, 2018a, 2018b), Akman *et al.* (2018), Amarasinghe *et al.* (2009, 2020), Annandale (1905a, 1905b, 1906, 1913), Areesirisuk *et al.* (2018), Ashaharrazza and Pednekar (2019), Bartlett (1981), Batuwita and Bahir (2005), Bauer (2003, 2004), Bauer and Doughty (2012), Bauer and Giri (2004), Bauer and Henle (1994), Bauer *et al.* (2002, 2003, 2009, 2010, 2013), Beddome (1870, 1878), Beolens *et al.* (2011), Beukema (2011), Bhupathy and Sathishkumar (2013), Biswas (2007), Bleeker (1860), Blyth (1859, 1861), Bobrov and Semenov (2008), Boulenger (1885, 1893, 1897a, 1897b, 1905, 1914), Brennan *et al.* (2017), Brongersma (1928, 1934, 1948), Brown and McCoy (1980), Brown and Parker (1973), Capocaccia (1961), Chan and Norhayati (2010), Chan-ard and Makchai (2011), Chan-ard *et al.* (1999, 2015), Chandramouli (2020), Che *et al.* (2020), Chomdej *et al.* (2020), Cogger (2014), Cogger *et al.* (1983), Couper, Amey and Shea (2004), Covacevich (1987), Covacevich *et al.* (1982), Daltry (2002), Daltry and Traeholt (2003), Darevsky (1964a, 1964b), Darevsky and Szczerbak (1997), Darevsky *et al.* (1998), Das (1994, 1997, 2004, 2005a, 2005b), Das and Das (2017), Das and Grismer (2003), Das and Lim (2001), Das and Lim (2000), David *et al.* (2004, 2011), Davis *et al.* (2019, 2020, 2021), Deraniyagala (1945), de Rooij (1915), De Silva and Ukuwela (2020), De Vis (1892), Dring (1979), Duda and Sahi (1978), Duméril and Bibron (1836), Dunn (1927), Ehmman (1992), Fay *et al.* (2019), Ferner *et al.* (2000), Forest *et al.* (2007), Frost and Hillis (1990), Frost and Kluge (1994), Gamble *et al.* (2012), Garman (1901), Geissler *et al.* (2009, 2019), Goldberg (2012), Goldberg *et al.* (2020), Gray (1827, 1831, 1845), Grismer (2005, 2008, 2011), Grismer and Ahmad (2008), Grismer and David (2018), Grismer and Grismer (2017), Grismer and Leong (2005), Grismer and Quah (2019), Grismer *et al.* (2007a, 2007b, 2008, 2010, 2012, 2013, 2014a, 2014b, 2015, 2016a, 2016b, 2017, 2018a, 2018b, 2018c, 2018d, 2018e, 2019a, 2019b, 2019c, 2019d, 2020a, 2020b, 2020c, 2020d, 2020e, 2021a, 2021b, 2021c), Günther (1864), Günther and Röslér (2002), Harikrishnan and Vasudevan (2018), Hartmann *et al.* (2016), Harvey *et al.* (2015, 2016), Harvey *et al.* (2011), Hayden *et al.* (2008), Heidrich (2007), Hikida (1990), Hillis (2019), Hoffmann (1998), Holderegger *et al.* (2019), Hoser (2018a, 2018b, 2018c, 2018d), Inger (1958), Inger and King (1961), Iskander *et al.* (2011), Jerdon (1870), Johnson *et al.* (2012), Karin *et al.* (2017), Karkkainen *et al.* (2020), Karunarathna *et al.* (2019), Kastle *et al.*



(2013), Kathriner *et al.* (2014), Khan (1980, 1993, 2003a, 3003b, 2003c), Khan and Tasnim (1990), King (1962), Kluge (1983, 1993), Koch (2012), Komeriëki *et al.* (2020), Kraus (2007, 2008, 2019), Kraus and Allison (2006), Kraus and Oliver (2020), Kraus and Weijola (2019), Kunya *et al.* (2014, 2015), Kwet (2013, 2017), Le *et al.* (2016, 2021), Li (2007), Linkem *et al.* (2008), Liu and Rao (2021), Lister (1888), LiVigni (2013), Lucas and Frost (1900), Luu *et al.* (2011, 2014, 2015, 2016a, 2016b, 2016c, 2017), Mace (2004), Mackay (1954), Mahony (2009), Mahony *et al.* (2009a, 2009b), Malkmus (1998, 1991), Malkmus *et al.* (1992), Manthey and Grossmann (1997), McCoy (2006a, 2006b), McKay (2006), Mecke *et al.* (2016a, 2016b), Meiri *et al.* (2017), Mertens (1929, 1967), Mirza *et al.* (2021), Mocquard (1890), Mohagan *et al.* (2019), Mohan (2020), Müller (1894, 1895), Murdoch *et al.* (2019), Nabhitabhata *et al.* (2000), Natusch *et al.* (2020, 2021), Nazarov *et al.* (2008, 2012, 2014, 2018), Neang *et al.* (2020), Nee and Ray (1997), Ngo and Bauer (2007), Ngo and Chan (2011), Ngo and Onn (2011), Ngo and Pauwels (2010), Ngo *et al.* (2008, 2017, 2020), Nguyen *et al.* (2021), Nguyen *et al.* (2006, 2013, 2014, 2017), Nguyen *et al.* (2009), Nguyen *et al.* (2010, 2015, 2017), Nielson and Oliver (2017), Nurngsomsri *et al.* (2019), Oaks *et al.* (2019), O'Connell *et al.* (2019), Oliver and McDonald (2016), Oliver and Richards (2012), Oliver and Switak (2019), Oliver *et al.* (2008, 2009, 2011, 2012, 2014, 2016, 2017, 2018, 2019, 2020a, 2020b), Orlov *et al.* (2007), Ostrowski *et al.* (2020, 2021), Purkayastha *et al.* (2020a, 2020b), Quah *et al.* (2019), Quang *et al.* (2007), Panitvong, *et al.* (2014), Pauwels and Sumontha (2014), Pauwels *et al.* (2004, 2013, 2014a, 2014b, 2014c, 2016, 2018), Peters (1871), Pham *et al.* (2019), Phung *et al.* (2014), Riyanto (2012), Riyanto and Mumpuni (2013), Riyanto *et al.* (2014, 2015a, 2015b, 2016, 2017, 2018), Rösler (1995, 2000a, 2000b, 2017), Rösler and Glaw (2008), Rösler (2000, 2001), Rösler *et al.* (2005, 2007), Sanap *et al.* (2011), Sang *et al.* (2006), Sanguila *et al.* (2016), Schlegel (1837), Schleich and Kästle (1998), Schneider *et al.* (2011, 2014a, 2014b, 2020), Seitadi and Hamidy (2006), Shea *et al.* (2011), Shi and Zhao (2010), Siler *et al.* (2010), Sindaco and Jeremèenko (2008), Sitthivong *et al.* (2019), Smith (1917, 1921a, 1921b, 1923, 1925, 1930, 1935, 1940), Somaweera and Somaweera (2009), Steindachner (1867), Stoliczka (1871), Streicher and Meik (2018), Sumontha *et al.* (2010, 2012, 2014, 2015), ?Tallowin *et al.* (2018), Tan (1993), Taylor (1915, 1922, 1953, 1962, 1963), Theobald (1876), Tri (2008, 2011, 2013), Tri and Grismer (2010, 2012), Tri and Onn (2010), Tri *et al.* (2010), Ulber (1993), Ulber and Grossmann (1991), Underwood (1954), Vane-Wright *et al.* (1991), Vázquez and Gittleman (1998), Weber (1980), Venturina *et al.* (2020), Venugopal (2010a, 2010b), Wells (2002), Wells and Wellington (1984, 1985, 1999), Welton *et al.* (2009, 2010a, 2010b), Wermuth (1965), Werner (1896), Wilcox *et al.* (2002), Wilmer and Couper (2015), Williams *et al.* (1991), Winter *et al.* (2012), Wood *et al.* (2012, 2020a, 2020b), Worrell (1963), Youmans and Grismer (2006), Zhu and Rao (2020), Ziegler *et al.* (2003, 2010, 2013), Ziesmann *et al.* (2007), Zug and Mulcahy (2019) and sources cited therein. The preceding papers also include the descriptions of all relevant taxa.

#### 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, spellings should not be altered in any way for any purpose unless expressly and exclusively called for by the rules governing Zoological Nomenclature as administered by the International Commission of Zoological Nomenclature (ICZN).

This includes if gender assignment of suffixes seems incorrect, Latinisation is wrong, apparent spelling mistakes and so on.

In the unlikely event two or more newly named taxa (either genera or species) are deemed to be the same by a first reviser, then the name to be used and retained is that which first appears in this

paper by way of page priority and as listed in the abstract keywords. Some material in descriptions for taxa may be repeated for other taxa in this paper and this is necessary to ensure each fully complies with the provisions of the *International Code of Zoological Nomenclature* (fourth edition) (Ride *et al.* 1999) as amended online since.

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 20 September 2021 (including if also viewed prior), unless otherwise stated and was accurate in terms of the content cited herein as of that date.

Online citations within this paper, including copied emails and the like, are not as a rule cited in the references part of this paper.

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

SVL or SV means snouth-vent length, TL means tail length, preanal pores = precloacal pores, preanal = precloacal, tail measurements refer to original tails, max. size refers to maximum known, sometimes approximated up to the nearest 10 mm if number of measured specimens is below 10.

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

#### TETENDITUNGUINI TRIBE NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:8D32E66E-4E37-423F-9616-8EF6455613AC

**Type genus:** *Tetenditunguis gen. nov.* (this paper).

**Diagnosis:** Tetenditunguini *tribe nov.* are separated from all other species of Gekkonidae by the following unique suite of characters: Vertical pupil. Nasal bones paired. No second ceratobranchial rod in the hyoid apparatus. Rostral and mental shields rounded. Labials are much larger than the adjacent scales. Postmentals enlarged. Digits are long, slender, (not dilated), moderately compressed distally with three rows of lateral scales on each digit. There are no enlarged subdigital lamellae, but there is a series of slightly swollen transverse lamellae. The feet are bird-like, the digits are bent in an angular way when viewed laterally. All digits are conspicuously clawed and free. The base of each claw is between two scales, the lower which is deeply notched. Males have preanal (AKA preanal) pores, with them also present in females of some species.

**Distribution:** (Natural): Ranges from far south-west Asia, throughout southern Asia, through the Indo-Malaysian Archipelago to the Western Pacific and including far northern Australia.

**Etymology:** As for the genus. In Latin, "*tetendi*" means bent and "*unguis*" means claw.

**Content:** *Tetenditunguis gen. nov.* (type genus); *Cyrtodactylus* Gray, 1827; *Geckoella* Gray, 1867; *Puellula* Blyth, 1860; *Siwaligekko* Khan, 2003; *Quantasia* Wells and Wellington, 1985; *Tibetgekko gen. nov.*; *Aeschtgekko gen. nov.*; *Ahyonggekko gen. nov.*; *Balleriogekko gen. nov.*; *Bertlinggekko gen. nov.*; *Bouchardekko gen. nov.*; *Bourgoingekko gen. nov.*; *Dmitrievgekko gen. nov.*; *Evenhuisgekko gen. nov.*; *Grygiergekko gen. nov.*; *Kottelatgekko gen. nov.*; *Cuprumcinctim gen. nov.*; *Kullandergekko gen. nov.*; *Papegekko gen. nov.*; *Lyalgekko gen. nov.*; *Macrolyalgekko gen. nov.*; *Pylegekko gen. nov.*; *Arunachalgekko gen. nov.*; *Rheindtgekko gen. nov.*; *Rosenberggekko gen. nov.*; *Welterschultesgekko gen. nov.*; *Zhiqiangzhanggekko gen. nov.*; *Maculagekko gen. nov.*; *Morotaigekko gen. nov.*; *Infigo gen. nov.*; *Russetocolore gen. nov.*; *Nigricansalvum gen. nov.*; *Facileoccutatur gen. nov.*; *Fasciacorpus gen. nov.*; *Brunneisoculura gen. nov.*; *Linguarosea gen. nov.*; *Albatubercula gen. nov.*; *Graysongekko gen. nov.*; *Obscuramacula gen. nov.*; *Vinculatisgrig gen. nov.*; *Spinagekko gen. nov.*; *Maculatumetglobum gen. nov.*; *Tuberculatasinus gen. nov.*; *Fasciaincompletum gen. nov.*

**CYRTODACTYLUS GRAY, 1827**

**Type species:** *Cyrtodactylus pulchellus* Gray, 1827.

**Diagnosis:** Species within *Cyrtodactylus* Gray, 1827 *sensu stricto* as defined in this paper are readily separated from all other species within Tetenditungguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique suite of characters: Dorsal tubercles usually small, roundish, somewhat keeled but in some species are quite prominent; there are no tubercles on the ventral surface of the forelimbs, gular region, in ventrolateral body folds, or the anterior one-third of the tail; nine or 10 supralabials; nine or 10 infralabials; male with a few preanal pores in a shallow longitudinal groove and 14 or 18 femoro-preanal pores on each side; 28-35 paravertebral tubercles; 16-24 longitudinal tubercle rows; 27-35 ventral scales; 20 to 24 subdigital lamellae on fourth toe; body with six or seven transverse brownish body bands, these being narrower than the interspaces between them; faint rostral chevron; body bands and nuchal loop edged with a thin white, tubercle-bearing line; dorsum usually lacking scattered pattern of white tubercles; no banding on base of thigh; 9-11 dark caudal bands on original tail; white caudal bands generally not immaculate; hatchlings and juveniles often have white tail tips and adult posterior caudal region is also usually white.

There remain a number of unnamed species within this genus (as defined in this paper), ostensibly being described at the present time by Perry L. Wood, (Jnr.) and others associated with Larry Lee Grismer.

**Distribution:** Restricted to Peninsula Malaysia, including offshore islands, Singapore and nearby southern (Peninsula) Thailand.

**Content:** *Cyrtodactylus pulchellus* Gray, 1827 (type species); *C. astrum* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. australotitiwangsaensis* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. bintangrendah* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. bintangtinggi* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. dayangbuntingensis* Quah, Grismer, Wood, and Sah, 2019; *C. evanquahi* Wood, Grismer, Muin, Anuar, Oaks and Sites, 2020; *C. hidupselamanya* Grismer, Wood, Anuar, Grismer, Quah, Murdoch, Muin, Davis, Auilar, Klabacka, Cobos, Aowphol and Sites, 2016; *C. jelawangensis* Grismer, Wood, Anuar, Quah, Muin, Mohamed, Onn, Sumarli, Loredo and Heinz, 2014; *C. langkawiensis* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. lekaguli* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012; *C. lenggongensis* Grismer, Wood, Anuar, Grismer, Quah, Murdoch, Muin, Davis, Auilar, Klabacka, Cobos, Aowphol and Sites, 2016; *C. macrotuberculatus* Grismer and Ahmad, 2008; *C. phuketensis* Sumontha, Pauwels, Kunya, Nitikul, Samphanthamit and Grismer, 2012; *C. sharkari* Grismer, Wood, Anuar, Quah, Muin, Mohamed, Onn, Sumarli, Loredo and Heinz, 2014; *C. timur* Grismer, Wood, Anuar, Quah, Muin, Mohamed, Onn, Sumarli, Loredo and Heinz, 2014; *C. trilatofasciatus* Grismer, Wood, Quah, Anuar, Muin, Sumontha, Ahmad, Bauer, Wangkulangkul, Grismer and Pauwels, 2012.

**PUELLULA BLYTH, 1860**

**Type species:** *Puellula rubida* Blyth, 1860.

**Diagnosis:** Geckos in the genus *Puellula* Blyth, 1860 are readily separated from all other species within Tetenditungguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following two unique suites of characters:

1/ Mainly uniform or heterogeneous dorsal scales; clawed phalanges very strong. A slight fold from axilla to groin. Relatively large species, with large head (SVL 48.59-56.75 mm).

Dorsal tubercles dense, small, roundish, feebly keeled; 10-11 supralabials; nine infralabials; two elongate inner pair of postmentals in broad contact with each other; two smaller, separated

outer pair of postmentals; no femoral pores; absence or presence of a preanal groove and up to six preanal pores located around the preanal groove in males; presence of four enlarged internasals; evident ventrolateral dermal folds; 38-40 transverse rows of juxtaposed or imbricate ventrals; 13-18 transverse rows of dorsal tubercles at midbody; two pairs of rounded post-cloacal spurs in males; 15-21 sub-digital lamellae under the fourth toe, of which the basal six or seven are expanded; presence or absence of a dark nuchal loop formed by post ocular streaks extending and joining at the nape and a dorsal colour pattern of either dark vertebral spots, bounded by lateral streaks or alternatively 5-9 dark transverse bands on a dark grey to brown background (nominate subgenus *Puellula*: content being: *P. rubida* Blyth, 1861 (type species); *P. adleri* (Das, 1997); *P. camortensis* (Chandramouli, 2020); *P. nicobaricus* (Chandramouli, 2020)); or;

2/ Species in the subgenus *Parapuella subgen. nov.* are readily separated from all other species in *Puellula* and within Tetenditungguini *tribe nov.* by the following unique combination of characters: (1) body robust; limbs and digits moderate in length; (2) tail prehensile; intact tails 0.97-1.22 times longer than the body; (3) tubercles extending from frontal region and supraorbital skin to cover most of tail, 16-20 irregular longitudinal rows of tubercles at midbody, 21-28 irregular transverse rows between the limbs; (4) dorsal antibrachium and brachium tuberculate; (5) tubercles on tail extending to 90% of its length; (6) 51-66 ventrals in a transverse row at midbody; (7) conical, spinose tubercles in ventrolateral fold; (8) subcaudals not transversely enlarged; (9) moderate longitudinal sulcus in preanal region of males; (10) 9-13 preanal pores in males (0-15) pore primordia in females, femoral pores absent, preanal pores sunken into a preanal sulcus; pore secretions red; (11) greatly enlarged preanal pore-bearing scales present; (12) ventral surface of thighs entirely granular or granular except for 2-13 (count combined for both sides) widely spaced enlarged femoral scales; (13) 18-24 lamellae under the fourth toe; (14) cloacal tubercles 1-2 on each side, usually in contact with one another; (15) dorsum gray to brown with dark brown markings; venter pale pink, immaculate or with diffuse, darkly pigmented scales forming no obvious pattern; (16) labials pale, contrasting with darker facial band; occiput with few large blotches; postocular stripe brown, edged dorsally by thin black line then by pale pigmented scales; (17) 5-6 transverse, usually broken bands on body; 7-9 bands on tail; caudal bands complete ventrally, though faint (18) tubercles, ranging from rounded to spinose in the temporal region, on the occiput, and on the neck (19) up to 100 mm SVL (subgenus *Parapuella subgen. nov.* content being: *P. lateralis* (Werner, 1896) (type species of subgenus); *P. durio* (Grismer, Anuar, Quah, Muin, Onn, Grismer and Ahmad, 2010)) (the preceding modified mainly from Grismer *et al.* 2010).

Species in both subgenera are also characterised by having a prehensile tail that is carried coiled in an elevated position.

**Distribution:** Andaman and Nicobar Islands (type subgenus), or Sumatra and Peninsula Malaysia (subgenus *Parapuella subgen. nov.*).

**Content:** *Puellula rubida* Blyth, 1861 (type species); *P. adleri* (Das, 1997); *P. camortensis* (Chandramouli, 2020); *P. durio* (Grismer, Anuar, Quah, Muin, Onn, Grismer and Ahmad, 2010); *P. lateralis* (Werner, 1896); *P. nicobaricus* (Chandramouli, 2020).

**PARAPUELLULA SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:ABE3E0E0-D224-4457-8E43-04DC7611F954**

**Type species:** *Gymnodactylus lateralis* Werner, 1896.

**Diagnosis:** Species in the subgenus *Parapuella subgen. nov.* are readily separated from all other species in *Puellula* and within Tetenditungguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: (1) body robust; limbs and digits moderate in length; (2) tail prehensile; intact tails 0.97-1.22 times longer than body; (3) tubercles extending from frontal region and supraorbital skin to cover most of tail, 16-20 irregular longitudinal rows of tubercles at midbody, 21-28 irregular transverse rows between limbs; (4) dorsal antibrachium and brachium tuberculate;



(5) tubercles on tail extending to 90% of its length; (6) 51-66 ventrals in a transverse row at midbody; (7) conical, spinose tubercles in ventrolateral fold; (8) subcaudals not transversely enlarged; (9) moderate longitudinal sulcus in preanal region of males; (10) 9-13 preanal pores in males (0-15) pore primordia in females, femoral pores absent, preanal pores sunken into a preanal sulcus; pore secretions red; (11) greatly enlarged preanal pore-bearing scales present; (12) ventral surface of thighs entirely granular or granular except for 2-13 (count combined for both sides) widely spaced enlarged femoral scales; (13) 18-24 lamellae under the fourth toe; (14) cloacal tubercles 1-2 on each side, usually in contact with one another; (15) dorsum gray to brown with dark brown markings; venter pale pink, immaculate or with diffuse, darkly pigmented scales forming no obvious pattern; (16) labials pale, contrasting with darker facial band; occiput with few large blotches; postocular stripe brown, edged dorsally by thin black line then by pale pigmented scales; (17) 5-6 transverse, usually broken bands on body; 7-9 bands on tail; caudal bands complete ventrally though faint (18) tubercles, ranging from rounded to spinose in the temporal region, on the occiput, and on the neck (19) up to 100 mm SVL (subgenus *Parapuella* subgen. nov. content being: *P. lateralis* (Werner, 1896) (type species of subgenus); *P. durio* (Grismer, Anuar, Quah, Muin, Onn, Grismer and Ahmad, 2010)) (the preceding modified mainly from Grismer *et al.* 2010). Species in this subgenus and the nominate subgenus are also characterised by having a prehensile tail that is carried coiled in an elevated position.

**Distribution:** Sumatra and west Peninsula Malaysia.

**Etymology:** The suffix "para" refers to this subgenus being near, or alongside the nominate subgenus both in form and in distribution and hence the full name "*Parapuella*".

**Content:** *Puella* (*Parapuella*) *lateralis* (Werner, 1896) (type species); *P. (Parapuella) durio* (Grismer, Anuar, Quah, Muin, Onn, Grismer and Ahmad, 2010).

#### GECKOELLA GRAY, 1867

**Type species:** *Geckoella punctata* Gray, 1867 (= *Gymnodactylus triedrus* Günther, 1864)

**Diagnosis:** Species within the genus *Geckoella* Gray, 1867 are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Head rather large, oviform; snout longer than the diameter of the eye, slightly longer than the distance between the eye and the ear-opening; forehead concave; ear-opening small, sub-oval, horizontal.

Body and limbs moderate; digits short, cylindrical in their basal end, compressed in their distal portion, with well-developed tubercle-like plates underneath. Head covered with small granules, being largest on the snout: rostral quadrangular, not twice as broad as high; nostril pierced between the rostral, the first labial and several small scales; ten or eleven upper labials and nine lower labials; mental triangular; two or three pairs of chin-shields, median largest and forming a long suture behind the point of the mental. Upper surface of the body is covered with small granules intermixed with numerous small trihedral tubercles. Abdominal scales rather small, cycloid, imbricate, smooth. Males with three or four preanal pores. Tail cylindrical, tapering, rather swollen, covered with roundish smooth scales, which are small and subimbricate above, much larger and strongly imbricate underneath. Brown above (purplish-grey in juveniles and young specimens, greyish-brown in females), with small whitish spots, sometimes obscure or widely scattered; lower surfaces light brown or purplish-grey (modified from Boulenger 1885).

Two new species in this genus are formally named herein for the first time, being *Geckoella wijenayakai* sp. nov. and *Geckoella rowvillewilsonorum* sp. nov..

**Distribution:** *Geckoella* is restricted to the southern parts of Sri Lanka (hilly parts).

**Content:** *Geckoella triedrus* (Günther, 1864) (type species); *G. rowvillewilsonorum* sp. nov.; *G. wijenayakai* sp. nov.

#### GECKOELLA WIJENAYAKAI SP. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:A99A42E0-4DD6-4EB1-9A06-1C60D25E9D89

**Holotype:** An adult male specimen depicted in an image, available online at: <https://www.inaturalist.org/observations/18532869> photographed by Shâmesh Wijenayaka in August 2017, collected about 6 km north of Deniyaya, Matara District, Southern Province, Sri Lanka, Latitude 6.3425 N., Longitude 80.5597 E.

The same image by Shamesh Wijenayake of Sri Lanka accompanies this description in this paper on this page.

**Paratype:** A specimen depicted in an image available online at: <https://www.inaturalist.org/observations/16433319>

collected from near Godakawela, Central Province, Sri Lanka, Latitude 6.5049 N., Longitude 80.6521 E.

**Diagnosis:** *Geckoella wijenayakai* sp. nov. and *Geckoella rowvillewilsonorum* sp. nov. have until now been treated as populations of *Geckoella triedrus* (Günther, 1864), also known as *Gymnodactylus triedrus* Günther, 1864 or *Cyrtodactylus triedrus* (Günther, 1864).

The three species comprise the entirety of the genus *Geckoella* Gray.

The three species are readily separated from one another as by the following three unique suites of characters:

1/ *Geckoella wijenayakai* sp. nov. has a bright orange-red iris, no yellow-white spots on the limbs, which are otherwise brownish, or purplish brown, or rarely one or two extremely tiny spots on the upper part of the anterior limbs, no yellow-white spots on the anterior part of the dorsum of the head; white spotting on the upper tail forms broken bands and less so towards the posterior end (original tail). Yellow-white spots on the upper dorsum are tiny.

2/ *Geckoella triedrus* has a dull orange-brown iris; presence of obvious, sometimes largeish yellow-white spots on both anterior and posterior limbs, which are otherwise brownish, or purplish brown, some yellow-white spots on the anterior part of the dorsum of the head, while spotting on the upper tail forms broken bands, but on the mid tail there are distinctive white rings that are unbroken and fully encircle the dorsal side of the tail. Yellow spots on the upper dorsum are medium in size and tiny on the upper flanks.

3/ *Geckoella rowvillewilsonorum* sp. nov. has a dark greyish-brown iris, no yellow-white spots on the limbs, which are otherwise brownish, or purplish brown, or rarely one or two extremely tiny ones on the upper part of the anterior limbs, no yellow-white spots on the anterior part of the dorsum of the head, or if present, small in number and tiny; no unbroken white rings encircling any part of the dorsal side of the tail (original tail). Yellow spots on the upper dorsum are tiny and widely scattered (as opposed to more closely spaced in the other two species) and the spots are tiny and sparse on the upper flanks.

*Geckoella triedrus* is depicted in life online at:

<https://www.flickr.com/photos/gomensee/33801372648/>

and

<https://www.inaturalist.org/observations/24978248>

and



<https://www.inaturalist.org/observations/29770254>  
and

<https://www.inaturalist.org/observations/88026774>  
with these specimens conforming to the image in Gray, 1867 of *Geckoella punctata* Gray, 1867, the description of *Gymnodactylus triedrus* Günther, 1864, as well as the description of both the preceding by Boulenger (1885) at page 38.

*Geckoella rowvillewilsonorum* sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/115116>

*Geckoella wijenayakai* sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/18532869>

Species within the genus *Geckoella* Gray, 1867 are readily separated from all other species within Tetenditunguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Head rather large, oviform; snout longer than the diameter of the eye, slightly longer than the distance between the eye and the ear-opening; forehead concave; ear-opening small, sub-oval, horizontal.

Body and limbs moderate; digits short, cylindrical in their basal end, compressed in their distal portion, with well-developed tubercle-like plates underneath. Head covered with small granules, being largest on the snout: rostral quadrangular, not twice as broad as high; nostril pierced between the rostral, the first labial, and several small scales; ten or eleven upper labials and nine lower labials; mental triangular; two or three pairs of chin-shields, median largest and forming a long suture behind the point of the mental. Upper surface of the body is covered with small granules intermixed with numerous small trihedral tubercles. Abdominal scales rather small, cycloid, imbricate, smooth. Males with three or four preanal pores. Tail cylindrical, tapering, rather swollen, covered with roundish smooth scales, which are small and subimbricate above, much larger and strongly imbricate underneath. Brown above (purplish-grey in juveniles and young specimens, greyish-brown in females), with small whitish spots, sometimes obscure or widely scattered; lower surfaces light brown or purplish-grey (modified from Boulenger 1885).

**Conservation:** The population of Sri Lanka has been rising at an exponential rate. According to the website <https://www.macrotrends.net> the population has risen from 7,971,098 in 1950 to 21,497,310 in 2021. The landmass of the country is a mere 65,610 km (less than the Australian state of Tasmania), meaning that the human pressure on all ecosystems there is huge and increasing.

Rather than sacrificing one or more potentially scarce living specimens for taxonomy, the holotype chosen has been the animal in the image by Shámésh Wijenayaka as identified earlier.

**Distribution:** *Geckoella wijenayakai* sp. nov. is found in the hilly parts of southern Sri Lanka generally south of Godakawela, Central Province, south to at least Matara District, Southern Province and including Uda Walawe.

*Geckoella triedrus* (Günther, 1864) is from the main range area in southern central Sri Lanka, with a distribution centred on the Horton Plains escarpment area, generally east of Colombo.

*Geckoella rowvillewilsonorum* sp. nov. is found north of the population of *G. triedrus* in the Knuckles Mountain range and nearby outlier hills.

**Etymology:** Named in honour of parks ranger, Shámésh Wijenayaka of Sri Lanka in recognition of his services to herpetology and wildlife conservation.

**GECKOELLA ROWVILLEWILSONORUM SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:EE383685-7C75-49CA-8DEB-B335A7C4494A**

**Holotype:** An female specimen depicted in an image, available online at: <https://www.inaturalist.org/observations/115116> photographed by Paul Freed of the USA on February 2007, collected from the South Knuckles Mountain range in central Sri Lanka, having been located by day under a rock.

**Diagnosis:** *Geckoella rowvillewilsonorum* sp. nov. and *Geckoella wijenayakai* sp. nov. have until now been treated as populations of *Geckoella triedrus* (Günther, 1864), also known as *Gymnodactylus*

*triedrus* Günther, 1864 or *Cyrtodactylus triedrus* (Günther, 1864). The three species comprise the entirety of the genus *Geckoella* Gray.

The three species are readily separated from one another as by the following three suites of characters:

1/ *Geckoella wijenayakai* sp. nov. has a bright orange-red iris, no yellow-white spots on the limbs, which are otherwise brownish, or purplish brown, or rarely one or two extremely tiny spots on the upper part of the anterior limbs, no yellow-white spots on the anterior part of the dorsum of the head; white spotting on the upper tail forms broken bands and less so towards the posterior end (original tail). Yellow-white spots on the upper dorsum are tiny.

2/ *Geckoella triedrus* has a dull orange-brown iris; presence of obvious, sometimes largeish yellow-white spots on both anterior and posterior limbs, which are otherwise brownish, or purplish brown, some yellow-white spots on the anterior part of the dorsum of the head, while spotting on the upper tail forms broken bands, but on the mid tail there are distinctive white rings that are unbroken and fully encircle the dorsal side of the tail. Yellow spots on the upper dorsum are medium in size and tiny on the upper flanks.

3/ *Geckoella rowvillewilsonorum* sp. nov. has a dark greyish-brown iris, no yellow-white spots on the limbs, which are otherwise brownish, or purplish brown, or rarely one or two extremely tiny ones on the upper part of the anterior limbs, no yellow-white spots on the anterior part of the dorsum of the head, or if present, small in number and tiny; no unbroken white rings encircling any part of the dorsal side of the tail (original tail). Yellow spots on the upper dorsum are tiny and widely scattered (as opposed to more closely spaced in the other two species) and the spots are tiny and sparse on the upper flanks.

*Geckoella triedrus* is depicted in life online at: <https://www.flickr.com/photos/gomensee/33801372648/>

and <https://www.inaturalist.org/observations/24978248>

and <https://www.inaturalist.org/observations/29770254>

and <https://www.inaturalist.org/observations/88026774>

with these specimens conforming to the image in Gray, 1867 of *Geckoella punctata* Gray, 1867, the description of *Gymnodactylus triedrus* Günther, 1864, as well as the description of both the preceding by Boulenger (1885) at page 38.

*Geckoella rowvillewilsonorum* sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/115116>

*Geckoella wijenayakai* sp. nov. is depicted in life online at: <https://www.inaturalist.org/observations/18532869>

Species within the genus *Geckoella* Gray, 1867 are readily separated from all other species within Tetenditunguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Head rather large, oviform; snout longer than the diameter of the eye, slightly longer than the distance between the eye and the ear-opening; forehead concave; ear-opening small, sub-oval, horizontal.

Body and limbs moderate; digits short, cylindrical in their basal end, compressed in their distal portion, with well-developed tubercle-like plates underneath. Head covered with small granules, being largest on the snout: rostral quadrangular, not twice as broad as high; nostril pierced between the rostral, the first labial, and several small scales; ten or eleven upper labials and nine lower labials; mental triangular; two or three pairs of chin-shields, median largest and forming a long suture behind the point of the mental. Upper surface of the body is covered with small granules intermixed with numerous small trihedral tubercles. Abdominal scales rather small, cycloid, imbricate, smooth. Males with three or four preanal pores. Tail cylindrical, tapering, rather swollen, covered with roundish smooth scales, which are small and subimbricate above, much larger and strongly imbricate underneath. Brown above (purplish-grey in juveniles and young specimens, greyish-brown in females), with small whitish spots,



sometimes obscure or widely scattered; lower surfaces light brown or purplish-grey (modified from Boulenger 1885).

**Conservation:** The population of Sri Lanka has been rising at an exponential rate. According to the website <https://www.macro-trends.net> the population has risen from 7,971,098 in 1950 to 21,497,310 in 2021. The landmass of the country is a mere 65,610 km (less than the Australian state of Tasmania), meaning that the human pressure on all ecosystems there is huge and increasing.

Rather than sacrificing one or more potentially scarce living specimens for taxonomy, the holotype chosen has been the animal in the image by Paul Freed as identified earlier.

**Distribution:** *Geckoella rowvillewilsonorum* sp. nov. is found north of the population of *G. triedrus* in the Knuckles Mountain range and nearby outlier hills.

*Geckoella wijenayakai* sp. nov. is found in the hilly parts of southern Sri Lanka generally south of Godakawela, Central Province, south to at least Matara District, Southern Province and including Uda Walawe.

*Geckoella triedrus* (Günther, 1864) is from the main range area in southern central Sri Lanka, with a distribution centred on the Horton Plains escarpment area, generally east of Colombo.

**Etymology:** The name is in honour of Rowville and Tania Wilson, of Burwood, Victoria, Australia, both originally from Sri Lanka, for their work in helping conserve Australian wildlife, including logistical support for the Snakebusters wildlife education enterprise.

#### SIWALIGEKKO KHAN, 2003

**Type species:** *Cyrtodactylus battalensis* Khan, 1993

**Diagnosis:** Species within the genus *Siwaligekko* Khan, 2003 are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Body and tail relatively plump. Tail is nearly round, shorter or subequal to the body, but not whip like. Segmentation of tail is indistinct but indicated by 2-3 minute blunt tubercles in the anterior half of the tail. The tail is fragile at the base; regenerated tail is not swollen, subcaudals are indistinct. No supraciliary spines on the posterior dorsal part of the upper eyelids. Dorsal scales are granular and roundish to polygonal, juxtaposed, beadlike (convex), interspersed three to four times with beadlike smooth or slightly keeled tubercles, extending on the head and neck, but absent from the limbs. No pre-femoral tubercles. 21-35 interorbitals, 36-56 midabdominals, 149-205 midventrals; subdigital lamellae under the basal part of the digits are somewhat broadened, while those under the angular part are narrower. 14-17 subdigital lamellae under toe four. Male has 8-10 preanal pores and no femoral pores. Females lack either. Dorsal colour pattern has charcoal black to light brown cross bands, spots or reticulation; tail is barred, with the pattern extending onto the ventral side.

Species in the morphologically similar genus *Tibetgekko* gen. nov. are separated from *Siwaligekko* Khan, 2003 by having 85-106 mid-ventrals (vs 149-205 mid-ventrals) and 19-21 sub-digital lamellae under the fourth toe (vs 14-17) (mainly modified from Khan 2003).

**Distribution:** *Siwaligekko* is confined to a small high altitude region encompassing parts of Northern Pakistan, northern India and Nepal.

**Content:** *Siwaligekko battalensis* Khan, 1993 (type species); *S. chamba* (Agarwal, Khandekar and Bauer, 2018); *S. dattanensis* (Khan, 1980); *S. himalayanus* (Duda and Sahl, 1978); *S. lawderanus* (Stoliczka, 1871); *S. markuscombaii* (Darevsky, Helfenberger, Orlov and Shah, 1998); *S. martinistolli* (Darevsky, Helfenberger, Orlov and Shah, 1998); *S. nepalensis* (Schleich and Kästle, 1998).

#### QUANTASIA WELLS AND WELLINGTON, 1985

**Type species:** *Hoplodactylus tuberculatus* Lucas and Frost, 1900.

**Diagnosis:** The genus *Quantasia* Wells and Wellington, 1985 is readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

An extensive series of preanal and femoral pores (totalling 29 or more) that reach the knee and are distinguishable from taxa that lack femoral pores; attain adult snout-vent lengths of 100 mm or more, making them distinguishable from species which have maximum recorded adult lengths of 80 mm or less: all species are all strongly banded, and hence are distinguishable from species that have irregular, blotched or striped dark patterning, or have broken bands: all have wide pale and dark bands and the dark bands consist of a nuchal band, a band over the shoulders and modally three bands over the trunk and hence differ from species having very narrow pale bands; have a single row of transversely oriented broad median subcaudal scales and hence differ from species, which have small subcaudal scales: all lack a preanal groove and hence differ from species, which have either a longitudinal or transverse preanal groove: between 24-45 longitudinal rows of ventral scales between the ventrolateral skin folds at midbody and differ from species, which have either fewer than 24 rows; between 20-24 longitudinal rows of dorsal tubercles on the body (occasionally as low as 18 or as high as 25), and therefore differ from species, which have fewer than 20 tubercle rows; all species are also characterised with significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end (the latter colour trait/s separating them from the morphologically similar and most closely related other genus *Welterschultesgekko* gen. nov.) (modified from Shea et al. 2011).

Wells (2002) wrote:

"To my way of thinking the genus *Cyrtodactylus* must be regarded as polyphyletic given the vast divergences between some species groups, and its break-up is long overdue I think.

Wells and Wellington even began this process with the establishment of a separate genus for the *louisiadensis*-complex - *Quantasia* Wells and Wellington, 1985 a genus that I am confident will be accepted eventually - but *Quantasia* has been largely ignored, and merely plunged into the synonymy of *Cyrtodactylus*." The species "*Cyrtodactylus hoskini* Shea, Couper, Wilmer and Arney, 2011" is evidently a junior synonym of "*Cyrtodactylus abrae* Wells, 2002" and treated as such herein.

Shea et al. (2011) effectively overwrote the Wells (2002) name by citing errors in his description as justification, even though the original description was compliant with the *International Code of Zoological Nomenclature*.

To justify their act, they wrote:

"Because of the considerable risk to destabilization of nomenclature by having this name potentially become a senior synonym of any one of the numerous *Cyrtodactylus* species described since 2002 through nomination of a neotype, and the lack of sufficient detail in the description (or in the photograph provided by Cogger (1975) that seems to have been the basis for that description) to clearly assign it to any one of the numerous banded *Cyrtodactylus* species, we choose to stabilize nomenclature by nominating as neotype of *Cyrtodactylus abrae* the larger syntype of *Cyrtodactylus pulchellus*, Natural History Museum, London (BMNH) xxii.91a, from Singapore. This action accords with the sparse detail that is available in the morphological and coloration description of *C. abrae* by Wells (2002), and relegates the name to synonymy. As we have demonstrated, it is not possible to nominate a neotype that is as close as possible to the nominal type locality of *C. abrae*, consistent with Article 75.3.6 of the Code of Zoological Nomenclature (ICZN 1999), because none of the Australian *Cyrtodactylus* are morphologically consistent with the description of *C. abrae*. To comply with Article 75.3.3 and 75.3.5, relevant to validation of neotype designations, we illustrate this specimen (the larger syntype of *C. pulchellus*) in dorsal view (Fig. 22)."

Article 75 of the *International Code of Zoological Nomenclature* (Ride et al. 1999) deals with neotypes.

Shea et al. (2011) have breached the *International Code of Zoological Nomenclature* making their neotype designation wholly invalid.

The relevant part of the Code reads as follows:

“Article 75. Neotypes.

75.1. Definition. A neotype is the name-bearing type of a nominal species-group taxon designated under conditions specified in this Article when no name-bearing type specimen (i.e. holotype, lectotype, syntype or prior neotype) is believed to be extant and an author considers that a name-bearing type is necessary to define the nominal taxon objectively. The continued existence of paratypes or paralectotypes does not in itself preclude the designation of a neotype.

75.2. Circumstances excluded. A neotype is not to be designated as an end in itself, or as a matter of curatorial routine, and any such neotype designation is invalid.

Example. If an author designates a neotype for *Xus albus* Smith, a species about whose identity there is no doubt and which is not involved in any complex zoological problem at the time at which it was designated, the purported “neotype” has no name-bearing status.

75.3.1. a statement that it is designated with the express purpose of clarifying the taxonomic status or the type locality of a nominal taxon;

75.3.2. a statement of the characters that the author regards as differentiating from other taxa the nominal species-group taxon for which the neotype is designated, or a bibliographic reference to such a statement;

75.3.3. data and description sufficient to ensure recognition of the specimen designated;

75.3.4. the author's reasons for believing the name-bearing type specimen(s) (i.e. holotype, or lectotype, or all syntypes, or prior neotype) to be lost or destroyed, and the steps that had been taken to trace it or them;

75.3.5. evidence that the neotype is consistent with what is known of the former name-bearing type from the original description and from other sources; however, a neotype may be based on a different sex or life stage, if necessary or desirable to secure stability of nomenclature;

75.3.6. evidence that the neotype came as nearly as practicable from the original type locality [Art. 76.1] and, where relevant, from the same geological horizon or host species as the original name-bearing type (see also Article 76.3 and Recommendation 76A.1);

75.3.7. a statement that the neotype is, or immediately upon publication has become, the property of a recognized scientific or educational institution, cited by name, that maintains a research collection, with proper facilities for preserving name-bearing types, and that makes them accessible for study.”

While Shea *et al.* (2011) have breached several parts of the above, the most significant is that they breached 75.4.6 which reads “75.3.6. evidence that the neotype came as nearly as practicable from the original type locality and ...”

The last time I looked at a map, Singapore was not even in Australia, let alone anywhere close to Iron Range, in North Queensland, the stated type locality for “*Cyrtodactylus abrae* Wells, 2002”.

In fact it is 5000 km to the west!

Type locality or as close as practicable to it is a mandatory part of the neotype designation.

The species-level likeness of the neotype is given as an “and” in the Code, in addition to the locality detail, which is the first and mandatory part.

Based on the evidence of Shea *et al.* (2011) the only species vaguely similar to the Wells taxon and with specimens able to be used as a potential neotype for it (on the basis of a missing or lost holotype) is the taxon they named as “*Cyrtodactylus hoskini*”, for which they had numerous specimens available and from the exact type locality.

Combined with:

“75.2. Circumstances excluded. A neotype is not to be designated as an end in itself, or as a matter of curatorial routine, and any such neotype designation is invalid.”

it is self-evident that the Neotype designation by Shea *et al.* (2011) is wholly invalid and this is assuming that all the cited (by Shea *et*

*al.* 2011) defects in the Wells (2002) paper are as stated by them (same also applies in terms of Couper, Amey and Shea (2004). At the time Shea *et al.* (2011) published their description of “*Cyrtodactylus hoskini*”, there were at least six potential neotypes for the Wells (2002) taxon from the exact type locality within the Queensland Museum, these being specimens J86926, J86927, J86928, J86929, J86950 and J86951 all from the Iron Range area of Far North Queensland and generally conforming with the description of Wells (2002).

There were also another four available specimens collected prior to the Wells description lodged at the Museum Victoria from the same area, being specimen numbers DTD498-DTD501. Therefore on the basis that the only known “*Cyrtodactylus*” from Iron Range is the one described by Wells (2002) and since then apparently redescribed in more detail by Shea *et al.* (2011), the species “*Cyrtodactylus hoskini* Shea, Couper, Wilmer and Amey, 2011” is treated herein as a junior synonym of “*Cyrtodactylus abrae* Wells, 2002” on the basis of an invalid neotype designation and the evidence provided by Shea *et al.* (2011).

Ego is not a part of science and the deliberate and reckless overwriting of an earlier name for the purpose of self-gratification is not within the rules of the *International Code of Zoological Nomenclature* and has been voted against by the ICZN on numerous occasions, including most recently in 2021 (Hoser, 2021).

The other species formally named in Shea *et al.* (2011) are herein regarded as valid.

According to Tallowin *et al.* (2018), the species within *Quantasia* Wells and Wellington, 1985 diverged from their nearest living relatives 13.MYA. however Tallowin *et al.* (2018) also chose to ignore the Wells and Wellington name.

**Distribution:** Cape York, Australia.

**Content:** *Quantasia tuberculatus* (Lucas and Frost, 1900) (type species); *Q. abrae* (Wells, 2002); *Q. adorus* (Shea, Couper, Wilmer and Amey, 2011); *Q. mcdonaldi* (Shea, Couper, Wilmer and Amey, 2011); *Q. pronarus* (Shea, Couper, Wilmer and Amey, 2011).

**TETENDITUNGUIS GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:B11C48B9-CDBB-4A13-8A27-49F17753BB52**

**Type species:** *Naultinus fasciolatus* Blyth, 1861.

**Diagnosis:** Species within the genus *Tetenditunguis* *gen. nov.* are readily separated from all other species within *Tetenditunguini* *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Limbs and digits slender; the basal joints not very distinct from the distal ones, which are strongly compressed, and provided with transverse imbricate plates below and a series of much smaller ones on the compressed phalanges. Rostral notched behind and grooved; nostril between the rostral, the first labial and three nasals; ten to eleven upper and eleven lower labials; mental partially wedged in between two large chin-shields, which form a broad suture with each other. Body granular, with numerous large trihedral tubercles. 26-34 longitudinal rows of rather elongated leaf-like scales on the middle of the belly, between the lateral folds. A fold of skin along the side (the lateral fold), indicates where the abdominal scales terminate and the granules begin.

Five to six femoral/preanal pores on each side along the whole length of the thigh. Tail cylindrical, the granules arranged in whorls and the tubercles in rings; a series of enlarged subcaudals. Grey above, spotted and marbled with black, set off with subdued white. A dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown similarly white-edged band on the nape, with seven cross bands on the body; Tail cross-banded. A broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts whitish. Total length about 150 mm, the tail measuring nearly half that length.

*Tetenditunguis* *gen. nov.* differ from morphologically similar Indo-Chinese species within *Tetenditunguini* *tribe nov.* by having 26-34 longitudinal (versus always under 30) rows of scales in the middle



of the belly and in the small number of femoral (or rather preanal) pores; these are five or six on each side (versus 10-18), and extend outwards in a line with the commencement of the thigh. Furthermore differs by having a dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown similarly white-edged band on the nape, with seven cross bands on the body; tail wholly cross-barred, versus a broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts of tail being whitish (in Indochinese *Tetenditunguis* *tribe* *nov.*).

*Tetenditunguis fasciolatus* (Blyth, 1861) treated until now as monotypic, is in fact a species complex of at least three species, two being formally named for the first time in this paper.

**Distribution:** North-west India including, West Himalaya, Subathu/Simla, Garhwal Hills, Almora, Kumaon, Himachal Pradesh.

**Etmology:** In Latin, "*tetendi*" means bent and "*unguis*" means claw. This is one of the traits of the genus.

**Content:** *Tetenditunguis fasciolatus* (Blyth, 1861) (type species); *T. gedyei* *sp. nov.*; *T. hoserae* *sp. nov.*.

**TETENDITUNGUIS HOSERAE SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:8D54B492-6464-42F5-8C4D-7D93B8DC164A**

**Holotype:** A preserved specimen at the Centre for Ecological Sciences, Bangalore, India, specimen number CES11/1345 collected at Almora, Almora District, Uttarakhand State, India. This facility allows access to its holdings.

**Diagnosis:** *Tetenditunguis hoserae* *sp. nov.* is similar in most respects to *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*, but is separated from both by the greater number of tail bands (original tail) being 12-13, as opposed to 10 or less, (rarely 11) in the other two species.

In terms of the cross-banded pattern of the dorsum, *T. hoserae* *sp. nov.* has wider dark bands, versus wider light bands in both *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*.

The blackening of anterior and posterior tips of the dark cross-bands on the tail is prominent in *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*, but not so in *T. hoserae* *sp. nov.*.

*T. gedyei* *sp. nov.* is separated from *T. hoserae* *sp. nov.* and *T. fasciolatus* by having by having 26 longitudinal rows of scales in the middle of the belly, versus 28-34 in the other two species, as well as an ear opening wider than the eye, versus not so in the other two species.

*T. hoserae* *sp. nov.* in life is depicted in Grismer *et al.* (2021a) Figure 14(d) and online at:

<https://www.inaturalist.org/observations/91569408>

*T. fasciolatus* in life is depicted in Grismer *et al.* (2021a) Figure 14(a-c).

Species within the genus *Tetenditunguis* *gen. nov.*, namely *Tetenditunguis fasciolatus* (Blyth, 1861) (type species); *T. gedyei* *sp. nov.*; *T. hoserae* *sp. nov.* are readily separated from all other species within *Tetenditunguis* *tribe* *nov.* by the following unique combination of characters:

Limbs and digits slender; the basal joints not very distinct from the distal ones, which are strongly compressed, and provided with transverse imbricate plates below and a series of much smaller ones on the compressed phalanges. Rostral notched behind and grooved; nostril between the rostral, the first labial, and three nasals; ten to eleven upper and eleven lower labials; mental partially wedged in between two large chin-shields, which form a broad suture with each other. Body granular, with numerous large trihedral tubercles. 26-34 longitudinal rows of rather elongated leaf-like scales on the middle of the belly, between the lateral folds. A fold of skin along the side (the lateral fold), indicates where the abdominal scales terminate and the granules begin.

Five to six femoral/preanal pores on each side along the whole length of the thigh. Tail cylindrical, the granules arranged in whorls, and the tubercles in rings; a series of enlarged subcaudals. Grey above, spotted and marbled with black, set off with subdued white. A dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown

similarly white-edged band on the nape, with seven cross bands on the body; Tail cross-barred. A broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts whitish. Total length about 150 mm, the tail measuring nearly half that length.

*Tetenditunguis* *gen. nov.* differ from morphologically similar Indo-Chinese species within *Tetenditunguis* *tribe* *nov.* as already formally described in this paper and relied upon in this description by having 26-34 longitudinal (versus always under 30) rows of scales in the middle of the belly and in the small number of femoral (or rather preanal) pores; these are five or six on each side (versus 10-18), and extend outwards in a line with the commencement of the thigh. Furthermore differs by having a dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown similarly white-edged band on the nape, with seven cross bands on the body; tail wholly cross-barred, versus a broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts of tail being whitish (in Indochinese *Tetenditunguis* *tribe* *nov.*).

*Tetenditunguis fasciolatus* (Blyth, 1861) treated until now as monotypic, is in fact a complex species of at least three species, two being formally named for the first time in this paper.

**Distribution:** *T. hoserae* *sp. nov.* is known only from the immediate vicinity of the type locality, Almora, Almora District, Uttarakhand State, India, including the hills immediately south of Almora, near Naini.

**Etmology:** Named in honour of my long suffering wife, Shireen Hoser, of Park Orchards, Victoria, Australia in recognition of her monumental contributions to wildlife conservation and education over some decades.

**TETENDITUNGUIS GEDYEI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:D7B786AD-6E26-4EDF-AA85-21104A0A76CB**

**Holotype:** A preserved specimen at the Centre for Ecological Sciences, Bangalore, India, specimen number CES09/1196 collected from Mussoorie-Kempton Road, Dehradun District, Uttarakhand State, India. This facility allows access to its holdings.

**Diagnosis:** *T. gedyei* *sp. nov.* has until now been treated as a divergent population of *T. fasciolatus* (Blyth, 1861).

*Tetenditunguis hoserae* *sp. nov.* is similar in most respects to *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*, but is separated from both by the greater number of tail bands (original tail) being 12-13, as opposed to 10 or less, (rarely 11) in the other two species.

In terms of the cross-banded pattern of the dorsum, *T. hoserae* *sp. nov.* has wider dark bands, versus wider light bands in both *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*.

The blackening of anterior and posterior tips of the dark cross-bands on the tail is prominent in *T. fasciolatus* (Blyth, 1861) and *T. gedyei* *sp. nov.*, but not so in *T. hoserae* *sp. nov.*.

*T. gedyei* *sp. nov.* is separated from *T. hoserae* *sp. nov.* and *T. fasciolatus* by having 26 longitudinal rows of scales in the middle of the belly, versus 28-34 in the other two species, as well as an ear opening wider than the eye, versus not so in the other two species.

*T. hoserae* *sp. nov.* in life is depicted in Grismer *et al.* (2021a) Figure 14(d) and online at:

<https://www.inaturalist.org/observations/91569408>

*T. fasciolatus* in life is depicted in Grismer *et al.* (2021a) Figure 14(a-c).

Species within the genus *Tetenditunguis* *gen. nov.*, namely *Tetenditunguis fasciolatus* (Blyth, 1861) (type species); *T. gedyei* *sp. nov.*; *T. hoserae* *sp. nov.* are readily separated from all other species within *Tetenditunguis* *tribe* *nov.* by the following unique combination of characters:

Limbs and digits slender; the basal joints not very distinct from the distal ones, which are strongly compressed, and provided with transverse imbricate plates below and a series of much smaller ones on the compressed phalanges. Rostral notched behind and grooved; nostril between the rostral, the first labial, and three

nasals; ten to eleven upper and eleven lower labials; mental partially wedged in between two large chin-shields, which form a broad suture with each other. Body granular, with numerous large trihedral tubercles. 26-34 longitudinal rows of rather elongated leaf-like scales on the middle of the belly, between the lateral folds. A fold of skin along the side (the lateral fold), indicates where the abdominal scales terminate and the granules begin.

Five to six femoral/preanal pores on each side along the whole length of the thigh. Tail cylindrical, the granules arranged in whorls, and the tubercles in rings; a series of enlarged subcaudals. Grey above, spotted and marbled with black, set off with subdued white. A dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown similarly white-edged band on the nape, with seven cross bands on the body; Tail cross-banded. A broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts whitish. Total length about 150 mm, the tail measuring nearly half that length.

*Tetenditunguis gen. nov.* Differ from morphologically similar Indo-Chinese species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by having 26-34 longitudinal (versus always under 30) rows of scales in the middle of the belly and in the small number of femoral (or rather preanal) pores; these are five or six on each side (versus 10-18), and extend outwards in a line with the commencement of the thigh. Furthermore differs by having a dark-brown band, edged behind with white, from the eye to the occiput, where it meets its fellow of the opposite side; a brown similarly white-edged band on the nape, with seven cross bands on the body; tail wholly cross-banded, versus a broad dark streak bordered with whitish behind each eye and continued irregularly round the occiput; tail irregularly banded above; lower parts of tail being whitish (in Indochinese *Tetenditunguini tribe nov.*).

*Tetenditunguis fasciolatus* (Blyth, 1861) treated until now as monotypic, is in fact a complex species of at least three species, two being formally named for the first time in this paper.

**Distribution:** *T. gedyei sp. nov.* is known only from the immediate vicinity of the type locality, Dehradun District, Uttarakhand State, India.

**Etymology:** Named in honour of Andrew Gedye of Bentley Park (Cairns), Queensland, Australia in recognition of his contributions to reptile conservation in Australia spanning some decades, including by way of breeding many rare and threatened species of snakes.

**TIBETGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:068C0C94-D131-42CD-AD4B-3679D616F818**

**Type species:** *Alsophylax tibetanus* Boulenger, 1905.

**Diagnosis:** Species within the genus *Tibetgekko gen. nov.* are readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Body and tail relatively plump. Tail is nearly round, shorter or subequal to the body, but not whip like. Segmentation of tail is indistinct but indicated by 2-3 minute blunt tubercles in the anterior half of the tail. The tail is fragile at the base; regenerated tail is not swollen, subcaudals are indistinct and not broader than long. No supraciliary spines on the posterior dorsal part of the upper eyelids. Dorsal scales are granular and roundish to polygonal, juxtaposed, beadlike (convex), interspersed three to four times with beadlike smooth or slightly keeled tubercles, extending on the head and neck, but absent from the limbs. There are no enlarged subfemoral scales. No prefemoral tubercles. 21-35 interorbitals, 36-56 midabdominals, 85-106 mid-ventrals; subdigital lamellae under the basal part of the digits are somewhat broadened, while those under the angular part are narrower. 19-21 subdigital lamellae under toe 4. Male has 8-10 preanal pores and no femoral pores. Females lack either. Dorsal pattern of bands, with dorsal bands broader than interspaces. Tail is barred, with the pattern extending onto the ventral side.

Species in *Tibetgekko gen. nov.* are separated from the

morphologically similar genus *Siwaligekko* Khan, 2003 by having 85-106 mid-ventrals (vs 149-205 midventrals) and 19-21 subdigital lamellae under the fourth toe (vs 14-17) (mainly modified from Khan 2003).

Agarwal *et al.* (2014) and Wood *et al.* (2012) both found that "*Alsophylax tibetanus* Boulenger, 1905." represented a divergent clade within *Cyrtodactylus* Gray, 1827 as defined by them.

There is at least one currently undescribed species similar in most respects to *T. tibetanus* Boulenger, 1905 (Grismer *et al.* 2021a).

**Distribution:** Tibet (China).

**Etymology:** The prefix Tibet, reflects where the genus occurs. *Gekko* is a spelling for the type of lizard. Hence the name "*Tibetgekko*".

**Content:** *Tibetgekko tibetanus* (Boulenger, 1905) (type species); *T. zhaoermii* (Shi and Zhao, 2010).

**AESCHTGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:E766257A-D1E7-4B5C-BA10-EBDBAF2481E3**

**Type species:** *Gymnodactylus fraenatus* Günther, 1864.

**Diagnosis:** Species within the genus *Aeschtgekko gen. nov.* are readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Physically they are relatively large (adult SVL 100-125 mm) scansorial species. Head large, depressed, oviform; snout longer than the diameter of the orbit, which equals its distance from the ear-opening; forehead concave; ear-opening suboval, oblique, nearly one third the diameter of the eye. Body and limbs rather elongate. Digits strong, distinctly depressed at the base, strongly compressed in the remaining portion; the basal phalanx with well-developed transverse plates inferiorly. Head granular, the granules largest on the snout; a few scattered round tubercles on the temples; rostral subquadrangular, twice as broad as high, with median cleft above, entering some way in the nostril; latter pierced between the rostral, the first labial and three nasals; ten to twelve upper and nine or ten lower labials; mental broadly triangular, with concave posterior-lateral borders; a pair of chinshields, forming a suture behind the mental; a few small chin shields on each side of the median pair; gular scales minutely granular. Body covered above with flat granules intermixed with irregularly scattered small round smooth tubercles. A slight fold from axilla to groin. Abdominal scales rather small, cycloid, imbricate. 27-35 scales across mid-body between ventrolateral folds; dorsal scales across mid-body between ventrolateral folds 70-74; 17-22 tubercles on paravertebral row; 5-9 rows of weakly convex dorsal tubercles at mid-body; ventral scales imbricate with rounded posterior edge.

Males with two pairs of preanal pores. Subdigital lamellae beneath proximal portion of 4th digit of manus 7-9, beneath distal portion 11-15; basal lamellae under proximal portion as wide as digit width; subdigital lamellae beneath proximal portion of fourth digit of pes 8-11, beneath distal portion 13-16; no preanal groove; 4-6 preanal pores in males. Tail cylindrical, tapering, covered above with small flat subquadrangular scales, inferiorly with a median series of large transverse plates. Original tail is longer than the body. Colouration is light pinkish brown above, with five pairs of angular dark-brown spots confluent into cross bands, being either distinct or faint, the anterior on the nape and uniting with a dark-brown band extending to the eye, and which is continued, more or less interrupted, along the side of the body; tail with dark-brown annuli; lower surfaces whitish.

According to Grismer *et al.* (2021a) there remain undescribed species in this genus as defined herein.

**Distribution:** Sri Lanka only.

**Etymology:** Named in honour of Erna Aescht of Austria, a commissioner with the International Commission on Zoological Nomenclature with a great diversity of expertise in the biological sciences, as outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/erna-aescht/>

In 2020, she voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal



"E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Aeschtgekko fraenatus* (Günther, 1864) (type species); *A. cracens* (Butuwita and Bahir, 2005); *A. edwardtaylori* (Butuwita and Bahir, 2005); *A. ramboda* (Butuwita and Bahir, 2005); *A. soba* (Butuwita and Bahir, 2005); *A. subsolanus* (Butuwita and Bahir, 2005).

**AHYONGGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:C56D173F-AD63-472D-B3E3-78C0E0457E23**

**Type species:** *Gymnodactylus deccanensis* Günther, 1864.

**Diagnosis:** Species within the genus *Ahyonggekko gen. nov.* are readily separated from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of one or other of the following sets of characters:

1/ Head rather large, oviform; snout longer than the diameter of the orbit or the distance between the eye and the ear-opening; forehead and loreal region concave; ear-opening suboval, vertical, about one third the diameter of the eye. Body moderately elongate, depressed.

Limbs rather long; digits moderately elongate, cylindrical in the basal part, compressed in the distal phalanges; the plates under the basal phalanx are very small, being little larger than the surrounding tubercles. Head covered with convex granules, largest on the snout and temples; rostral is quadrangular, not quite twice as broad as high, with median cleft above; nostril pierced between the rostral, the first labial and three nasals; nine to eleven upper and as many lower labials; mental triangular or pentagonal; a pair of large chin-shields forming a long suture behind the point of the mental, which are either in contact externally and posteriorly with two smaller pairs, or alternatively the smaller pairs are fused with the larger ones. Body covered above with large juxtaposed subequal tubercles arranged in more or less regular transverse series; these tubercles flat or very slightly keeled, generally with a small raised point in the centre. Abdominal scales round, smooth, subimbricate, much smaller than dorsals, or alternatively slightly enlarged, tubercular and feebly keeled. Males with enlarged preanal and femoral scales, but without pores. Tail cylindrical, tapering, covered with uniform smooth scales arranged in rings. Reddish to chestnut brown above, with narrow white, black-edged cross bars; the first semicircular, extending from one eye to the other across the nape; a second on the scapular region, two on the body and a fifth on sacrum; similar bands forming annuli around the tail; lower surfaces whitish (nominat subgenus), or;

2/ Head rather large, oviform, generally very convex, sometimes somewhat depressed; snout longer than the diameter of the orbit or the distance between the eye and the ear-opening; forehead slightly concave; ear-opening elliptical, oblique, one third to three fifths the diameter of the eye. Body shortish, slightly to moderately depressed. Limbs moderate; digits short, thick, slightly depressed at the base, compressed at the end, inferiorly with enlarged plates. Head covered with unequal flattish granules, which are larger on the snout; rostral quadrangular, generally almost or about twice as broad as high, usually with a median cleft above; nostril pierced between the rostral, the first labial, and three or more nasals or other small scales; nine to eleven upper and seven to nine lower labials; mental triangular; a pair of large chin-shields forming a suture behind the point of the mental, surrounded by several smaller shields. Upper surface of the body is covered with small granules, which are uniform or intermixed with more or less numerous, irregularly scattered, small roundish keeled tubercles, or alternatively with uniform juxtaposed large, squarish hexagonal

flat scales arranged regularly like bricks in a wall. Abdominal scales small, cycloid, imbricate and smooth. No femoral nor preanal pores. Tail cylindrical, tapering, slightly swollen, covered with small imbricate smooth scales largest inferiorly. Pale yellowish brown to brownish or dark brownish above, variously ornate with reddish to brown spots or bands becoming blackish towards their borders and more or less distinctly finely margined with lighter; the upper surface of the head is more or less marbled or elegantly marked with insuliform brown spots and a brown band passes through the eye typically extending to the ear, lips and side of throat, sometimes with small brown dots and marbling. The lower surfaces are whitish, the throat reticulated with brown, which has a tendency to form oblique lines.

There is no lateral fold. There are no obvious large tubercles or arrangement of them on the back of the dorsum in an obvious regular pattern (subgenus *Elegansgekko subgen. nov.*).

**Distribution:** South India (Ghats) and Sri Lanka.

**Etymology:** The new genus *Ahyonggekko gen. nov.* is named in honour of Shane T. Ahyong, working at the Australian Museum in Sydney, NSW, Australia, with research interests including the systematics of marine and freshwater malacostracan crustaceans. His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/shane-t-ahyongnew-staff/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Ahyonggekko deccanensis* (Günther, 1864) (type species); *A. albofasciatus* (Boulenger, 1885); *A. collegensis* (Beddome, 1870); *A. jeyporensis* (Beddome, 1878); *A. nebulosus* (Beddome, 1870); *A. rishivalleyensis* (Agarwal, 2016); *A. speciosus* (Beddome, 1870); *A. srilekhae* (Agarwal, 2016); *A. varadgirii* (Agarwal, Mirza, Pal, Maddock, Mishra and Bauer, 2016); *A. yakhuna* (Deraniyagala, 1945).



*Ahyonggekko yakhuna*  
(Deraniyagala, 1945)

Shamesh Wijenayake

**ELEGANSGEKKO SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:486C5AE7-2E9F-46C9-812F-105C251BEA53**

**Type species:** *Gymnodactylus nebulosus* Beddome, 1870.

**Diagnosis:** Species within the subgenus *Elegansgekko gen. nov.* (within the genus *Ahyonggekko gen. nov.*) are readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Head rather large, oviform, generally very convex, sometimes somewhat depressed; snout longer than the diameter of the orbit or the distance between the eye and the ear-opening; forehead slightly concave; ear-opening elliptical, oblique, one third to three fifths the diameter of the eye. Body shortish, slightly to moderately depressed. Limbs moderate; digits short, thick, slightly depressed at the base, compressed at the end, inferiorly with enlarged plates. Head covered with unequal flattish granules, which are larger on the snout; rostral quadrangular, generally almost or about twice as broad as high, usually with a median cleft above; nostril pierced between the rostral, the first labial, and three or more nasals or other small scales; nine to eleven upper and seven to nine lower labials; mental triangular; a pair of large chin-shields forming a suture behind the point of the mental, surrounded by several smaller shields. Upper surface of the body is covered with small granules, which are uniform or intermixed with more or less numerous, irregularly scattered, small roundish keeled tubercles, or alternatively with uniform juxtaposed large, squarish hexagonal flat scales arranged regularly like bricks in a wall. Abdominal scales small, cycloid, imbricate and smooth. No femoral nor preanal pores. Tail cylindrical, tapering, slightly swollen, covered with small imbricate smooth scales largest inferiorly. Pale yellowish brown to brownish or dark brownish above, variously ornate with reddish to brown spots or bands becoming blackish towards their borders and more or less distinctly finely margined with lighter; the upper surface of the head is more or less marbled or elegantly marked with insuliform brown spots and a brown band passes through the eye typically extending to the ear, lips and side of throat, sometimes with small brown dots and marbling. The lower surfaces are whitish, the throat reticulated with brown, which has a tendency to form oblique lines.

There is no lateral fold. There are no obvious large tubercles or arrangement of them on the back of the dorsum in an obvious regular pattern.

Species within the nominate subgenus *Ahyonggekko subgen. nov.* are readily separated from all other species within *Tetenditunguini tribe nov.* and the subgenus *Elegansgekko subgen. nov.* by the following unique set of characters:

Head rather large, oviform; snout longer than the diameter of the orbit or the distance between the eye and the ear-opening; forehead and loreal region concave; ear-opening suboval, vertical, about one third the diameter of the eye. Body moderately elongate, depressed. Limbs rather long; digits moderately elongate, cylindrical in the basal part, compressed in the distal phalanges; the plates under the basal phalanx are very small, being little larger than the surrounding tubercles. Head covered with convex granules, largest on the snout and temples; rostral is quadrangular, not quite twice as broad as high, with median cleft above; nostril pierced between the rostral, the first labial and three nasals; nine to eleven upper and as many lower labials; mental triangular or pentagonal; a pair of large chin-shields forming a long suture behind the point of the mental, which are either in contact externally and posteriorly with two smaller pairs, or alternatively the smaller pairs are fused with the larger ones. Body covered above with large juxtaposed subequal tubercles arranged in more or less regular transverse series; these tubercles flat or very slightly keeled, generally with a small raised point in the centre. Abdominal scales round, smooth, subimbricate, much smaller than dorsals, or alternatively slightly enlarged, tubercular and feebly keeled. Males with enlarged preanal and femoral scales, but without pores. Tail cylindrical, tapering, covered with uniform smooth scales arranged in rings. Reddish to chestnut brown above, with narrow white, black-edged cross bars; the first semicircular, extending from one

eye to the other across the nape; a second on the scapular region, two on the body and a fifth on sacrum; similar bands forming annuli around the tail; lower surfaces whitish.

**Distribution:** Southern India (Ghats) and Sri Lanka.

**Etymology:** The new subgenus *Elegansgekko subgen. nov.* is named in reflection of the general elegance of these species.

**Content:** *Ahyonggekko (Elegansgekko) nebulosus* (Beddome, 1870) (type species); *A. (Elegansgekko) collegalensis* (Beddome, 1870); *A. (Elegansgekko) jeyeporensis* (Beddome, 1878); *A. (Elegansgekko) rishivalleyensis* (Agarwal, 2016); *A. (Elegansgekko) speciosus* (Beddome, 1870); *A. (Elegansgekko) srilekhae* (Agarwal, 2016); *A. (Elegansgekko) varadgirii* (Agarwal, Mirza, Pal, Maddock, Mishra and Bauer, 2016); *A. (Elegansgekko) yakhuna* (Deraniyagala, 1945).

**BALLERIOGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:38BFC8D6-96C1-49D8-A4F4-9FCC454FD329**

**Type species:** *Gymnodactylus agamensis* Bleeker, 1860.

**Diagnosis:** Species within the genus *Balleriogekko gen. nov.* are readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

A lack of transversely enlarged subcaudals; including no enlarged median subcaudal scales; presence of a preanal depression; presence of an enlarged scale positioned at the apex of a continuous series of femoral and preanal pore-bearing scales or equivalent; no femoral pores; 4-6 wide dorsal bands or being blotched; 17-23 fourth toe lamellae, 8-15 labials, 7-12 infralabials, 32-46 paravertebral tubercles, 37-53 rows of ventrals; postfemoral scale contact is usually abrupt; a deep preanal groove; 0-15 pre-cloacal pores; usually with enlarged pre-cloacal scales; femoral scales may or may not be enlarged; 9-16 light bands on the tail; tail is usually without a white tip in juveniles.

Grismer *et al.* (2021a) stated that Kyle A. O'Connell *et al.* (one of his co-authors) was working on identifying and naming unnamed taxa in the genus (as defined herein and called by them the "*Cyrtodactylus agamensis* group"), of which at least four unnamed species are currently well-known.

**Distribution:** *Balleriogekko gen. nov.* species occur in Sumatra, the Thai-Malay Peninsula south of the Isthmus of Kra to the Riau Archipelago of Indonesia.

**Etymology:** *Balleriogekko gen. nov.* is named in honour of Alberto Ballerio of Italy, with research interests in taxonomy, biogeography and ecology of Afrotropical, Madagascan, Oriental, and Australian Ceratocanthidae (Insecta, Coleoptera, Scarabaeoidea) as well as the phylogeny and cataloging of the world's species.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/alberto-ballerio/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Balleriogekko agamensis* (Bleeker, 1860) (type species); *B. jarakensis* (Grismer, Chan, Grismer, Wood and Belabut, 2008); *B. khelangensis* (Pauwels, Sumontha, Panitvong and Varaguttanonda, 2014); *B. majulah* (Grismer, Wood and Lim, 2012); *B. metropolis* (Grismer, Wood, Onn, Anuar and Muin, 2014); *B. pantiensis* (Grismer, Chan, Grismer, Wood and Belabut, 2008); *B. payacola* (Johnson, Quah Anuar, Muin, Wood, Grismer, Greer, Onn, Ahmad, Bauer and Grismer, 2012); *B. psarops* (Harvey,



O'Connell, Barraza, Riyanto, Kurniawan and Smith, 2015); *B. rosichonarieforum* (Riyanto, Grismer and Wood, 2015); *B. samroiyyot* (Pauwels and Sumontha, 2014); *B. semenanjungensis* (Grismer and Leong, 2005); *B. semicinctus* (Harvey, O'Connell, Barraza, Riyanto, Kurniawan and Smith, 2015); *B. surin* (Chan-ard and Makchai, 2011); *B. tiomanensis* (Das and Lim, 2000).

**BERTLINGGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:953CF290-F538-42B2-9286-3164750AE26C**

**Type species:** *Cyrtodactylus angularis* Smith, 1921.

**Diagnosis:** Species within the genus *Bertlinggekko* *gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following unique combinations of characters:

1/ No web present on hand or foot; only preanal pores present (no femoral pores); no median continuous series of transversely widened subcaudal scales; the median series usually paired or rarely with occasionally fused scales; male with preanal pores in an angular series of scales sometimes not strongly developed; a series of somewhat specialized femoral scales, without pores; four more-or-less W-shaped marks of brown or black on dorsum; rostral rectangular, being wider than high, often with a Y-shaped notch; granular scales near snout, behind the eye being interspersed with small irregularly scattered tubercles which run down the neck in irregular rows; more-or-less circular ear opening; first chin shields, large and elongated; small flat scales on the inner surfaces of the toes (nominated subgenus *Bertlinggekko* *gen. nov.*), or;

2/ As for the preceding subgenus, but with femoral pores and a dorsal pattern usually consisting of well-defined and bold bands across the body (majority of species), or less often spotted, flecked or irregularly marked with scattered dark on a lighter background and more-or-less blotched, but in any event, never with W-shaped markings or similar such pattern on the dorsum (subgenus *Purpurabrunusgekko* *subgen. nov.*).

According to Grismer *et al.* (2021a), Nikolay A. Poyarkov (another of his co-authors) and others are working on formally describing three currently undescribed species within *Purpurabrunusgekko* *subgen. nov.* (defined by them as the "*Cyrtodactylus angularis* group").

**Distribution:** North-east Thailand, Vietnam, Laos and Cambodia generally south of Hanoi and north of Dong Hoi and in the hills east of the Chao Phraya River drainage system.

**Etymology:** *Bertlinggekko* *gen. nov.* is named in honour of Markus Bertling of Germany, curator for palaeontology at the Geomuseum of the WWU (Westphalian Wilhelm's University) in Münster/ Germany.

His expertise is outlined at:

<https://www.uni-muenster.de/Geomuseum/museum/markus.html>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Bertlinggekko angularis* (Smith, 1921) (type species); *B. bansocensis* (Luu, Nguyen, Le, Bonkowski and Ziegler, 2016); *B. buchardi* (David, Teynie and Ohler, 2004); *B. calamei* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. chanhomeae* (Bauer, Sumontha and Pauwels, 2003); *B.*

*darevskii* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. hinnamnoensis* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. jaegeri* (Luu, Calame, Bonkowski, Nguyen and Ziegler, 2014); *B. jarujini* (Ulber, 1993); *B. khammouanensis* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. lomyenensis* (Ngo Van Tri and Pauwels, 2010); *B. muangfuangensis* (Sitthivong, Luu, Ha, Nguyen, Le and Ziegler, 2019); *B. multiporus* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. pageli* (Schneider, Nguyen, Schmitz, Kingsada, auer and Ziegler, 2011); *B. papilionoides* (Ulber and Grossmann, 1991); *B. phongnhakebangensis* (Ziegler, Rösler, Herrmann and Thanh, 2003); *B. roesleri* (Ziegler, Nazarov, Orlov, Nguyen, Vu, Dang, Dinh and Schmitz, 2010); *B. rufford* (Luu, Calame, Nguyen, Le, Bonkowski and Ziegler, 2016); *B. sommerladi* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. soudthichaki* (Luu, Calame, Nguyen, Bonkowski and Ziegler, 2015); *B. teyniei* (David, Nguyen, Schneider and Ziegler, 2011); *B. thathomensis* (Nazarov, Pauwels, Konstantinov, Chulisov, Orlov and Poyarkov, 2018).

**PURPURABRUNUSGEKKO SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:5981B1BD-BDA8-424E-9E23-B0EE7D1CD549**

**Type species:** *Cyrtodactylus jarujini* Ulber, 1993.

**Diagnosis:** Species within the genus *Bertlinggekko* *gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following unique combinations of characters:

1/ No web present on hand or foot; only preanal pores present (no femoral pores); no median continuous series of transversely widened subcaudal scales; the median series usually paired or rarely with occasionally fused scales; male with preanal pores in an angular series of scales sometimes not strongly developed; a series of somewhat specialized femoral scales, without pores; four more-or-less W-shaped marks of brown or black on dorsum, often bordered by thin yellow lines or etchings across the dorsum; rostral rectangular, being wider than high, often with a Y-shaped notch; granular scales near snout, behind the eye being interspersed with small irregularly scattered tubercles which run down the neck in irregular rows; more-or-less circular ear opening; first chin shields, large and elongated; small flat scales on the inner surfaces of the toes (nominated subgenus *Bertlinggekko* *gen. nov.*), or;

2/ As for the preceding subgenus, but with femoral pores. Also with a dorsal pattern usually consisting of well-defined and bold bands across the body (majority of species), or less often spotted, flecked or irregularly marked with scattered dark on a lighter background and more-or-less blotched, but in any event, never with W-shaped markings or similar such pattern on the dorsum (subgenus *Purpurabrunusgekko* *subgen. nov.*).

According to Grismer *et al.* (2021a), Nikolay A. Poyarkov (another of his co-authors) and others are working on formally describing three currently undescribed species within *Purpurabrunusgekko* *subgen. nov.* (defined by them as the "*Cyrtodactylus angularis* group").

**Distribution:** North-east Thailand, Vietnam, Laos and Cambodia generally south of Hanoi and north of Dong Hoi and in the hills east of the Chao Phraya River drainage system.

**Etymology:** The subgenus *Purpurabrunusgekko* *subgen. nov.* is named in reflection of the dorsal colourations found on most specimens, being purple, brown or purplish-brown, the Latin words being "*purpura*" for the colour purple and "*brunus*" for the colour brown.

**Content:** *Bertlinggekko* (*Purpurabrunusgekko*) *jarujini* (Ulber, 1993) (type species); *B. (Purpurabrunusgekko) bansocensis* (Luu, Nguyen, Le, Bonkowski and Ziegler, 2016); *B. (Purpurabrunusgekko) calamei* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. (Purpurabrunusgekko) darevskii* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. (Purpurabrunusgekko)*

*hinnamnoensis* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. (Purpurabrunusgecko) jaegeri* (Luu, Calame, Bonkowski, Nguyen and Ziegler, 2014); *B. (Purpurabrunusgecko) khammouanensis* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. (Purpurabrunusgecko) lomyenensis* (Ngo Van Tri and Pauwels, 2010); *B. (Purpurabrunusgecko) muangfuangensis* (Sitthivong, Luu, Ha, Nguyen, Le and Ziegler, 2019); *B. (Purpurabrunusgecko) multiporus* (Nazarov, Poyarkov, Orlov, Nguyen, Milto, Martinov, Konstantinov and Chulisov, 2014); *B. (Purpurabrunusgecko) phongnhakebangensis* (Ziegler, Rösler, Herrmann and Thanh, 2003); *B. (Purpurabrunusgecko) roesleri* (Ziegler, Nazarov, Orlov, Nguyen, Vu, Dang, Dinh and Schmitz, 2010); *B. (Purpurabrunusgecko) rufford* (Luu, Calame, Nguyen, Le, Bonkowski and Ziegler, 2016); *B. (Purpurabrunusgecko) sommerladi* (Luu, Bonkowski, Nguyen, Le, Schneider, Ngo and Ziegler, 2016); *B. (Purpurabrunusgecko) soudthichaki* (Luu, Calame, Nguyen, Bonkowski and Ziegler, 2015); *B. (Purpurabrunusgecko) teyniei* (David, Nguyen, Schneider and Ziegler, 2011); *B. (Purpurabrunusgecko) thathomensis* (Nazarov, Pauwels, Konstantinov, Chulisov, Orlov and Poyarkov, 2018).

#### **BOUCHARDEGKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:E8C55989-D559-431F-A71B-37923851FBA6**

**Type species:** *Cyrtodactylus nigriocularis* Sang, Orlov and Darevsky, 2006.

**Diagnosis:** Species within the genus *Bouchardgecko gen. nov.* are readily separated from all other species within Tetendituguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Black eyes; depressed head with wide and depressed snout; body moderately slender, elongate with developed ventrolateral folds; limbs moderately long, digits long; tail longer than snout-vent length, with large undivided subcaudals; 13-14 upper labials, 13-15 lower labials, 17-21 narrow subdigital lamellae on fourth toe, 119-145 mid-body rows of scales; large femoral scales are absent.

**Distribution:** Known only from the type locality of the single species in the genus, at Mount Ba Den, Tay Ninh province, southern Vietnam.

**Etymology:** *Bouchardgecko gen. nov.* is named in honour of entomologist Patrice Bouchard of Canada, whose scientific works encompasses beetles.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/patrice-bouchard/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Bouchardgecko nigriocularis* Sang, Orlov and Darevsky, 2006 (type species) (monotypic)

#### **BOURGOINGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:5E1F4D6E-00B2-4CE7-BD5D-6CE71760282D**

**Type species:** *Cyrtodactylus arcanus* Oliver, Richards and Siström, 2012.

**Diagnosis:** *Bourgoingekko gen. nov.* can be distinguished from all other from all other Melanesian species within Tetendituguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

SVL to 92 mm; relatively narrow head (HW/SVL 0.17-0.18); ventrolateral fold scalation homogeneous and lacking enlarged tubercles; forelimbs without tubercles; dorsal tubercles in 16-18 longitudinal rows at mid-body or alternatively sparse; sometimes also near base tail; ventral scales in approximately 46 longitudinal rows at mid-body; subcaudal scales may or may not be transversely widened or enlarged on original tail, but if so, are approximately one quarter to a third width of the tail; largest preanal scales roughly triangular and more than 10 rows anterior to cloaca; enlarged femoral scales extending to knee, discontinuous with enlarged preanals, ovoid and approximately twice as long as wide; and a complex dorsal colour pattern on consisting of 7-11 dark-brown transverse irregularly-shaped transversely oriented dorsal bands or series of blotches on a medium brown background.

**Distribution:** Known only from the north and south sides of the central cordillera of Papua New Guinea.

**Etymology:** *Bourgoingekko* is named in honour of entomologist Thierry Bourgoïn of France whose scientific works encompasses Planthoppers (Insecta, Hemiptera, Fulgoromorpha).

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/thierry-bourgoïn/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Bourgoingekko arcanus* (Oliver, Richards and Siström, 2012), (type species); *B. manos* (Oliver, Karkkainen, Rösler and Richards, 2019).

#### **DMITRIEVGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:E8AF0E7B-98BB-4B8C-B8EA-7B2838B870ED**

**Type species:** *Gymnodactylus brevipalmatus* Smith, 1923.

**Diagnosis:** *Dmitrievgecko gen. nov.* can be distinguished from all other species within Tetendituguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Feet partially webbed; tail with lateral denticulations; (usually) nine preanal pores on either side; brown above with W-shaped dorsal marks in young which may disappear in adults. The membranes between the toes alone separate species in this genus from all others within Tetendituguini *tribe nov.*

There are at least 2 undescribed species in this genus, not including the species formally named in this paper for the first time.

**Distribution:** *Dmitrievgecko gen. nov.* species occur in Peninsula Malaysia and Indochina, including, Malaysia, Thailand, Laos and Vietnam.

**Etymology:** *Dmitrievgecko gen. nov.* is named in honour of entomologist Dmitry Dmitriev, originally from Russia but now of the USA whose scientific works encompasses leafhopper insects.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/dmitry-dmitriev/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that



follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Dmitrievgekko brevipalmatus* (Smith, 1923) (type species); *D. elok* (Dring, 1979); *D. interdigitalis* (Ulber, 1993); *D. ngati* (Le, Sitthivong, Tran, Grismer, Nguyen, Le, Ziegler and Luu, 2021); *D. oxyi* sp. nov..

**DMITRIEVGEKKO OXYI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:C53050FC-F6B6-428B-90D1-1C5FAE72F690**

**Holotype:** A preserved specimen at the Universiti Sains Malaysia Herpetological Collection, School of Biological Sciences, Gelugor. Penang. Malaysia, specimen number USMHC (herps) 2555 collected at Langkawi Island, Kedah state, Malaysia.

**Diagnosis:** *Dmitrievgekko oxyi* sp. nov. has until now been treated as an insular population of the species *Dmitrievgekko brevipalmatus* (Smith, 1923), better known as *Cyrtodactylus brevipalmatus* (Smith, 1923), although originally described as *Gymnodactylus brevipalmatus* Smith, 1923.

*Dmitrievgekko oxyi* sp. nov. is similar in most respects to *D. brevipalmatus*, but is most readily separated from that species by the following suite of characters: Orange as opposed to dark reddish, dorsum; a general lack of distinct markings on the dorsum of the body, versus a well-defined pattern of lighter (mainly) and darker blotches or chevrons, or chevron-like markings, lighter tail bands not infused with dark red or brown and an absence of obvious white spots on the anterior labials, forehead of the eye. *Dmitrievgekko oxyi* sp. nov. and *D. brevipalmatus* are separated from other members of the genus *Dmitrievgekko* gen. nov. and all other species within Tetenditungiini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Head moderately depressed, snout little longer than orbit; ear-opening small, oval, one sixth of diameter of eye; head covered with small granules, largest over snout, those on occiput intermixed with small tubercles; rostral quadrangular, broader than high, bordering the nostril, first labial, two supranasals and two small internasals; an entrant suture from top edge, bifurcating, its branches continuing somewhat, forming an angle greater than a right angle; supralabials, 12-13, first bordering nostril; infralabials, 10-11; mental large, subtriangular; first pair of chinshields large in contact with each other followed by two pairs of smaller scales, these widely separated. Throat and chin covered with small flat granular scales; dorsum with fine granules interspersed with enlarged rounded keeled tubercles; indistinct ventrolateral folds with enlarged scales, separated on venter by about 44 rows of small cycloid scales. A series of nine much enlarged preanal pores forming wide angle; six and seven femoral pores separated by an interval from preanal series; enlarged scales preceding and following pore-scales; no pre-anal groove. Tail cylindrical, tapering, covered with small scales and regularly disposed rows of keeled tubercles above, with irregularly disposed enlarged scales below. Limbs moderate, digits long, toes webbed at base and strongly compressed distally. Basal part of digits with six or seven broad imbricate transverse plates below. The venter and throat are also faintly spotted.

The species *D. elok* Dring, 1979 is similar in most respects to *D. oxyi* sp. nov. and *D. brevipalmatus*, with the yellowish dorsal colouring of *D. oxyi* sp. nov. but instead having distinct irregular jagged chocolate brown markings on the dorsum, mainly on either side of the mid-vertebral line. *D. elok* is further separated from *D. oxyi* sp. nov. and *D. brevipalmatus* by lacking enlarged femoral scales and lacking femoral pores. There are 6-10 tubercles counted across the midbody in a rough line, which are separated from each other by 4-9 granules. In *D. brevipalmatus* and *D. oxyi* sp. nov. there are 14-18 tubercles across the midbody, separated by 1-5 granules. The distal portions of the digits (that is, distal to

the expanded subdigital lamellae) are relatively shorter in length and have fewer subdigital scales in *D. elok* than in *D. brevipalmatus* and *D. oxyi* sp. nov..

The recently described species *Dmitrievgekko ngati* (Le, Sitthivong, Tran, Grismer, Nguyen, Le, Ziegler and Luu, 2021), is readily separated from all others in the genus by the (original) tail which is charcoal black with much narrower white rings. That species can also be separated from other members of the genus *Dmitrievgekko* gen. nov. and all other species within Tetenditungiini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Maximum SVL 69.3 mm; dorsal pattern consisting of six dark irregular transverse bands between limb insertions; inter-supranasals one; dorsal tubercles present on occiput, body, hind limbs and on first half of tail; 17-22 irregular dorsal tubercle rows at midbody; lateral folds clearly defined, with interspersed tubercles; 32-38 ventral scales between ventrolateral folds; 13 preanal pores separated by a diastema of 5/5 poreless scales from a series of 7/7 femoral pores in enlarged femoral scales; preanal and femoral pores absent in females; 1-3 postcloacal tubercles on each side; transversely enlarged median subcaudal scales absent (derived from Le *et al.* 2021).

The species *D. interdigitalis* (Ulber, 1993) is readily separated from *D. ngati* by having broad yellow-white bands on the tail, as wide or wider than the charcoal bands.

*D. interdigitalis* can also be separated from other members of the genus *Dmitrievgekko* gen. nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Generally reddish-brown dorsum that is not dark in colour; SVL adult males 72-4-77.0 mm; SVL adult females 59-80 mm; supralabials 10-13/9-15, infralabials 10-12/10-11, internasal separated by 1-3 scales, dorsal tubercle rows at midbody 16-22, midbody ventral scale rows are 36-42; preanal pores 14-16; femoral pores 7-8/7-9.

A colour image of the type form of *D. brevipalmatus* is seen online at:

<https://www.inaturalist.org/observations/38089467>

*D. oxyi* sp. nov.. in life is depicted in Grismer *et al.* (2021a) at Fig. 10 (C).

Grismer *et al.* (2021a) at Fig. 10 also have images of typical *D. elok* and *D. interdigitalis* (2 images).

*D. ngati* is depicted in life online at:

<https://novataxa.blogspot.com/2021/05/cyrtodactylus-ngati.html>

Species within *Dmitrievgekko* gen. nov. can be distinguished from all other species within Tetenditungiini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Feet partially webbed; tail with lateral denticulations; (usually) nine preanal pores on either side; brown above with W-shaped dorsal marks in young which may disappear in adults. The membranes between the toes alone separate species in this genus from all others within Tetenditungiini tribe nov..

There are at least 2 undescribed species in this genus, not including the species formally named in this paper for the first time, that being *D. oxyi* sp. nov..

**Distribution:** *D. oxyi* sp. nov. is only known from the type locality Langkawi Island, Kedah state, Malaysia.

**Etymology:** *D. oxyi* sp. nov. is named in honour of a now deceased Great Dane dog, named "Oxyuranus", or "Oxy" for short, in recognition of his 8 years of life, guarding the research and conservation facility of Snakebusters: Australia's best reptiles shows and Reptile Party Melbourne.

**EVENHUISGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:7BC660FB-EE7D-4D7D-9917-7264356F97C9**

**Type species:** *Cyrtodactylus capreoloides* Rösler, Richards and Günther, 2007.

**Diagnosis:** *Evenhuisgekko* gen. nov. can be distinguished from all other Melanesian species within Tetenditungiini tribe nov. as

already formally described in this paper and relied upon in this description by the presence of pores in a characteristic tripartite series or alternatively / additionally, one or other of the following three unique combinations of characters:

1/ Moderate size (males to 78-109 mm SVL); relatively slender body with moderate to robust head (HW/SVL 0.19-0.213); medial row of subcaudal scales much less than one-quarter the transverse width of tail to 1/2 width of tail; mid-dorsal tubercles in approximately 20-22 transverse rows (at mid body); dorsal cephalic tubercles sparsely or densely arranged in mid-dorsal region posterior to the orbitals; pores in a tripartite series; preanal and femoral scales in a distinctly enlarged and continuous series to knee or beyond; adult males with preanal pores in broad and wide open chevron of 12-14 preanal pores; separated by one to three scales from a long series of femoral pores ranging from 16 to 25 in number, separate from preanal pores and extending to knee or further; dorsal pattern of 5-7 thin indistinct somewhat jagged dorsal transverse bands dark brown in colour on light grey, grey-brown or buff background; tail with or without prominent dentate tubercles, but if present not extending more than 3 cm from base of vent and on dorsal surface only; iris is beige-brown, bronze or chocolate-brown in life. Tail (original) of moderate thickness, much longer than the head and body with 5-8 sets of wide bands, the dark greyish-brown bands being wider than the alternating narrower whitish-yellow bands. (*Evenhuisgekko capreoloides* (Rösler, Richards and Günther, 2007) (type species for genus); *E. boreoclivus* (Oliver, Krey, Mumpuni and Richards, 2011); *E. medioclivus* (Oliver, Richards and Sstrom, 2012)); or;

2/ Moderate size (SVL to 96.7 mm) and slender body, with a relatively narrow head (HW/SVL 0.17-0.19), mid-dorsal tubercles in 14-16 longitudinal rows at midpoint of body, ventrolateral fold without enlarged tubercles, subcaudal scales not transversely widened; pores in a tripartite series; preanal pores obvious and of moderate number (15-17), femoral pores minute and numerous (31-30 per limb, 66-76 total), and dorsal colour pattern on torso consisting of six to nine semi-distinctly defined, alternating dark-brown bands or blotches, on a medium-brown background. Tail (original), is thin and longer than the head and body, with 9-11 sets of wide bands, the brown bands being wider than the alternating narrower yellow bands, except at the anterior end, where the reverse applies or the bands are of similar width, the colour contrast between those also being relatively indistinct and in line with the preceding dorsal pattern. Iris is beige to brown with a slight orange tinge (*Evenhuisgekko tanim* Nielsen and Oliver, 2017); or;

3/ Small size (SVL of two adult specimens 61.6 and 71.3 mm); relatively slender body with robust head (HW/SVL 0.21); subcaudal scales not transversely enlarged, only slightly wider than dorsal caudals; pores in a tripartite series; adult males with a broad and shallow chevron of about 11 preanal pores widely separated from small series (about 7) of femoral pores approximately midway along femur; posteriormost enlarged ventral scales separated from the cloacal opening by less than 10 rows of much smaller scales; relatively low number of dorsal tubercle rows (16); and dorsal coloration consisting of indistinct medium-brown transverse blotches or lines on a light-brown background. Tail (original), thin and long as or slightly longer than the head and body (SVL), heavily banded with 5-6 alternating wide bands, being white and dark blackish brown in colour, the darker bands being slightly wider than the light ones (*Exilgekko subgen. nov.*).

**Distribution:** Elevated parts of mainland New Guinea including hill and lower-montane forests on the southern side of the Central Cordillera extending from Gulf Province into West Papua (*E. capreoloides*, *E. medioclivus* and *E. tanim*), the Huon Peninsula (*E. minor*) and the northern coastal ranges of Papua New Guinea and West Papua (*E. boreoclivus*). There are other undescribed species in this genus.

**Etymology:** *Evenhuisgekko gen. nov.* is named in honour of entomologist Neal Evenhuis of Honolulu, Hawaii, USA, whose scientific works encompasses over 600 publications.

His expertise is outlined at:

<http://hbs.bishopmuseum.org/staff/evenhuis.html>

As a commissioner with the International Commission on

Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Evenhuisgekko capreoloides* (Rösler, Richards and Günther, 2007) (type species); *E. boreoclivus* (Oliver, Krey, Mumpuni and Richards, 2011); *E. medioclivus* (Oliver, Richards and Sstrom, 2012); *E. minor* (Oliver and Richards, 2012); *E. tanim* (Nielsen and Oliver, 2017).

**EXILGEKKO SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:022B5AB5-E94F-4E9B-A19D-E47053A0A9F0**

**Type species:** *Cyrtodactylus minor* Oliver and Richards, 2012.

**Diagnosis:** The species within *Exilgekko subgen. nov.*, being within the genus *Evenhuisgekko gen. nov.* can be distinguished from all other Melanesian species within Tetenditungui *tribe nov.* as already formally described in this paper and relied upon in this description, including other species within *Evenhuisgekko gen. nov.* by the presence of the following unique combination of characters:

Small size (SVL of two adult specimens 61.6 and 71.3 mm); relatively slender body with robust head (HW/SVL 0.21); subcaudal scales not transversely enlarged, only slightly wider than dorsal caudals; pores in a tripartite series; adult males with a broad and shallow chevron of about 11 preanal pores widely separated from small series (about 7) of femoral pores approximately midway along femur; posteriormost enlarged ventral scales separated from the cloacal opening by less than 10 rows of much smaller scales; relatively low number of dorsal tubercle rows (16); and dorsal coloration consisting of indistinct medium-brown transverse blotches or lines on a light-brown background. Tail (original), thin and long as or slightly longer than the head and body, heavily banded with 5-6 alternating wide bands, being white and dark blackish brown in colour, the darker bands being slightly wider than the light ones.

Species within the nominate subgenus *Evenhuisgekko gen. nov.* are in turn separated distinguished from all other from all other Melanesian species within Tetenditungui *tribe nov.* as already formally described in this paper and relied upon in this description, including the species within *Exilgekko subgen. nov.* by the presence of the following unique combination of characters, being one or other of:

1/ Moderate size (males to 78-109 mm); relatively slender body with moderate to robust head (HW/SVL 0.19-0.213); medial row of subcaudal scales much less than one-quarter the transverse width of tail to 1/2 width of tail; mid-dorsal tubercles in approximately 20-22 transverse rows (at mid body); dorsal cephalic tubercles sparsely or densely arranged in mid-dorsal region posterior to the orbitals; pores in a tripartite series; preanal and femoral scales in a distinctly enlarged and continuous series to knee or beyond; adult males with preanal pores in broad and wide open chevron of 12-14 preanal pores; separated by one to three scales from a long series of femoral pores ranging from 16 to 25 in number, separate from preanal pores and extending to knee or further; dorsal pattern of 5-7 thin indistinct somewhat jagged dorsal transverse bands dark brown in colour on light grey, grey-brown or buff background; tail with or without prominent dentate tubercles, but if present not extending more than 3 cm from base of vent and on dorsal surface only; iris is beige-brown, bronze or chocolate-brown in life. Tail (original) of moderate thickness, much longer than the head and body (SVL) with 5-8 sets of wide bands, the dark greyish-brown bands being wider than the alternating narrower whitish-yellow



bands. (*Evenhuisgekko capreoloides* (Rösler, Richards and Günther, 2007) (type species for genus); *E. boreoclivus* (Oliver, Krey, Mumpuni and Richards, 2011); *E. medioclivus* (Oliver, Richards and Sstrom, 2012)); or;

2/ Moderate size (SVL to 96.7 mm) and slender body, with a relatively narrow head (HW/SVL 0.17-0.19), mid-dorsal tubercles in 14-16 longitudinal rows at midpoint of body, ventrolateral fold without enlarged tubercles, subcaudal scales not transversely widened; pores in a tripartite series; preanal pores obvious and of moderate number (15-17), femoral pores minute and numerous (31-30 per limb, 66-76 total), and dorsal colour pattern on torso consisting of six to nine semi-distinctly defined, alternating dark-brown bands or blotches, on a medium-brown background. Tail (original), is thin and longer than the head and body, with 9-11 sets of wide bands, the brown bands being wider than the alternating narrower yellow bands, except at the anterior end, where the reverse applies or the bands are of similar width, the colour contrast between those also being relatively indistinct and in line with the preceding dorsal pattern. Iris is beige to brown with a slight orange tinge (*Evenhuisgekko tanim* Nielsen and Oliver, 2017).

**Distribution:** The Huon Peninsula of northern Papua New Guinea.

**Etymology:** "Exil" means "thin" in Latin and hence the name "*Exilgekko*" in reflection of the thin body of the type species in this monotypic subgenus.

**Content:** *Evenhuisgekko (Exilgekko) minor* (Oliver and Richards, 2012) (type species) (monotypic).

**GRYGIERGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:5751DD06-47BC-40B5-8EBC-E345B0B5C377**

**Type species:** *Cyrtodactylus chauquangensis* Quang, Orlov, Ananjeva, Johns, Ngoc Thao and Quang Vinh, 2007.

**Diagnosis:** *Grygiergekko gen. nov.* can be distinguished from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description by the presence of characteristic bright yellowish spots and reticulations on the dorsal surface of the head and body, including on the upper surfaces of the limbs, this spotting always including the upper surface of the head (which may be dark spotted instead of yellowish spots, but always distinctly spotted in any event) as well as the same distinctive yellowish spotting on either the lateral surfaces and/or the upper surfaces of the limbs, these spots are sometimes feint or indistinct, being somewhat subsumed by a more distinctive and obvious dorsal pattern of yellowish and purple-brown cross bands (4-6) across the body or blotches and spots conforming to a similar number of bands as well as one or other of the following two suites of characters:

1/ SVL 70.00-99.30 mm, tail length 75.00-108.31 mm. The head is slightly depressed, wide, with a distinct neck. The snout is depressed. The body is slender; limbs and digits long and slender. The tail is longer than the length from snout to vent. The subcaudals are single and transversely enlarged, even if only slightly, or rarely in two longitudinal rows of enlarged scales; cilia 26-40. There are 9-10 supralabials, 8-11 infra-labials; enlarged pair of first postmental scales; 24-32 interorbital scales at the minimum width, 128-130 rows of scales around the mid-body, 31-48 scales across the belly in the middle of the body (ventral scale rows), between moderately distinct to very distinct ventrolateral folds, usually without interspersed tubercles. Both the males and the females have no preanal groove, 6-9 preanal pores separated by a diastema of 12-14 smaller poreless scales from a series of 4-10 femoral pores on each thigh in males, absent or present in females. 0-3 postcloacal tubercles (or spurs); 10-24 lamellae under toe 4; one pair of enlarged postmental scales in broad contact with one another; dorsum relatively smooth textured, with 10-24 longitudinal rows of small tubercles, with some sometimes in contact (nominated subgenus); or;

2/ SVL 95-100 mm; body, limbs and digits long, slender; original tail longer than body (TL/SVL 1.16); presence of nuchal loop; dorsal pattern consisting of six or seven dark bands on a brown background; nine white rings on tail; pore-bearing preanal and femoral scales separated; 7-13 pore-bearing preanal scales in males separated from zero to ten pore-bearing femoral scales on

each side by two poreless scales; 18-19 interorbital scales across the frontal bone; 18-19 scales between the eye and nostril; 30-31 rows of ventral scales between well developed ventrolateral folds; 16-18 irregular longitudinal rows of smooth conical tubercles at midbody between lateral folds; 26-27 paravertebral tubercles; 16-20 subdigital lamellae on the first toe; 21-22 subdigital lamellae on the fourth toe; no tubercles on the tail; subcaudal scales transversely enlarged (*Claragekko subgen. nov.*).

There are further unnamed species within *Grygiergekko gen. nov.*

**Distribution:** The species in the genus *Grygiergekko gen. nov.* appear to be range-restricted endemics confined to limestone hills in northern Indochina, ranging from northern Thailand and Laos, to northeastern Vietnam and to Yunnan Province in south China.

**Etymology:** *Grygiergekko gen. nov.* is named in honour of Mark J. Grygier, a USA citizen based in Taiwan, with expertise in the parasitic crustacean group Ascothoracida with side interests in certain isopods, copepods and barnacles.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/mark-j-grygier/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Grygiergekko chauquangensis* (Quang, Orlov, Ananjeva, Johns, Ngoc Thao and Quang Vinh, 2007) (type species); *G. aurbalateatus* (Sumontha, Panitvong and Deein, 2010); *G. bichnganae* (Ngo Van Tri and Grismer, 2010); *G. bobrovi* (Nguyen, Le, Van Pham, Ngo, Hoang, The Pham and Ziegler, 2015); *G. cucphuongensis* (Ngo and Onn, 2011); *G. doisuthep* (Kunya, Panmongkol, Pauwels, Sumontha, Meewasana, Bunkhwamdi and Dangsri, 2014); *G. dumnuui* (Bauer, Kunya, Sumontha, Niyomwan, Pauwels, Chanhome and Kunya, 2010); *G. erythropros* (Bauer, Kunya, Sumontha, Niyomwan, Panitvong, Pauwels, Chanhome and Kunya, 2009); *G. houaphanensis* (Schneider, Luu, Sitthivong, Teynie, Le, Nguyen and Ziegler, 2020); *G. huongsonensis* (Luu, Nguyen, Do and Ziegler, 2011); *G. martini* (Ngo Van Tri, 2011); *G. otai* (Nguyen, Le, Van Pham, Ngo, Hoang, The Pham and Ziegler, 2015); *G. ngoiensis* (Schneider, Luu, Sitthivong, Teynie, Le, Nguyen and Ziegler, 2020); *G. phetchaburiensis* (Pauwels, Sumontha and Bauer, 2016); *G. puhuenensis* (Nguyen, Yang, Thi Le, Nguyen, Orlov, Hoang, Nguyen, Jin, Rao, Hoang, Che, Murphy and Zhang, 2014); *G. soni* (Le, Nguyen, Le and Ziegler, 2016); *G. sonlaensis* (Nguyen, Pham, Ziegler, Ngo and Le, 2017); *G. spelaeus* (Nazarov, Poyarkov, Orlov, Nguyen, Miltov, Martinov, Konstantinov and Chulisov, 2014); *G. taybacensis* (Pham, Le, Ngo, Ziegler, Nguyen, 2019); *G. vilaphongi* (Schneider, Nguyen, Duc Le, Nophaseud, Bonkowski and Ziegler, 2014); *G. wayakonei* (Nguyen, Kingsada, Rösler, Auer and Ziegler, 2010); *G. zhenkangensis* (Liu and Rao, 2021)

**CLARAGEKKO SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:1F7A14E3-84F5-4383-9272-EF8BC87B3F1C**

**Type species:** *Cyrtodactylus taybacensis* Pham, Le, Ngo, Ziegler, Nguyen, 2019.

**Diagnosis:** Species in the subgenus *Claragekko subgen. nov.* can be distinguished from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description (including species in the nominate subgenus *Grygiergekko gen. nov.*) by the presence of characteristic bright yellowish spots and reticulations on the dorsal surface of the head

and body, including on the upper surfaces of the limbs, this spotting always including the upper surface of the head (which may be dark spotted instead of yellowish spots, but always distinctly spotted in any event) as well as the same distinctive yellowish spotting on either the lateral surfaces and/or the upper surfaces of the limbs, these spots are sometimes feint or indistinct, being somewhat subsumed by a more distinctive and obvious dorsal pattern of yellowish and purple-brown cross bands (4-6) across the body or blotches and spots conforming to a similar number of bands as well as the following suite of characters:

SVL 95-100 mm; body, limbs and digits long, slender; original tail longer than body (TL/SVL 1.16); presence of nuchal loop; dorsal pattern consisting of six or seven dark bands on a brown background; nine white rings on tail; pore-bearing preanal and femoral scales separated; 7-13 pore-bearing preanal scales in males separated from zero to ten pore-bearing femoral scales on each side by two poreless scales; 18-19 interorbital scales across the frontal bone; 18-19 scales between the eye and nostril; 30-31 rows of ventral scales between well developed ventrolateral folds; 16-18 irregular longitudinal rows of smooth conical tubercles at midbody between lateral folds; 26-27 paravertebral tubercles; 16-20 subdigital lamellae on the first toe; 21-22 subdigital lamellae on the fourth toe; no tubercles on the tail; subcaudal scales transversely enlarged.

Specimens in the nominate subgenus (*Grygiergekko gen. nov.*) are in turn distinguished from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description (including species in the subgenus *Claragekko subgen. nov.*) by the presence of characteristic bright yellowish spots and reticulations on the dorsal surface of the head and body, including on the upper surfaces of the limbs, this spotting always including the upper surface of the head (which may be dark spotted instead of yellowish spots, but always distinctly spotted in any event) as well as the same distinctive yellowish spotting on either the lateral surfaces and/or the upper surfaces of the limbs, these spots are sometimes feint or indistinct, being somewhat subsumed by a more distinctive and obvious dorsal pattern of yellowish and purple-brown cross bands (4-6) across the body or blotches and spots conforming to a similar number of bands as well as the following suite of characters:

SVL 70.00-99.30 mm, Tail length 75.00-108.31 mm. The head is slightly depressed, wide, with a distinct neck. The snout is depressed. The body is slender; limbs and digits long and slender. The tail is longer than the length from snout to vent. The subcaudals are single and transversely enlarged, even if only slightly, or rarely in two longitudinal rows of enlarged scales; cilia 26-40. There are 9-10 supralabials, 8-11 infra-labials; enlarged pair of first postmental scales; 24-32 interorbital scales at the minimum width, 128-130 rows of scales around the mid-body, 31-48 scales across the belly in the middle of the body (ventral scale rows), between moderately distinct to very distinct ventrolateral folds, usually without interspersed tubercles. Both the males and the females have no preanal groove, 6-9 preanal pores separated by a diastema of 12-14 smaller poreless scales from a series of 4-10 femoral pores on each thigh in males, absent or present in females. 0-3 postcloacal tubercles (or spurs); 10-24 lamellae under toe 4; one pair of enlarged postmental scales in broad contact with one another; dorsum relatively smooth textured, with 10-24 longitudinal rows of small tubercles, with some sometimes in contact.

**Distribution:** Both species in the subgenus are known only from Son La Province, northwestern Vietnam.

**Etymology:** *Claragekko subgen. nov.* is named in reflection of the bright colouration of adults of these species, coming from the Latin word "*clara*" which means "bright" or "brilliant".

**Content:** *Grygiergekko (Claragekko) taybacensis* (Pham, Le, Ngo, Ziegler, Nguyen, 2019) (type species); *G. (Claragekko) bichnganae* (Ngo Van Tri and Grismer, 2010).

#### **KOTTELATGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:1064BD25-8C4F-43BD-AEFE-D52AD95248C4**

**Type species:** *Gymnodactylus condorensis* Smith, 1921.

**Diagnosis:** *Kottelatgekko gen. nov.* can be distinguished from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following four suites of characters:

1/ Maximum SVL of 92 mm, enlarged tubercles on body and hind limbs but none on fore limbs, 27-40 ventral scale rows, a single row of transversely enlarged, median subcaudal scales, 18-20 subdigital lamellae on fourth toe, 4 to 7 preanal pores, and a single row of enlarged, non pore-bearing femoral scales beneath each thigh which are not continuous with the preanal pores, beige coloured top of head with dark brown spotting, the spots being of irregular size and shape. Dorsal pattern of irregular light brown markings running in a longitudinal manner along the midline and nearby on a medium to dark brown background more-or-less turning into spots on the flanks. Numerous dark or light tubercles, arranged in a dense but spaced apart arrangement of even distribution across the dorsal surface and flanks (*Kottelatgekko condorensis* (Smith, 1921), *K. leegrimeri* (Chan and Norhayati, 2010)); or;

2/ Maximum SVL 87 mm; no preanal groove; 3-5 preanal pores arranged in an angular series; a series of enlarged femoral scales contacting a wide patch of enlarged preanal scales; 3-6 intersuparanasals in contact with the rostral; 20-26 strongly keeled, longitudinal rows of tubercles at midbody; and 30-40 transverse rows of ventral scales between the ventrolateral folds (*K. tho chuensis* Ngo Van Tri and Grismer, 2012)); or;

3/ Adult body size of 45-80 mm SVL; no preanal groove, no preanal and femoral pores in male or female, enlarged femoral scales distinct; 26-36 midventral scale rows between indistinct lateral folds; 17-23 subdigital lamellae under fourth toe; a median series of transversely widened subcaudal scales; tail moderately thick, longer than S-V, irregularly marked, more-or-less with indistinct dark and white bands. Head pattern with a distinctive crown across the top of the head, bounded on sides with darker, with light thin, mid-vertebral line running from rear of crown, down length of body becoming less intense or indistinct towards the pelvis; irregular semi-distinct crossbands on the dorsum. Irregularly scattered tubercles on the dorsum are lighter tipped and larger ones conical; head and body, thick-set and robust, including hind-limbs that are also relatively thick (*K. paradoxus* (Darevsky and Szczerbak, 1997)); or;

4/ SVL of 68.3-95.0 mm; head with band on occiput; 15-19 interorbitals; 15-27 scales between eye and nostril; one pair of enlarged postmental scales in broad contact; body slender to robust; limbs and digits long and slender; original tail very long (TL/SVL = 1.24-1.28); dorsal pattern with four narrow white bands on chocolate-brown background, one other band on tail; sometimes a single band or feint yellow marking on occiput; sometimes three faded narrow white-yellow bands or lightening, between limb insertions; 14-22 irregular longitudinal rows of weakly keeled tubercles at midbody between ventrolateral folds; 19-36 paravertebral tubercles; preanal groove and pores absent in males; 0-6 enlarged femoral scales beneath each thigh; 33-45 ventral scales between ventrolateral folds at midbody; 20-25 subdigital lamellae on first toe; 16-19 subdigital lamellae on fourth toe; sometimes with enlarged scales on heel; subcaudal scales enlarged to form broad transverse plates (Subgenus *Tenuisalbavincula subgen. nov.*, comprising *Kottelatgekko eisenmanae* (Ngo Van Tri, 2008); *K. grimeri* (Ngo Van Tri, 2008)). Grismer and Grismer (2017) estimated a 16.54 MYA divergence between the species within the nominate subgenus *Kottelatgekko subgen. nov.* and *Tenuisalbavincula subgen. nov.*, with an estimate of divergence between the two identified component species of 14.16 MYA.

**Distribution:** *Kottelatgekko gen. nov.* species are known from the Mekong Delta of Vietnam eastward to the Con Dao Islands and southward across several islands in the Gulf of Thailand to Tenggol and Kra islands of Peninsular Malaysia and Thailand.



**Etymology:** *Kottelatgekko* *gen. nov.* is named in honour of Maurice Kottelat, of Switzerland, who has as his main field of expertise the taxonomy of freshwater fishes of Eurasia, having authored more than 280 scientific papers.

His expertise is outlined at:  
<https://www.iczn.org/about-the-iczn/commissioners/maurice-kottelat/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science. The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Kottelatgekko condorensis* (Smith, 1921) (type species); *K. eisenmanae* (Ngo Van Tri, 2008); *K. grismeri* (Ngo Van Tri, 2008); *K. leegrimeri* (Chan and Norhayati, 2010); *K. paradoxus* (Darevsky and Szczerbak, 1997); *K. thochuensis* (Ngo Van Tri and Grismer, 2012).

#### TENUISALBAVINCOLA SUBGEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:150639D9-DBA4-46BF-ADD6-70C93600F40E

**Type species:** *Cyrtodactylus eisenmanae* Ngo Van Tri, 2008.

**Diagnosis:** Species in the subgenus *Tenuisalbavincula* *subgen. nov.* can be distinguished from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description (including species in the nominate subgenus *Kottelatgekko* *gen. nov.*) by the following suite of characters:

SVL of 68.3-95.0 mm; head with band on occiput; 15-19 interorbitals; 15-27 scales between eye and nostril; one pair of enlarged postmental scales in broad contact; body slender to robust; limbs and digits long and slender; original tail very long (TL/SVL = 1.24-1.28); dorsal pattern with four narrow white bands on chocolate-brown background, one other band on tail; sometimes a single band or feint yellow marking on occiput; sometimes three faded narrow white-yellow bands or lightening, between limb insertions; 14-22 irregular longitudinal rows of weakly keeled tubercles at midbody between ventrolateral folds; 19-36 paravertebral tubercles; preanal groove and pores absent in males; 0-6 enlarged femoral scales beneath each thigh; 33-45 ventral scales between ventrolateral folds at midbody; 20-25 subdigital lamellae on first toe; 16-19 subdigital lamellae on fourth toe; sometimes with enlarged scales on heel; subcaudal scales enlarged to form broad transverse plates (being subgenus *Tenuisalbavincula* *subgen. nov.*, comprising *Kottelatgekko eisenmanae* (Ngo Van Tri, 2008); *K. grismeri* (Ngo Van Tri, 2008)). Species in the nominate subgenus *Kottelatgekko* *subgen. nov.* can be distinguished from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description (including species in the other subgenus *Tenuisalbavincula* *subgen. nov.*) by one or other of the following three suites of characters:

1/ Maximum SVL of 92 mm, enlarged tubercles on body and hind limbs but none on fore limbs, 27-40 ventral scale rows, a single row of transversely enlarged, median subcaudal scales, 18-20 subdigital lamellae on fourth toe, 4 to 7 preanal pores, and a single row of enlarged, non pore-bearing femoral scales beneath each thigh which are not continuous with the preanal pores, beige coloured top of head with dark brown spotting, the spots being of irregular size and shape. Dorsal pattern of irregular light brown markings running in a longitudinal manner along the midline and nearby on a medium to dark brown background more-or-less turning into spots on the flanks. Numerous dark or light tubercles, arranged in a dense but spaced apart arrangement of even

distribution across the dorsal surface and flanks (*Kottelatgekko condorensis* (Smith, 1921), *K. leegrimeri* (Chan and Norhayati, 2010)); or;

2/ Maximum SVL 87 mm; no preanal groove; 3-5 preanal pores arranged in an angular series; a series of enlarged femoral scales contacting a wide patch of enlarged preanal scales; 3-6 intersupranasals in contact with the rostral; 20-26 strongly keeled, longitudinal rows of tubercles at midbody; and 30-40 transverse rows of ventral scales between the ventrolateral folds (*K. thochuensis* Ngo Van Tri and Grismer, 2012)); or;

3/ Adult body size of 45-80 mm SVL; no preanal groove, no preanal and femoral pores in male or female, enlarged femoral scales distinct; 26-36 midventral scale rows between indistinct lateral folds; 17-23 subdigital lamellae under fourth toe; a median series of transversely widened subcaudal scales; tail moderately thick, longer than S-V, irregularly marked, more-or-less with indistinct dark and white bands. Head pattern with a distinctive crown across the top of the head, bounded on sides with darker, with light thin, mid-vertebral line running from rear of crown, down length of body becoming less intense or indistinct towards the pelvis; irregular semi-distinct crossbands on the dorsum. Irregularly scattered tubercles on the dorsum are lighter tipped and larger ones conical; head and body, thick-set and robust, including hind-limbs that are also relatively thick (*K. paradoxus* (Darevsky and Szczerbak, 1997)).

Grismer and Grismer (2017) estimated a 16.54 MYA divergence between the species within the nominate subgenus *Kottelatgekko* *subgen. nov.* and *Tenuisalbavincula* *subgen. nov.*, with an estimate of divergence between the two identified component species of 14.16 MYA.

**Distribution:** Hon Son Island, Lai Son commune, Kien Hai district, Kien Giang Province, Southwestern Vietnam (*K. eisenmanae* Ngo Van Tri, 2008) and Tuc Dup (= Co To) Rocky Hill, Tri Ton District, An Giang province, southwestern Vietnam (*K. grismeri* Ngo Van Tri, 2008)

**Etymology:** The subgenus name *Tenuisalbavincula* *subgen. nov.* comes directly from the Latin words "*tenuis alba vincula*" meaning "four white lines" in reflection of the four prominent thin white (or yellow-white) bands on a dark brown background as seen on the body of each species.

**Content:** *Kottelatgekko* (*Tenuisalbavincula*) *eisenmanae* (Ngo Van Tri, 2008) (type species); *K. (Tenuisalbavincula) grismeri* (Ngo Van Tri, 2008).

#### CUPRUMCINCTIM GEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:1EFCB898-2F14-45BB-B862-411847DACD45

**Type species:** *Cyrtodactylus badenensis* Sang, Orlov and Darevsky, 2006.

**Diagnosis:** The monotypic genus *Cuprumcinctim* *gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following suite of characters:

Enlarged femoral scales and femoral pores absent; 10-13 supralabials, 8-10 infralabials, 2 internasals; 25-28 mid belly scale rows between the ventrolateral folds; 18-22 subdigital lamellae on the fourth toe of the hind limb; Top of head and snout bronze, gold in colour, with a semi-distinct purple-brown border on the lateral edges, including a reasonably well-defined purple-brownband running from the front of the snout, through the eye and to the back of the head, where it widens and then forms a band across the nape. A thinnish well-defined white cross-band is across the front girdle, running onto the upper surface of each forelimb to the elbow and a similar such thin white cross-band is across the pelvic region and onto the upper surface of the hind legs, where the white breaks up and tends to spot, half-way along the thigh. There are two more similar such thin-white cross-bands evenly spaced on the body, between the front and hind legs, with most of the dorsum an even and consistent purplish-brown in colour, with the flanks of similar colour and pattern to the dorsum. The original tail has 5 well-defined thin white rings, on an otherwise purple-brown tail, with the tip being a sixth white area, being extended in relative length. Tail is thinnish, with the anterior part, similar to the body in

possessing numerous raised tubercles. The iris is dark purplish brown. All four lower limbs are light purple with scattered white spots of irregular size.

**Distribution:** Known only from the type locality of the type species, being Mount Ba Den, Tay Ninh province, Vietnam, Latitude 11.2325 N., Longitude 106.0942 E.

**Etymology:** The genus name *Cuprumcinctim* gen. nov. is from the Latin words “cuprum”, meaning copper, as in the colour and “cinctum” meaning crown (on head), in reflection of the golden crown on the head of the type species.

**Content:** *Cuprumcinctim badenensis* (Sang, Orlov and Darevsky, 2006).

**KULLANDERGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:BA59A3FB-0193-4FB3-ACB5-9290D397AB76**

**Type species:** *Gymnodactylus jellesmae* Boulenger, 1897.

**Diagnosis:** The genus *Kullandergekko* gen. nov. is readily separated from all other species within Tetendituguini tribe nov. as already formally described in this paper and relied upon in this description by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed as well as one or other of the following suites of characters:

1/ Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and no enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows (nominative subgenus); or;

2/ Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, or alternatively a configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL or 80-82 mm SVL. (*Terrenusgekko* subgen. nov. and *Arenosumgekko* subgen. nov.).

**Distribution:** The genus *Kullandergekko* gen. nov. is found mainly in the islands of Wallacea (Bali in the west, Sulawesi to the north, and the Kai Islands to the east), but geographically outlying species occur on islands off the east and west coasts of Peninsular Malaysia (*Kullandergekko seribuatensis* and *K. batucolus*, respectively), Java (*K. petani*), Christmas Island (*K. sadleiri*), and Western Australia (*K. kimberleyensis*) (Grismer *et al.* 2021a).

**Etymology:** *Kullandergekko* gen. nov. is named in honour of Sven O. Kullander, of Sweden, who does collection-based scientific research focused on freshwater fish systematics, predominantly in the tropics.

His expertise is outlined at:

[https://www.nrm.se/theswedishmuseumofnaturalhistory/researchandcollections/zoology/vertebratezoology/contactdetails/staff/svenokullander.782\\_en.html](https://www.nrm.se/theswedishmuseumofnaturalhistory/researchandcollections/zoology/vertebratezoology/contactdetails/staff/svenokullander.782_en.html)

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal “E” (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called “Negative SEO” against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Kullandergekko jellesmae* (Boulenger, 1897) (type species); *K. batik* (Iskandar, Rachmansah and Umilaela, 2011); *K. batucolus* (Grismer, Chan, Grismer, Wood and Belabut, 2008); *K. celatus* (Kathriner, Bauer, O’Shea, Sanchez and Kaiser, 2014); *K. darmandvillei* (Weber, 1890); *K. gordongekkoi* (Das, 1994); *K. hitchi* (Riyanto, Kurniati and Engilis, 2016); *K. jatnai* (Amarasinghe, Riyanto, Mumpuni and Grismer, 2020); *K. kimberleyensis* (Bauer and Doughty, 2012); *K. laevigatus* (Darevsky, 1964); *K. petani* (Riyanto, Grismer and Wood, 2015); *K. richardwellsi* sp. nov.; *K. rosswellingtoni* sp. nov.; *K. sadleiri* (Wells and Wellington, 1985); *K. semiadii* (Riyanto, Bauer and Yudha, 2014); *K. seribuatensis* (Youmans and Grismer, 2006); *K. tambora* (Riyanto, Mulyadi, McGuire, Kusri, Febylasma, Basyir and Kaiser, 2017); *K. tanahjampea* (Riyanto, Hamidy and McGuire, 2018); *K. trevorhawkeswoodi* sp. nov.; *K. uniformis* (Auffenberg, 1980); *K. wallacei* (Hayden, Brown, Gillespie, Setiadi, Linkem, Iskandar, Umilaela, Bickford, Riyanto, Mumpuni and McGuire, 2008); *K. wennigae* sp. nov.; *K. wetariensis* (Dunn, 1927).

**TERRENUSGEKKO SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:730EFC4B-4ED6-4FEE-953C-297F00E9C8CB**

**Type species:** *Cyrtodactylus batucolus* Grismer, Chan, Grismer, Wood and Belabut, 2008.

**Diagnosis:** The subgenus *Terrenusgekko* subgen. nov. within the genus *Kullandergekko* gen. nov. is readily separated from all other species within Tetendituguini tribe nov. as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergekko* subgen. nov. as well as the third subgenus *Arenosumgekko* subgen. nov. by the following suite of characters:

A configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than body and head (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the subgenus *Arenosumgekko* subgen. nov. are separated from the two preceding subgenera (*Terrenusgekko* subgen. nov. and *Kullandergekko* subgen. nov.) by the following suite of characters:

Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, being arranged in 17-20 longitudinal series of alternate, very strong, subconical, ribbed or uni-to three-carinate tubercles running down the back.

Lateral fold with slightly enlarged conical tubercles, in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 80-82 mm SVL. Head large; robust and strongly triangular in shape; snout twice as large as the diameter of the orbit; the distance of the latter from the ear-opening equals one time and a half its diameter; forehead concave; ear-opening sub-oval, vertical, one half the diameter of the eye, as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the nominate subgenus *Kullandergekko* subgen. nov. are readily separated from all other species within Tetendituguini tribe nov. as already formally described in this paper and relied upon in this description, as well as all other species in the other subgenera of *Kullandergekko* gen. nov. (*Terrenusgekko* subgen. nov. and *Arenosumgekko* subgen. nov.) by the following suite of characters:

Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales;



numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

**Distribution:** *Terrenusgecko subgen. nov.* species occur found mainly in the islands of Wallacea (Bali in the west, Sulawesi to the north, and the Kei Islands to the east), but geographically outlying species occur on islands off the east and west coasts of Peninsular Malaysia (*Kullandergecko seribuatensis* and *K. batucolus*, respectively), Java (*K. petani*), Christmas Island (*K. sadleiri*), and Western Australia (*K. kimberleyensis*) (Grismer *et al.* 2021a).

**Etymology:** *Terrenusgecko subgen. nov.* is named in reflection of the earthy brownish-yellow colouration of the dorsal surface of most species in the subgenus. The Latin word “*terrenus*” means earthy in reflection of earthy colours.

**Content:** *Kullandergecko (Terrenusgecko) batucolus* (Grismer, Chan, Grismer, Wood and Belabut, 2008) (type species); *K. (Terrenusgecko) celatus* (Kathriner, Bauer, O’Shea, Sanchez and Kaiser, 2014); *K. (Terrenusgecko) gordongekko* (Das, 1994); *K. (Terrenusgecko) jathnai* (Amarasinghe, Riyanto, Mumpuni and Grismer, 2020); *K. (Terrenusgecko) kimberleyensis* (Bauer and Doughty, 2012); *K. (Terrenusgecko) laevigatus* (Darevsky, 1964); *K. (Terrenusgecko) petani* (Riyanto, Grismer and Wood, 2015); *K. (Terrenusgecko) rosswellingtoni sp. nov.*; *K. (Terrenusgecko) sadleiri* (Wells and Wellington, 1985); *K. (Terrenusgecko) semiadii* (Riyanto, Bauer and Yudha, 2014); *K. (Terrenusgecko) seribuatensis* (Youmans and Grismer, 2006); *K. (Terrenusgecko) tambora* (Riyanto, Mulyadi, McGuire, Kusri, Febylasmia, Basyir and Kaiser, 2017); *K. (Terrenusgecko) tanahjampea* (Riyanto, Hamidy and McGuire, 2018); *K. (Terrenusgecko) trevorhawkeswoodi sp. nov.*; *K. (Terrenusgecko) uniformis* (Auffenberg, 1980); *K. (Terrenusgecko) wetariensis* (Dunn, 1927).

#### ARENOSUMGEKKO SUBGEN. NOV.

**LSIDURN:LSID:ZOOBANK.ORG:ACT:669B9496-A34A-482D-B0AC-C20ED61367ED**

**Type species:** *Gymnodactylus d’armandvillei* Weber, 1890.

**Diagnosis:** The subgenus *Arenosumgecko subgen. nov.* within the genus *Kullandergecko gen. nov.* is readily separated from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergecko subgen. nov.* as well as the third subgenus *Terrenusgecko subgen. nov.* by the following suite of characters:

Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, being arranged in 17-20 longitudinal series of alternate, very strong, subconical, ribbed or uni-to three-carinate tubercles running down the back.

Lateral fold with slightly enlarged conical tubercles, in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 80-82 mm SVL. Head large; robust and strongly triangular in shape; snout twice as large as the diameter of the orbit; the distance of the latter from the ear-opening equals one time and a half its diameter; forehead concave; ear-opening sub-oval, vertical, one half the diameter of the eye, as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

The subgenus *Terrenusgecko subgen. nov.* within the genus *Kullandergecko gen. nov.* is readily separated from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergecko subgen. nov.* and the other subgenus *Arenosumgecko subgen. nov.* by the following suite of characters:

A configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the nominate subgenus *Kullandergecko subgen. nov.* are separated from the other subgenera (*Terrenusgecko subgen. nov.* and *Arenosumgecko subgen. nov.*) and other members of the tribe *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description, by the following suite of characters:

Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

**Distribution:** Flores, Komodo, Pulau Kalao, Sumbawa, Sikka, Lombok, all in Indonesia.

**Etymology:** *Arenosumgecko subgen. nov.* is named in reflection of the sandy colour and gritty granular nature of the skin of the gecko, using the Latin word “*Arenosum*” meaning sandy and gritty in form or colour.

**Content:** *Kullandergecko (Arenosumgecko) darmandvillei* (Weber, 1890); *K. richardwellsi sp. nov.*

#### KULLANDERGEKKO SUBGEN. NOV.

**LSIDURN:LSID:ZOOBANK.ORG:ACT:2DA508FD-7C4F-431E-B226-26542A3A0CA1**

**Type species:** *Gymnodactylus jellesmae* Boulenger, 1897.

**Diagnosis:** The subgenus *Kullandergecko subgen. nov.* (nominate genus in the genus *Kullandergecko gen. nov.*) is readily separated from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed as well as ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows.

The other two subgenera *Terrenusgecko subgen. nov.* and *Arenosumgecko subgen. nov.* are separated from the subgenus *Kullandergecko subgen. nov.* (nominate in the genus *Kullandergecko gen. nov.*) and from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description by having prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, or alternatively a configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL or 80-82 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite

long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

**Distribution:** Sulawesi, Indonesia.

**Etymology:** As for genus.

**Content:** *Kullandergekko* (*Kullandergekko*) *jellesmae* (Boulenger, 1897) (type species); *K. (Kullandergekko) batik* (Iskandar, Rachmansah and Umilaela, 2011); *K. (Kullandergekko) hitchi* (Riyanto, Kurniati and Engilis, 2016); *K. (Kullandergekko) wallacei* (Hayden, Brown, Gillespie, Setiadi, Linkem, Iskandar, Umilaela, Bickford, Riyanto, Mumpuni and McGuire, 2008); *K. (Kullandergekko) wennigae* sp. nov.

**KULLANDERGEKKO (TERREUSGEKKO)**

**ROSSWELLINGTONI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:7CFE6818-6FD9-42F4-9DBC-01D953A0F482**

**Holotype:** A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number AM R.141823 collected from Ohoilim Village, Kai Besar Island, Kai Islands, Indonesia, Latitude -5.6 S., Longitude 133.05 E, collected in June 1993.

This government-owned facility allows access to its holdings.

**Paratypes:** Three preserved specimens at the Australian Museum in Sydney, New South Wales, Australia, specimen numbers AM R.141824, R.141825 and R.141826 collected from Ohoilim Village, Kai Besar Island, Kai Islands, Indonesia, Latitude -5.6 S., Longitude 133.05 E., collected in June 1993.

**Diagnosis:** *Kullandergekko rosswellingtoni* sp. nov. conforms wholly to the subgeneric diagnosis for the subgenus *Terrenusgekko* gen. nov. as described in this paper.

*K. rosswellingtoni* sp. nov. is readily separated from all other species in the subgenus by the following suite of characters:

In life, ciliary ring is bright yellow, forming an obvious ring around the eye; dark yellow-brown iris with distinctive patch of orange in the middle (versus light grey brown, yellow-brown or yellow (with or without orange) for other members of the subgenus), between 20 and 60 bright yellow, raised circular tubercles on each flank, evenly spaced and mainly on the mid to lower parts, with some also entering the upper surface of each forelimb; the numerous tubercles on neck and mid dorsum are smaller in size than those of the flanks; upper surfaces of limbs indistinctly marked with varying shades of brown and white; fingers with alternating brown and white patches encircling them; tail (original) about same length as head and body and of moderate thickness; obvious ventrolateral folds with tiny tubercles, head relatively large; distinctive large tubercles arranged in a row on either side of the lateral surface of the anterior of the tail, for about the first seventh of the length; hemipenes tubelike and lacking obvious spines; undersurfaces of head, body and limbs are pale and unmarked. Undersurface of the tail is coloured similar to the dorsum and sides, albeit with lightening near the subcaudal line.

Photos of dead specimens of *K. rosswellingtoni* sp. nov. are seen in Fig 9 of Karin *et al.* (2017)

The subgenus *Terrenusgekko* subgen. nov. within the genus *Kullandergekko* gen. nov. is readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergekko* subgen. nov. as well as the third subgenus *Arenosumgekko* subgen. nov. by the following suite of characters:

A configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the subgenus *Arenosumgekko* subgen. nov. are

separated from the two preceding subgenera (*Terrenusgekko* subgen. nov. and *Kullandergekko* subgen. nov.) by the following suite of characters:

Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, being arranged in 17-20 longitudinal series of alternate, very strong, subconical, ribbed or uni-to three-carinate tubercles running down the back.

Lateral fold with slightly enlarged conical tubercles, in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 80-82 mm SVL. Head large; robust and strongly triangular in shape; snout twice as large as the diameter of the orbit; the distance of the latter from the ear-opening equals one time and a half its diameter; forehead concave; ear-opening sub-oval, vertical, one half the diameter of the eye, as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the nominate subgenus *Kullandergekko* subgen. nov. are readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description, as well as all other species in the other subgenera of *Kullandergekko* gen. nov. (*Terrenusgekko* subgen. nov. and *Arenosumgekko* subgen. nov.) by the following suite of characters:

Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SV. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

**Distribution:** Known from Kai Besar Island, Kai Islands, Indonesia.

**Etymology:** *C. rosswellingtoni* sp. nov. is named in honour of Cliff Ross Wellington, now of Ramornie, northern in New South Wales, Australia in recognition of significant contributions to herpetology in Australia over many decades and in numerous roles. While best known for various landmark taxonomic publications co-written with Richard Wells including Wells and Wellington (1984, 1985), these form but a tiny fraction of his total contributions.

**KULLANDERGEKKO (ARENOSUMGEKKO) RICHARDWELLSI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:A20A4268-D43C-4E1C-B0E0-9775CEB5CA14**

**Holotype:** A preserved female specimen at the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA, specimen number MCZ Herp R-192798, collected from Suco Beloi, Subdistrict Atauro, District Dili, Democratic Republic of Timor-Leste, Latitude -8.21847 S., Longitude 125.61144 E. This facility allows access to its holdings.

**Paratype:** A preserved male specimen at the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA, specimen number MCZ Herp R-192799, collected from Suco Beloi, Subdistrict Atauro, District Dili, Democratic Republic of Timor-Leste, Latitude -8.21847 S., Longitude 125.61144 E.

**Diagnosis:** *K. richardwellsi* sp. nov. is similar in most respects to the type species of the subgenus *Arenosumgekko* gen. nov., the only other formally named species in the subgenus, being *Kullandergekko (Arenosumgekko) darmandvillei* (Weber, 1890), and otherwise fitting the same subgenus diagnosis.

*K. richardwellsi* sp. nov. is most readily separated from *K.*



*darmandvillei* by having a bright yellow iris with a well-defined obvious line of orange down the midline from top to bottom of the eye, versus a generally orange yellow iris in *K. darmandvillei*, with more intense orange in the middle of the eye, but no obvious boundary between this part of the eye and the less intense orange spreading across the iris. *K. darmandvillei* has two distinctive dark brown stripes running posterior from the mid and upper eye, with a white bar between them. By contrast the upper line is faded in *K. richardwellsi* sp. nov. so as to be indistinct and give the appearance of only a single brown line running from the rear of the eye. In *K. richardwellsi* sp. nov. the start of the brown stripe is raised to be in the middle part of the eye, versus below the middle part of the eye in *K. darmandvillei*. The upper surface of the upper forelimb of *K. darmandvillei* has a small number large raised tubercles, versus a similar number of small to medium tubercles in *K. richardwellsi* sp. nov..

The subgenus *Arenosumgekko* subgen. nov. within the genus *Kullandergekko* gen. nov. is readily separated from all other species within Tetenditungini tribe nov. as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergekko* subgen. nov. as well as the third subgenus *Terrenusgekko* subgen. nov. by the following suite of characters:

Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, being arranged in 17-20 longitudinal series of alternate, very strong, subconical, ribbed or uni- to three-carinate tubercles running down the back.

Lateral fold with slightly enlarged conical tubercles, in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 80-82 mm SVL. Head large; robust and strongly triangular in shape; snout twice as large as the diameter of the orbit; the distance of the latter from the ear-opening equals one time and a half its diameter; forehead concave; ear-opening sub-oval, vertical, one half the diameter of the eye, as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

The subgenus *Terrenusgekko* subgen. nov. within the genus *Kullandergekko* gen. nov. is readily separated from all other species within Tetenditungini tribe nov. as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Kullandergekko* subgen. nov. and the other subgenus *Arenosumgekko* subgen. nov. by the following suite of characters:

A configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the nominate subgenus *Kullandergekko* subgen. nov. are separated from the other subgenera (*Terrenusgekko* subgen. nov. and *Arenosumgekko* subgen. nov.) and other members of the tribe Tetenditungini tribe nov. as already formally described in this paper and relied upon in this description, by the following suite of characters:

Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite

long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

*K. richardwellsi* sp. nov. is depicted in life in Kaiser et al. (2013b) in Fig 3B.

*K. darmandvillei* of the type form is depicted in life online at: <https://www.inaturalist.org/observations/14929783>

Of the species herein formally named as *K. richardwellsi* sp. nov., Kaiser et al. (2013b) wrote:

"Even though this population appears to be superficially similar to *C. darmandvillei* (Weber, 1890) from Flores, a more careful morphological and genetic analysis to ascertain the taxonomic status of this population is currently underway (Kathriner et al. in prep.)."

The International Code of Zoological Nomenclature (Ride et al. 2018), states:

"Appendix A  
Code of Ethics

1. Authors proposing new names should observe the following principles, which together constitute a "Code of Ethics".  
2. A zoologist should not publish a new name if he or she has reason to believe that another person has already recognized the same taxon and intends to establish a name for it (or that the taxon is to be named in a posthumous work). A zoologist in such a position should communicate with the other person (or their representatives) and only feel free to establish a new name if that person has failed to do so in a reasonable period (not less than a year)."

After 8 years of waiting there is no evidence that any of Hinrich Kaiser or Andrew Kathriner or anyone else is seeking to publish any description of this obvious species and so it has been formally named herein.

Kaiser for example has not been in any circumstance that would forbid his publishing a relevant description to make a name available for the taxon. In fact he has spent most of the past 8 years stalking me online and posting hate and lies on countless internet chat forums, list servers and the like, while Kaiser and his cohort have ruthlessly edited Wikipedia hate pages, harassed journal editors to engage in his own unique brand of taxonomic vandalism, (unsuccessfully) attempted to knobble the ICZN to squash thousands of scientific names published by numerous authors and many other destructive and damaging actions.

Therefore I have had no hesitation in breaking the improper 8 year monopoly Kaiser et al. (2013b) imposed on the species *K. richardwellsi* sp. nov. and another until now undescribed species from Ataúro Island, that being *Kullandergekko (Terrenusgekko) trevorhawkeswoodi* sp. nov., which they also claimed to be in the act of formally naming.

The species of *Kullandergekko* gen. nov. within the subgenus *Terrenusgekko* subgen. nov. also occurring on the island of Ataúro, being *Kullandergekko trevorhawkeswoodi* sp. nov., is most readily distinguished and separated from *K. richardwellsi* sp. nov. by its beige-brown iris, without orange in the middle and the presence of forelimbs that have purplish-brown upper surfaces covered with numerous yellowish spots, both above and below the elbow, the latter character being unique for the subgenus.

*K. trevorhawkeswoodi* sp. nov. is depicted in life in Kaiser et al. (2013b) in Fig 3A.

**Distribution:** *K. richardwellsi* sp. nov. appears to be restricted to Ataúro Island, District Dili, Democratic Republic of Timor-Leste and mainly to lower altitudes (below 500 metres).

**Etymology:** *K. richardwellsi* sp. nov. is named in honour of Richard W. Wells, now of Lismore in New South Wales, Australia in recognition of significant contributions to herpetology in Australia over many decades and in numerous roles.

While best known for various landmark taxonomic publications co-written with (Cliff) Ross Wellington, including Wells and Wellington (1984, 1985), these form but a tiny fraction of his total contributions.

**KULLANDERGEKKO (TERRENUSGEKKO)  
TREVORHAWKESWOODI SP. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:DD2184C6-20AB-4EB8-A238-ADBECA4CBDC8

**Holotype:** A preserved adult specimen in the North Carolina Museum of Natural Sciences, Raleigh, North Carolina, USA, specimen number NCSM Herpetology Collection NCSM-Herp 88282 collected at 630 metres elevation on Palau Atauro, Subdistrict Atauro, District Dili, Democratic Republic of Timor-Leste, Latitude -8.1983 S., Longitude 125.6006 E. This facility allows access to its holdings.

The holotype was found at night in scrubby forest grassland.

**Paratype:** A preserved adult specimen in the North Carolina Museum of Natural Sciences, Raleigh, North Carolina, USA, specimen number NCSM Herpetology Collection NCSM-Herp 88283 with the same collection details as the holotype.

**Diagnosis:** *K. trevorhawkeswoodi* sp. nov. has been variously identified as "*Cyrtodactylus* sp. 1" by Kaiser *et al.* (2013b) or more recently as "*Cyrtodactylus celatus*" by the North Carolina Museum of Natural Sciences.

While morphologically similar to *K. (Terrenusgekko) celatus* (Kathriner, Bauer, O'Shea, Sanchez and Kaiser, 2014), this taxon is sufficiently divergent to be regarded as a separate species.

Palau Atauro is separated from Timor by a deep sea strait and has not as far as is known, been connected at any stage in the recent geological past (as in last 5 MYA). In any event *K. trevorhawkeswoodi* sp. nov. appears to be confined to the higher elevations of the island (over 500 m), being replaced at lower altitudes by the significantly larger *K. richardwellsi* sp. nov.

*K. trevorhawkeswoodi* sp. nov. is also morphologically divergent from *K. celatus* further confirming it is a different species evolving in a different direction to the West Timor taxon.

*K. trevorhawkeswoodi* sp. nov. is similar in most respects to *K. celatus*, in that it is small as an adult with an SVL of less than 50 mm as an adult, vs over 80 mm in *K. richardwellsi* sp. nov. being the only other species on the island of Atauro.

*K. trevorhawkeswoodi* sp. nov. is most readily distinguished and separated from *K. richardwellsi* sp. nov. by its beige-brown iris, without orange in the middle and the presence of forelimbs that have purplish-brown upper surfaces covered with numerous yellowish spots, both above and below the elbow, the latter character being unique for the subgenus and that character readily separating it from *K. celatus* (forelimbs marked indeterminately dark and light, but not with the distinctive numerous yellow spots on a plain darker background).

*K. trevorhawkeswoodi* sp. nov. is further defined and separated from others in the subgenus (including *K. celatus*) by the presence of an obvious yellow ring around most of the eye, except the bottom, dark brownish-dark-grey iris; a prominent dark line running from lower part of upper tip of the snout, through the eye, over the ear to the back of the head, (versus no prominent line anterior to the eye in *K. celatus*).

*K. trevorhawkeswoodi* sp. nov. and other members of the subgenus *Terrenusgekko* subgen. nov. within the genus *Kullandergekko* gen. nov. are readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description and the species in the nominate subgenus *Arenosumgekko* subgen. nov. as well as the third subgenus *Arenosumgekko* subgen. nov. by the following suite of characters:

A configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the subgenus *Arenosumgekko* subgen. nov. are separated from the two preceding subgenera (*Terrenusgekko* subgen. nov. and *Kullandergekko* subgen. nov.) by the following suite of characters:

Prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, being arranged in 17-20 longitudinal series of alternate, very strong, subconical, ribbed or uni- to three-carinate tubercles running down the back.

Lateral fold with slightly enlarged conical tubercles, in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 80-82 mm SVL. Head large; robust and strongly triangular in shape; snout twice as large as the diameter of the orbit; the distance of the latter from the ear-opening equals one time and a half its diameter; forehead concave; ear-opening sub-oval, vertical, one half the diameter of the eye, as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

Species within the nominate subgenus *Kullandergekko* subgen. nov. are readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description, as well as all other species in the other subgenera of *Kullandergekko* gen. nov. (*Terrenusgekko* subgen. nov. and *Arenosumgekko* subgen. nov.) by the following suite of characters:

Ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

*K. trevorhawkeswoodi* sp. nov. is depicted in life in Kaiser *et al.* (2013b) in Fig 3A.

Kaiser *et al.* (2013b) wrote of this taxon (identified herein as *K. trevorhawkeswoodi* sp. nov.) the following:

"Based on a suite of morphological characters, we have no doubts that this Mt. Manucoco population of *Cyrtodactylus* is a new species to science (Kathriner *et al.* in prep)."

The *International Code of Zoological Nomenclature* (Ride *et al.* 2018), states:

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2. A zoologist should not publish a new name if he or she has reason to believe that another person has already recognized the same taxon and intends to establish a name for it (or that the taxon is to be named in a posthumous work). A zoologist in such a position should communicate with the other person (or their representatives) and only feel free to establish a new name if that person has failed to do so in a reasonable period (not less than a year)."

After 8 years of waiting there is no evidence that any of Hinrich Kaiser or Andrew Kathriner or anyone else is seeking to publish any description of this obvious species and so it has been formally named herein.

Kaiser for example has not been in any circumstance that would forbid his publishing a relevant description to make a name available for the taxon. In fact he has spent most of the past 8 years stalking me online and posting hate and lies on countless internet chat forums, list servers and the like, while Kaiser and his cohort have ruthlessly edited Wikipedia hate pages, harassed



journal editors to engage in his own unique brand of taxonomic vandalism, unsuccessfully attempted to knobble the ICZN to squash thousands of scientific names published by numerous authors and many other destructive and damaging actions. Therefore I have had no hesitation in breaking the improper 8 year monopoly Kaiser *et al.* (2013b) imposed on the species *K. trevorhawkeswoodi sp. nov.* and another until now undescribed species from Ataúro Island, that being *Kullandergekko (Terrenusgekko) richardwellsi sp. nov.*, which they also claimed to be in the act of formally naming.

**Distribution:** *K. trevorhawkeswoodi sp. nov.* appears to be restricted to Ataúro Island, District Dili, Democratic Republic of Timor-Leste and mainly to higher altitudes (above 500 metres).

**Etymology:** Named in honour of esteemed Zoologist, Trevor Hawkeswood of Sydney, New South Wales, Australia, in recognition of his many contributions to zoology over some decades, including his strong advocacy against taxonomic vandalism as practiced by Welsh criminal Wolfgang Wüster and his gang of thieves as detailed by Cogger (2014), Hoser (2007, 2009, 2012a-c, 2013c-d, 2015a-g), Hawkeswood (2021) and ICZN (2021).

**KULLANDERGEKKO (KULLANDERGEKKO) WENNIGAE SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:35321023-A48A-4CE5-99CA-E4B9AFF274D7**

**Holotype:** A preserved specimen at the University of Texas at Austin, Texas, USA, Texas Natural History Collections. Herpetology Collection, specimen number: TNHC: Herpetology: 59969 collected from Desa Salakan, Kabupaten Banggai, Propinsi Sulawesi Tengah, Peleng Island, Indonesia, collected on 30 Dec 1998. This facility allows access to its holdings.

**Paratypes:** Four more specimens with the same collection data as the holotype at the University of Texas at Austin, Texas, USA, Texas Natural History Collections. Herpetology Collection, specimen numbers: TNHC: Herpetology: 59970-73.

**Diagnosis:** *K. wennigae sp. nov.* has until now been treated as an insular population of the relatively widespread Sulawesi species *Kullandergekko (Kullandergekko) jellesmae* (Boulenger, 1897), better known until now as *Cyrtodactylus jellesmae*. However *K. wennigae sp. nov.* is most easily separated from the morphologically similar *K. jellesmae* of Sulawesi Island by the greater number of dark blotches forming bands across the dorsum (usually 3 only in *K. jellesmae*, versus 5-6 in *K. wennigae sp. nov.*).

*K. wennigae sp. nov.* is further diagnosed and separated from other species in the subgenus *Kullandergekko subgen. nov.*, the genus *Kullandergekko subgen. nov.* and for that matter, all other species within *Tetenditungiini tribe nov.* as already formally described in this paper by the following unique suite of characters: SVL to 110 mm, yellow-brown iris, beige dorsum, with 5-6 dark brown spots tending to form irregular bands across the back of the dorsum, between the fore and hind limbs, with similar markings on the back of the head and neck and onto the tail, where they are in the form of yellow and brown bands, almost forming rings, becoming white and dark brown bands distally, usually forming complete rings around the tail. Lighter bands on tail are wider than darker ones at basal end of tail and reverse is the case at the posterior end. The tail is of moderate thickness and 15-30 percent longer than the snout-vent. Thick dark brown temporal streak beyond eye to tympanum, before it angles across the back of the head. No such stripe anterior to the eye, or if present, only semidistinct at best. No preanal groove; ventrolateral fold with tubercles; there are some transversely enlarged medians; and dorsal pattern of blotches is more-or-less in the form of a W-shape for each, but definitely not in the form of a series of "X" or "V" shapes, in combination with the applicable diagnosis for the subgenus *Kullandergekko subgen. nov.* which is as follows:

The subgenus *Kullandergekko subgen. nov.* (nominatè genus in the genus *Kullandergekko gen. nov.*) is readily separated from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description by having

a well defined lateral fold, often with tubercles on it, tail longer than the head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed as well as ventral scales very small, 39-57 mid-body ventral scale rows. 58-113 mm SVL. Body brown above with small darker spots and V- or M- shaped cross bands on the dorsum; no preanal groove, no preanal or femoral pores and absent enlarged femoral scales; numerous dorsal tubercles of moderate size, somewhat unevenly distributed across the dorsum, including some in series of rows. The other two subgenera *Terrenusgekko subgen. nov.* and *Arenosumgekko subgen. nov.* are separated from the subgenus *Kullandergekko subgen. nov.* (nominatè in the genus *Kullandergekko gen. nov.*) and from all other species within *Tetenditungiini tribe nov.* as already formally described in this paper and relied upon in this description by having prominent and densely, generally evenly arranged enlarged rounded or conical tubercles across the body, including flanks and all upper and lower limbs, or alternatively a configuration of a moderate to small amount of dorsal tubercles, usually not arranged in any particular order and invariably largest on the upper to mid flanks; in addition to having contiguous femoral and preanal pores. 34-38 mid-body ventral scale rows; 40-68 mm SVL or 80-82 mm SVL, as well as by having a well defined lateral fold, often with tubercles on it, tail longer than head and body (SVL), more-or-less rounded at the base and length, with tubercles at the anterior end; limbs quite long; digits long, the basal part somewhat dilated, with enlarged transverse, imbricate plates underneath, distal phalanges compressed.

*K. wennigae sp. nov.* is depicted in life online at: <https://www.inaturalist.org/observations/66525094>

**Distribution:** Peleng Island, Indonesia, where it appears to be most common in relatively elevated areas of the eastern half, generally near the type locality and south of there.

**Etymology:** Named in honour of Kerry Lee Wennig, of Geelong, Victoria (most of the time), in recognition of her courageous efforts in exposing New South Wales (Australia) police corruption in the Wood Royal Commission, running from 1995-1997.

Following my harassing of independent member of parliament John Hatton to call for a Royal Commission into police corruption in New South Wales and the provision of extensive evidence of the same from 1978 to 1985 and later, Hatton did after numerous unsuccessful attempts, finally successfully petition the New South Wales government to run a judicial inquiry into the NSW police force.

That was in 1994, when by 46 votes to 45, he forced the minority John Fahey Government to establish the Wood Royal Commission into Police Corruption.

That inquiry was run by Judge James Wood.

Wennig as witness KX-8 gave extensive evidence of police running drugs, extortion and prostitution rackets, taking bribes, supplying cocaine to politicians, magistrates and judges, several murders, child sex rackets for politicians, magistrates, judges and senior clergy in the Catholic and Anglican churches and other serious crimes, mainly in the Kings Cross area of Sydney, where she had worked for crime bosses Abraham Saffron and Pandelis "Fat George" Karipis.

Her evidence was critical to the ultimate success of the Royal Commission in identifying some previously untouchable members of the NSW Police force including Roger Caleb Rogerson and Graham 'Chook' Fowler as well as other organized crime identities, as well as confirming police complicity in the ostensibly unsolved murder of Juanita Neilson in 1975.

As a result of this Royal Commission, numerous police were charged and jailed, but an even greater number of corrupt police, judges, magistrates, politicians (including former Premier Neville Kenneth Wran) and church figures remained unpunished and got to keep their ill-gotten assets.

Wennig was subsequently harassed by police in New South Wales. She then fled to Victoria, where they got the Victorian

Police to harass her at their behest and this went on continually for more than 20 years after this Royal Commission, noting that she was without the protection she was promised in 1997 by the commission. Wennig's life shattering sacrifices for the public benefit should not be forgotten. Her courageous actions put a serious dent in the police-protected narcotics trade, in effect saving lives of youth who would otherwise have been victims of illicit drug overdoses.

**PAPEGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:3C3CE3E6-A1B5-44CF-9F91-91B86F02BD43**

**Type species:** *Gymnodactylus intermedius* Smith, 1917.

**Diagnosis:** The genus *Papegekko gen. nov.* is readily separated from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following unique combinations of characters:

1/ No web present on hand or foot; only preanal pores present; a median series of transversely widened subcaudals in a continuous series except on basal 24 millimeters of tail; body gray or gray-brown marked with four distinct bands of dark brown or blackish brown each edged with yellow or cream; a light edged brown band from the eye around occiput; top of head uniform brownish; preanal pores eight to ten; venter with 40-50 rows of midbody scale rows (nominate subgenus); or;

2/ Body slender; SVL 75-85 mm; occiput without spots or bands; 16 or 17 scales across rostrum; 21-26 scales between eye and nostril; three broad dorsal body bands edged in white between limb insertions; no preanal groove; seven or eight preanal pores in males; 2-5 enlarged femoral scales; 40-42 ventral scales between ventrolateral body folds; very low, smooth body tubercles in fourteen irregular longitudinal rows at midbody; 20-24 paravertebral tubercles; 21-22 subdigital lamellae on first toe; 17-19 subdigital lamellae on fourth toe; tail segmented, a shallow middorsal groove present, caudal tubercles; broad dark band at base of tail; enlarged subcaudal scales (*Triavincula subgen. nov.*). There remain many undescribed forms in this genus.

**Distribution:** The entirety of *Papegekko gen. nov.* is found in the hilly and mountainous region in the east of southern Thailand, southern Cambodia and nearby parts of South Vietnam.

**Etymology:** *Papegekko gen. nov.* is named in honour of Thomas Pape of Denmark, a well-known scientist who's research is primarily focused on taxonomy, systematics, phylogeny and evolution of two-winged insects (Diptera) with special emphasis on the Tachinidae family-group (Calliphoridae, Oestridae, Rhinophoridae, Sarcophagidae, Tachinidae).

His expertise is outlined at:

<https://snm.ku.dk/english/staffsnm/staff/?pure=en/persons/110843>

As a commissioner with the International Commission on Zoological Nomenclature, and in 2020 its president, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Papegekko intermedius* (Smith, 1917) (type species); *P. auralensis* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019); *P. bokorensis* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019); *P. cardamomensis* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019); *P. hontreensis* (Ngo Van Tri, Grismer and Grismer, 2008); *P. kohrongensis* (Grismer, Onn, Oaks, Neang, Sokun, Murdoch,

Stuart and Grismer, 2020); *P. kulenensis* (Grismer, Geissler, Neang, Hartmann, Wagner and Poyarkov, 2021); *P. laangensis* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019); *P. phuquocensis* (Ngo Van Tri, Grismer and Grismer, 2010); *P. septimontium* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019); *P. thylacodactylus* (Murdoch, Grismer, Wood, Neang, Poyarkov, Tri, Nazarov, Aowphol, Pauwels, Nguyen and Grismer, 2019).

**TRIAVINCULA SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:3C662FF6-DA62-4DB9-B2A5-53C3AE247BEE**

**Type species:** *Cyrtodactylus hontreensis* Ngo Van Tri, Grismer and Grismer, 2008.

**Diagnosis:** The subgenus *Triavincula subgen. nov.* is readily separated from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description as well as from other members of the genus *Papegekko gen. nov.* by the following unique combination of characters:

Body slender; SVL 75-85 mm; occiput without spots or bands; 16 or 17 scales across rostrum; 21-26 scales between eye and nostril; three broad dorsal body bands edged in white between limb insertions; no preanal groove; seven or eight preanal pores in males; 2-5 enlarged femoral scales; 40-42 ventral scales between ventrolateral body folds; very low, smooth body tubercles in fourteen irregular longitudinal rows at midbody; 20-24 paravertebral tubercles; 21-22 subdigital lamellae on first toe; 17-19 subdigital lamellae on fourth toe; tail segmented, a shallow middorsal groove present, caudal tubercles; broad dark band at base of tail; enlarged subcaudal scales (modified from Ngo Van Tri, Grismer and Grismer, 2008).

**Distribution:** Known only from the type locality being Hon Tre Island, Kien Hai District, Kien Giang Biosphere Reserve, Kien Giang province, southwestern Vietnam.

**Etymology:** The genus name is a direct translation of the Latin words "*tria vincula*" which as a phrase means "three bands" in reflection of the dorsal colour pattern of the relevant species.

**Content:** *Papegekko (Triavincula) hontreensis* Ngo Van Tri, Grismer and Grismer, 2008.

**LYALGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:0739F7DD-AB29-4B8B-853A-11CD5A054A51**

**Type species:** *Gymnodactylus peguensis var. irregularis* Smith, 1921.

**Diagnosis:** The genus *Lyalgekko gen. nov.* is readily separated from all other species within Tetenditunguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

SVL to 115 mm; total length to 240 mm, but usually about 2/3 that size in adults; 3-16 enlarged femoral sacs; no femoral pores; 3-11 pre-anal pores in males; 0-8 preanal pores in females; 8-11 upper and 8-10 lower labials; 36-57 ventrals; usually banded or blotched; head with well-marked angular spots, or less often small angular spots not arranged in any very marked pattern; 12-19 subdigital lamellae under the fourth digit (forelimb); 14-23 subdigital lamellae under the fourth toe (hindlimb); as a rule, no enlarged subcaudals, except in a small number of species; tail is 5-25 percent longer than the body; 0-3 cloacal spurs on each side of tail base; no preanal pits in females; rounded body in cross-section, not wider than head; ventrolateral skin folds along the body or enlarged lateral tubercles absent; tubercles present on top of the head, body, forearm, hind limbs and tail; 10-24 irregular longitudinal rows of dorsal tubercles.

Species within the subgenus *Macrolyalgekko subgen. nov.* are readily separated from the nominate subgenus *Lyalgekko subgen. nov.* by the following suite of characters:

Having a greater adult maximum SVL (115 mm vs. 105 mm); fewer ventral scales (36-39 vs. 39-57) and fewer preanal pores (three to five vs. 6-11).

There are numerous obvious, but undescribed species within this



genus, with Grismer *et al.* (2021a) claiming to be working on formally describing, so no formal descriptions of any hitherto unnamed taxa within this group are presented herein.

**Distribution:** *Lyalgecko gen. nov.* has a distribution confined to central and southern Vietnam, including nearby parts of Cambodia and southeast Laos.

**Etymology:** *Lyalgecko gen. nov.* is named in honour of Christopher H. C. Lyal of the United Kingdom, a well-known taxonomist who's research is primarily focused on taxonomy and systematics of the hyperdiverse beetle group Curculionoidea (weevils).

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/christopher-h-c-lyal/>

As a commissioner with the International Commission on Zoological Nomenclature, and in 2020 its president, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Lyalgecko irregularis* (Smith, 1921) (type species); *L. bidoupimontis* (Nazarov, Poyarkov, Orlov, Phung, Nguyen, Hoang and Ziegler, 2012); *L. bugiamapensis* (Nazarov, Poyarkov, Orlov, Phung, Nguyen, Hoang and Ziegler, 2012); *L. caovansungi* (Orlov, Quang Truong, Nazarov, Ananjeva and Ngoc Sang, 2007); *L. cattienensis* (Geissler, Nazarov, Orlov, Böhme, Phung, Nguyen and Ziegler, 2009); *L. chungii* (Ostrowski, Le, Ngo, Pham, Phung, Nguyen and Ziegler, 2021); *L. cryptus* (Heidrich, Rösler, Thanh, Böhme and Ziegler, 2007); *L. cucdongensis* (Schneider, Phung, Le, Nguyen and Ziegler, 2014); *L. culaochamensis* (Tri, Grismer, Thai and Wood, 2020); *L. dati* (Ngo Van Tri, 2013); *L. gialaiensis* (Luu, Dung, Nguyen, LE and Ziegler, 2017); *L. huynhi* (Ngo and Bauer, 2008); *L. kingsadai* (Ziegler, Phung, Le and Nguyen, 2013); *L. phnomchiensis* (Neang, Henson and Stuart, 2020); *L. phumyensis* (Ostrowski, Do, Le, Ngo, Pham, Nguyen, Nguyen and Ziegler, 2020); *L. phuocbinhensis* (Nguyen, Le, Tran, Orlov, Lathrop, Macculloch, Le, Jin, Nguyen, Nguyen, Hoang, Che, Murphy and Zhang, 2013); *L. pseudoquadrivirgatus* (Rösler, Nguyen, Vu, Ngo and Ziegler, 2008); *L. raglai* (Nguyen, Duong, Grismer and Poyarkov, 2021); *L. sangi* (Pauwels, Nazarov, Bobrov and Poyarkov, 2018); *L. takouensis* (Ngo and Bauer, 2008); *L. taynguyenensis* (Nguyen, Le, Tran, Orlov, Lathrop, Macculloch, Le, Jin, Nguyen, Nguyen, Hoang, Che, Murphy and Zhang, 2013); *L. yangbayensis* (Ngo Van Tri and Onn, 2010); *L. ziegleri* (Nazarov, Orlov, Nguyen and Ho, 2008)

#### MACROLYALGEKKO SUBGEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:5EEE1A86-A072-4724-9FD5-D579AC844056

**Type species:** *Cyrtodactylus taynguyenensis* Nguyen, Le, Tran, Orlov, Lathrop, Macculloch, Le, Jin, Nguyen, Nguyen, Hoang, Che, Murphy and Zhang, 2013.

**Diagnosis:** Species within the subgenus *Macrolyalgecko subgen. nov.* are readily separated from the nominate subgenus *Lyalgecko subgen. nov.* by the following suite of characters:

Having a greater adult maximum SVL (115 mm vs. 105 mm); fewer ventral scales (36-39 vs. 39-57) and fewer preanal pores (three to five vs. 6-11).

The genus *Lyalgecko gen. nov.* is readily separated from all other species within *Tetendituguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

SVL to 115 mm; total length to 240 mm, but usually about 2/3 that

size in adults; 3-16 enlarged femoral sacs; no femoral pores; 3-11 pre-anal pores in males; 0-8 preanal pores in females; 8-11 upper and 8-10 lower labials; 36-57 ventrals; usually banded or blotched; head with well-marked angular spots, or less often small angular spots not arranged in any very marked pattern; 12-19 subdigital lamellae under the fourth digit (forelimb); 14-23 subdigital lamellae under the fourth toe (hindlimb); as a rule, no enlarged subcaudals, except in a small number of species; tail is 5-25 percent longer than the body; 0-3 cloacal spurs on each side of tail base; no preanal pits in females; rounded body in cross-section, not wider than head; ventrolateral skin folds along the body or enlarged lateral tubercles absent; tubercles present on top of the head, body, forearm, hind limbs and tail; 10-24 irregular longitudinal rows of dorsal tubercles.

There are numerous obvious, but undescribed species within this genus, including within both subgenera, with Grismer *et al.* (2021a) claiming to be working on formally describing, so no formal descriptions of any hitherto unnamed taxa within this group are presented herein.

**Distribution:** The subgenus *Macrolyalgecko subgen. nov.* is principally found on and around the Kon Tum-Gia Lai Plateau of the central Annamite Range, in north Vietnam and nearby Laos, with the exception of *L. kingsadai* (Ziegler, Phung, Le and Nguyen, 2013) from Phu Yen Province of southern Vietnam.

**Etymology:** Species in this subgenus are generally larger in adult size and have relatively larger sized ventral scales than in the nominate genus and hence the addition of the prefix "Macro" to the genus name, to create the name "*Macrolyalgecko*".

**Content:** *Lyalgecko (Macrolyalgecko) taynguyenensis* (Nguyen, Le, Tran, Orlov, Lathrop, Macculloch, Le, Jin, Nguyen, Nguyen, Hoang, Che, Murphy and Zhang, 2013) (type species); *L. (Macrolyalgecko) cryptus* (Heidrich, Rösler, Thanh, Böhme and Ziegler, 2007); *L. (Macrolyalgecko) culaochamensis* (Tri, Grismer, Thai and Wood, 2020); *L. (Macrolyalgecko) kingsadai* (Ziegler, Phung, Le and Nguyen, 2013); *L. (Macrolyalgecko) pseudoquadrivirgatus* (Rösler, Nguyen, Vu, Ngo and Ziegler, 2008); *L. raglai (Macrolyalgecko)* (Nguyen, Duong, Grismer and Poyarkov, 2021).

#### PYLEGEKKO GEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:E0AEE56E-C80D-40D4-BDCD-8030D1AAF454

**Type species:** *Pentadactylus khasiensis* Jerdon, 1870.

**Diagnosis:** The genus *Pylegecko gen. nov.* is readily separated from all other species within *Tetendituguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Large species, with large head, being relatively deep and triangular, with concave forehead. Ear-opening suboval, oblique. Tail (original) is moderately thick and circular in cross-section, tapering somewhat and covered with uniform small flat scales above and usually with scattered tubercles.

Dorsal tubercles small, roundish, feebly keeled; infradigital lamellae much developed; male with 10 or 13 preanal pores, forming an angle. A ventro-lateral fold being composed of tiny tubercles. no enlarged femoral scales or pore-bearing femoral scales; no pubic groove in males; 15-27 subdigital lamellae on the fourth toe; ten to twelve upper labials and nine or ten lower labials; mental scale triangular; two or three pairs of chin-shields, median largest and in contact behind the point of the mental; 35-55 ventral rows of small size. All species are generally yellow-brown in colour on top and yellowish on the crown. Dorsal pattern on body is usually in the form of somewhat irregular blotches, spots or flecks tending to form semi-distinct dorsal crossbands, invariably with spotting of some form on the flanks. Tail is invariably banded in some way, with the darker bands, usually becoming darker posteriorly, and often ending up as black bands. All species have some form of dark post-ocular band. Limbs indistinctly marked with flecks, blotches or semi-distinct bands.

The morphologically similar genus *Arunachalgecko gen. nov.* is diagnosed as above, save for the following suite of characters: Moderate body size (SVL 64.9-81.7, mean 70.6); 8-11 supralabials;

8-10 infralabials; 24-26 rows of bluntly conical, feebly keeled dorsal tubercles; 50-60 paravertebral tubercles; about 38 rows of ventral scales between the prominent ventrolateral folds; no preanal grooves; 6-10 preanal femoral pores in a continuous series; three to four rows of enlarged scales below pored scales, slightly larger than pored scales; 10-16 distal subdigital lamellae on toe four of front foot; subcaudal scalation of original tail without enlarged plates (derived from Mirza *et al.* 2021).

There are unnamed species within the genus *Pylegekko gen. nov.*

**Distribution:** *Pylegekko gen. nov.* occur from northeastern India and Bangladesh east to the western edge of the Salween Basin in Myanmar (Burma).

**Etymology:** *Pylegekko gen. nov.* is named in honour of Richard Pyle of Honolulu, Hawaii, USA, who is heavily involved in taxonomy and biogeography of coral-reef fishes. This is no mean feat as he is also the primary architect and manager of Zoobank, at <http://zoobank.org>. This is "The Official Registry of Zoological Nomenclature" and "Zoobank provides a means to register new nomenclatural acts, published works, and authors", being a valuable online database.

His expertise is outlined at:

<http://hbs.bishopmuseum.org/staff/pylerichard.html>

As a commissioner with the International Commission on Zoological Nomenclature, and in 2020 its president, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Pylegekko khasiensis* (Jerdon, 1870); *P. aaronbaueri* (Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan and Rathee, 2021); *P. agarwali* (Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan and Rathee, 2021); *P. aunglini* (Grismer, Wood, Thura, Win, Grismer, Trueblood and Quah, 2018); *P. ayeyarwadyensis* (Bauer, 2003); *P. bapmo* (Kamei and Mahony, 2021); *P. bengkhuaiai* (Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan and Rathee, 2021); *P. brevidactylus* (Bauer, 2002); *P. cayuensis* (Li, 2007); *P. chrysopylos* (Bauer, 2003); *P. gansi* (Bauer, 2003); *P. guwahatiensis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. himalayicus* (Annandale, 1906); *P. jaintiaensis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. karsticola* (Purkayastha, Lalremsanga, Bohra, Biakzuala, Decemson, Muansanga, Vabeiryureilai, Chauhan and Rathee, 2021); *P. kazirangaensis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. mandalayensis* (Mahony, 2009); *P. myaleiktaung* (Grismer, Wood, Thura, Win, Grismer, Trueblood and Quah, 2018); *P. mombergi* (Grismer, Wood, Quah, Thura, Herr and Lin, 2019); *P. montanus* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. nagalandensis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. septentrionalis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. tamaiensis* (Smith, 1940); *P. tripuraensis* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *P. urbanus* (Purkayastha, Das, Bohra, Bauer and Agarwal, 2020).

**ARUNACHALGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:01F06CC7-3FA8-4128-B2F8-F5E74BD7F4FC**

**Type species:** *Cyrtodactylus arunachalensis* Mirza, Bhosale, Ansari, Phansalkar, Swant, Gowande and Patel, 2021.

**Diagnosis:** The genus *Arunachalgekko gen. nov.* is diagnosed and separated from all other species within Tetenditnguini *tribe nov.* as

already formally described in this paper and relied upon in this description as for the genus *Pylegekko gen. nov.*, save for the following suite of characters: Moderate body size (SVL 64.9-81.7 mm, mean 70.6); 8-11 supralabials; 8-10 infralabials; 24-26 rows of bluntly conical, feebly keeled dorsal tubercles; 50-60 paravertebral tubercles; about 38 rows of ventral scales between the prominent ventrolateral folds; no preanal grooves; 6-10 preanal femoral pores in a continuous series; three to four rows of enlarged scales below pored scales, slightly larger than pored scales; 10-16 distal subdigital lamellae on toe four of front foot; subcaudal scalation of original tail without enlarged plates (derived from Mirza *et al.* 2021). The genus *Pylegekko gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Large species, with large head, being relatively deep and triangular, with concave forehead. Ear-opening suboval, oblique.

Tail (original) is moderately thick and circular in cross-section, tapering somewhat and covered with uniform small flat scales above and usually with scattered tubercles.

Dorsal tubercles small, roundish, feebly keeled; infradigital lamellae much developed; male with 10 or 13 preanal pores, forming an angle. A ventro-lateral fold being composed of tiny tubercles. no enlarged femoral scales or pore-bearing femoral scales; no pubic groove in males; 15-27 subdigital lamellae on the fourth toe; ten to twelve upper labials and nine or ten lower labials; mental scale triangular; two or three pairs of chin-shields, median largest and in contact behind the point of the mental; 35-55 ventral rows of small size. All species are generally yellow-brown in colour on top and yellowish on the crown. Dorsal pattern on body is usually in the form of somewhat irregular blotches, spots or flecks tending to form semi-distinct dorsal crossbands, invariably with spotting of some form on the flanks. Tail is invariably banded in some way, with the darker bands, usually becoming darker posteriorly, and often ending up as black bands. All species have some form of dark post-ocular band. Limbs indistinctly marked with flecks, blotches or semi-distinct bands.

**Distribution:** Dafia and Mishmi Hills, state of Arunachal Pradesh, India.

**Etymology:** *Arunachalgekko gen. nov.* is named in reflection of where it occurs, namely the Indian state of Arunachal Pradesh.

**Content:** *Arunachalgekko arunachalensis* (Mirza, Bhosale, Ansari, Phansalkar, Swant, Gowande and Patel, 2021) (type species) (monotypic).

**RHEINDTGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:D5881F9B-AEF3-4548-A999-987B66327100**

**Type species:** *Cyrtodactylus linnwayensis* Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017.

**Diagnosis:** The genus *Rheindtgekko gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Adult SVL to 105 mm; 7-9 supralabials; 6-8 infralabials; 25-33 paravertebral tubercles; 13-18 longitudinal rows of body tubercles; 34-42 ventral scales; relatively long digits with 8-10 expanded fourth toe subdigital lamellae proximal to the digital inflection, 12-14 unmodified distal subdigital lamellae and 21-23 total subdigital lamellae; low, weakly keeled, dorsal body tubercles; tubercles not extending beyond base of tail; enlarged femoral and preanal scales not continuous; 24-32 enlarged femoral scales; enlarged femoral scales nearly equal in size; 10-22 femoral pores in males not continuous with pore-bearing preanal scales; 9-12 enlarged, preanal scales; 6-10 preanal pores in males; three or four rows of enlarged post-preanal scales, this dependent on species; transverse subcaudal scales twice as wide as long midway down the tail and not extending onto the lateral margins of the tail; top of head bearing dark blotches and light-coloured, reticulum; nuchal loop rarely paired, bearing an anterior, azygous notch, and nearly always having a smooth posterior border; first body band bearing an anterior, azygous notch; no band on nape; three or four dark,



variably shaped dorsal bands with no paravertebral elements, bands usually as wide or wider than interspaces bearing lightened centres, edged with light tubercles; dark markings in dorsal interspaces but no light-coloured tubercles; anterodorsal margins of thighs, brachia and ventrolateral fold pigmented; eight or nine light caudal bands bearing dark markings in adults and usually, but not always encircling tail; nine dark caudal bands wider than light caudal bands, (colour and darkness of bands varies between species); and mature regenerated tail spotted.

There are undescribed species in this genus.

**Distribution:** *Rheindtgekko gen. nov.* is confined to the western section of the Shan Plateau of the Mandalay Division and Shan State, Myanmar (Burma).

**Etiology:** *Rheindtgekko gen. nov.* is named in honour of bird expert Frank E. Rheindt of Singapore.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/frank-erwin-rheindt/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Rheindtgekko linnwayensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017) (type species); *R. feae* (Boulenger, 1893); *R. pinlaungensis* (Grismer, Wood, Quah, Thura, Oaks and Lin, 2019); *R. shwetaungorum* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017); *R. ywanganensis* (Grismer, Wood, Thura, Quah, M Grismer, Murdoch, Espinoza and Lin, 2018).

#### ROSENBERGGEKKO GEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:D4BCBF2C-0781-4839-957F-09C9EC3B3B6C

**Type species:** *Gymnodactylus loriae* Boulenger, 1897.

**Diagnosis:** The genus *Rosenberggekko gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm SVL (310 mm total length); divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color pattern consisting of paired elongate blotches (colouration of nominate subgenus) or alternatively a largely uniform dark colour marked with large white tubercles on the dorsum (*Melanogekko subgen. nov.*).

**Distribution:** Island New Guinea, including the main central cordillera on both sides, Huon Peninsula and the north coastal ranges.

**Etiology:** *Rosenberggekko gen. nov.* is named in honour of mollusc expert Gary Rosenberg of Philadelphia, USA.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/gary-rosenberg/>

As a commissioner with the International Commission on Zoological Nomenclature, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Rosenberggekko loriae* (Boulenger, 1897) (type species); *R. alexanderdudleyi sp. nov.*; *R. caudatenuis sp. nov.*; *R. derongo* (Brown and Parker, 1973); *R. fritzmaarteni sp. nov.*; *R. merceicai sp. nov.*; *R. serratus* (Kraus, 2007).

#### MELANOGEKKO SUBGEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:EFB29784-785E-48BC-9089-98044243248B

**Type species:** *Cyrtodactylus derongo* Brown and Parker, 1973.

**Diagnosis:** The subgenus *Melanogekko subgen. nov.* within the genus *Rosenberggekko gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm SVL; divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color consisting of a largely uniform dark colour, marked with large white tubercles in irregular rows on the dorsum (*Melanogekko subgen. nov.*) or alternatively, species within the nominate subgenus have a dorsal pattern consisting of paired elongate blotches.

**Distribution:** The sole described species within *Melanogekko subgen. nov.* is known only from the type locality, being the Derongo area at an elevation of 1300 feet, Alice River system, being a tributary to the upper Fly River, Papua, New Guinea.

**Etiology:** *Melanogekko subgen. nov.* is named in reflection of the generally dark blackish dorsum of the only species within the subgenus.

**Content:** *R. derongo* (Brown and Parker, 1973) (monotypic).

#### ROSENBERGGEKKO CAUDATENUIS SP. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:791C8B91-284A-4089-8D4B-AA75604CE08A

**Holotype:** A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number R.122415 collected from Namosado, Southern Highlands District, Papua New Guinea, Latitude 6.15 S., Longitude 142.47 E. This government-owned facility allows access to its holdings.

**Paratype:** A preserved specimen at the Australian Museum in Sydney, New South Wales, Australia, specimen number R.122419, collected from Bobole, Southern Highlands District, Papua New Guinea, Latitude 6.12 S. Longitude 142.46 E.

**Diagnosis:** Until now the species *Rosenberggekko caudatenuis sp. nov.* has been treated as either a population of "*Cyrtodactylus serratus* Kraus, 2007", as evidenced by the accession information for the type material, or alternatively as a closely related species (Baker 2016), the latter view being taken here.

*R. caudatenuis sp. nov.* is readily separated from the type form of *R. serratus* (Kraus, 2007) as depicted by Kraus (2007), by having reduced sized tubercles on the rear part of the lateral fold, versus obvious spines in *R. serratus* and three sets of light markings on either side of the upper dorsum (often merged), versus two sets in *R. serratus*. The ridges and tubercles on the upper and lateral surfaces of the basal part of the tail are very prominent in *R. serratus* versus less so in *R. caudatenuis sp. nov.*

Both *R. serratus* and *R. caudatenuis sp. nov.* are separated from the other members of the genus *Rosenberggekko gen. nov.* by having a close-set series of raised triangular orange-coloured or yellowish tubercles running along the length of the lateral fold on either side.

Enlarged tubercles on the lateral fold of the other species in the genus are not obviously triangular or enlarged to the same extent. The subgenus *Melanogekko subgen. nov.* within the genus *Rosenberggekko gen. nov.* is readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm

SVL (310 mm total); divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color consisting of a largely uniform dark colour, marked with large white tubercles in irregular rows on the dorsum (*Melanogekko subgen. nov.*) or alternatively, species within the nominate subgenus have a dorsal pattern consisting of paired elongate blotches.

*R. caudatenuis sp. nov.* is depicted in life in Baker (2016).

The other gecko displayed in that paper from Gobe ridge and listed as undescribed is : *Bourgoingekko manos* (Oliver, Karkkainen, Rösler and Richards, 2019) (originally placed in the genus *Cyrtodactylus*).

**Distribution:** *R. serratus* is known only from the Star Mountains near the Irian Jaya border, whereas *R. caudatenuis sp. nov.* is found in the region of the southern Highlands province of PNG, including immediately adjacent eastern parts of the Western Province, being found in the Muller Range, east and generally east of the Strickland River.

**Etymology:** The name "*caudatenuis*" refers in Latin to the relatively thin tail of this species (*Cauda tenuis*) as compared to most other members of *Tetenditunguini tribe nov.*

**ROSENBERGGEKKO MERCEICAI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:6873DA50-B8F2-402E-856E-DD41A7E985BF**

**Holotype:** A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, USA, specimen number Herp-BPBM 32013 collected from 1 km South west of Wau, Morobe Province, Papua New Guinea, at 1150 metres ASL, Latitude -7.34969 S., Longitude 146.706 E. This facility allows access to its holdings.

**Paratype:** A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, USA, specimen number Herp-BPBM 8718 collected from 1 km South west of Wau, Morobe Province, Papua New Guinea, at 1200 metres ASL, Latitude -7.34969 S., Longitude 146.706 E.

**Diagnosis:** *Rosenberggekko merceicai sp. nov.* has until now been treated as a divergent population of *R. loriae* (Boulenger, 1897) (e.g. Loveridge, 1948), but is readily separated from that species by having a snout 1.5 times as long as the diameter of the eye, versus only slightly longer in *R. loriae* and twice as long in *R. alexanderdudleyi sp. nov.*; a reduced lateral fold, with similarly reduced tubercles as compared to the other species, as well as a different colouration that is a dorsal colouring that is grayish above speckled with brown, mainly on the tubercles and forming about eight, fine, wavy, transverse lines that are the outer, darker edges of four crossbands.

Venter is white, with each scale minutely flecked with black.

By contrast the other two species are brown above, with a series of paired blackish spots along the back, with three pairs between the fore and hind limbs. The last pair on the base of the tail, is confluent into a "V", a V-shaped dark band from eye to eye, the apex on the nape. Lower parts are pale.

Tail is slightly longer than the body in *R. merceicai sp. nov.* and *R. loriae*, versus body significantly longer than the tail in *R. alexanderdudleyi sp. nov.*

*R. loriae* has a lateral fold with a series of slightly enlarged tubercles, while *R. alexanderdudleyi sp. nov.* has numerous prominently enlarged tubercles below the lateral fold.

The species *R. fritzmaarteni sp. nov.* is similar in most respects to *R. loriae* (as detailed above) but is separated from that species by its generally reddish-brown versus yellowish-dorsum and having a snout 1.5 times as long as the diameter of the eye (versus only slightly longer).

The preceding species are in turn separated from others within the genus *Rosenberggekko gen. nov.* and all other species within the tribe *Tetenditunguini tribe nov.* by the following suite of characters:

Head large; snout longer than the diameter of the orbit, which equals its distance from the ear-opening; forehead and lores concave; ear-opening roundish, one third the diameter of the eye. Head granular, with small round tubercles on the occiput and temples; rostral subquadrangular, nearly twice as broad as deep, with median cleft above; a large supranasal, separated from its fellow by a small azygous shield; nostril bordered by the rostral, the

supranasal, the first upper labial, and three or four small granules. Twelve upper and ten or eleven lower labials; mental pentagonal or subtriangular; two or three pair of chin-shields, median largest and forming a suture behind the mental. Throat with very small granules.

Body long, covered above with small flat granules, intermixed with small round, flat, feebly keeled tubercles. Dorsal tubercles in about 22-26 rows; ventral scales in about 46-56 rows; subcaudals quadrangular, the median series not transversely enlarged.

Lateral fold with a series of slightly enlarged tubercles (average size depends on species). Ventral scales small, smooth, juxtaposed or subimbricate. Male with a long uninterrupted series of femoral and preanal pores, 30 or more on each side, forming a right angle in the middle, preceded by 4 additional preanal pores; no preanal groove. Tail round, tapering, covered with uniform flat scales. Limbs long; digits strong, slightly depressed at the base, strongly compressed at the end phalanges, inferior transverse lamellae well developed.

Both *R. serratus* and *R. caudatenuis sp. nov.* are separated from the other members of the genus *Rosenberggekko gen. nov.* including the four named above by having a close-set series of raised triangular orange-coloured or yellowish tubercles running along the length of the lateral fold on either side.

The genus *Rosenberggekko gen. nov.* is readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm SVL; (310 mm total) divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color pattern consisting of paired elongate blotches (colouration of nominate subgenus) or alternatively a largely uniform dark colour marked with large white tubercles on the dorsum (*Melanogekko subgen. nov.*).

**Distribution:** *Rosenberggekko merceicai sp. nov.* appears to be confined to the vicinity of the type locality, being Morobe Province, Papua New Guinea.

**Etymology:** *Rosenberggekko merceicai sp. nov.* is named in honour of David Merceica of the Sunshine Coast, Queensland, Australia formerly of Melton and Bacchus Marsh, Victoria, Australia in recognition of his services to herpetology, including the recent purchase with his wife Kate of the Snakes Downunder Reptile Park at Childers, Queensland, Australia, sold to them by Ian and Barb Jenkins, who had built and run the facility for decades.

**ROSENBERGGEKKO ALEXANDERDUDLEYI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:5942A400-1B0A-483F-95A6-C92E000DF161**

**Holotype:** A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, USA, specimen number Herp-BPBM 17256, collected at 1420 metres ASL, from Bunisi Village, Milne Bay Province, Papua New Guinea, Latitude 10.01028 S., Longitude 149.36009 E. This facility allows access to their holdings.

**Paratype:** A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, USA, specimen number Herp-BPBM 17257 collected at 1420 m, from Bunisi Village, Milne Bay Province, Papua New Guinea, Latitude 10.01028 S., Longitude 149.36009 E.

**Diagnosis:** *Rosenberggekko alexanderdudleyi sp. nov.* has until now been treated as a divergent population of *R. loriae* (Boulenger, 1897) (e.g. Loveridge, 1948), as was *R. merceicai sp. nov.*

*R. merceicai sp. nov.* is readily separated from *R. loriae* by having a snout 1.5 times as long as the diameter of the eye, versus only slightly longer in *R. loriae* and twice as long in *R. alexanderdudleyi sp. nov.*; a reduced lateral fold, with similarly reduced tubercles as compared to the other species, as well as a different colouration that is a dorsal colouring that is grayish above speckled with brown, mainly on the tubercles and forming about eight, fine, wavy, transverse lines that are the outer, darker edges of four crossbands.

Venter is white, with each scale minutely flecked with black.

By contrast the other two species are brown above, with a series of



paired blackish spots along the back, with three pairs between the fore and hind limbs. The last pair on the base of the tail, is confluent into a "V"; there is a V-shaped dark band from eye to eye, the apex on the nape. Lower parts are pale.

*R. alexanderdudleyi* sp. nov. is separated from both *R. merceicai* sp. nov. and *R. loriae* by having a body significantly longer than the tail versus tail is slightly longer than the body in *R. merceicai* sp. nov. and *R. loriae* (original tails).

*R. loriae* has a lateral fold with a series of slightly enlarged tubercles, while *R. alexanderdudleyi* sp. nov. has numerous prominently enlarged tubercles below the lateral fold.

The species *R. fritzmaarteni* sp. nov. is similar in most respects to *R. loriae* (as detailed above) but is separated from that species by its generally reddish-brown versus yellowish-dorsum and having a snout 1.5 times as long as the diameter of the eye (versus only slightly longer).

The preceding species are in turn separated from others within the genus *Rosenberggekko* gen. nov. and all other species within the tribe Tetenditnguini tribe nov. by the following suite of characters: Head large; snout longer than the diameter of the orbit, which equals its distance from the ear-opening; forehead and lores concave; ear-opening roundish, one third the diameter of the eye. Head granular, with small round tubercles on the occiput and temples; rostral subquadrangular, nearly twice as broad as deep, with median cleft above; a large supranasal, separated from its fellow by a small azygous shield; nostril bordered by the rostral, the supranasal, the first upper labial, and three or four small granules. Twelve upper and ten or eleven lower labials; mental pentagonal or subtriangular; two or three pair of chin-shields, median largest and forming a suture behind the mental. Throat with very small granules.

Body long, covered above with small flat granules, intermixed with small round, flat, feebly keeled tubercles. Dorsal tubercles in about 22-26 rows; ventral scales in about 46-56 rows; subcaudals quadrangular, the median series not transversely enlarged.

Lateral fold with a series of slightly enlarged tubercles (average size depends on species). Ventral scales small, smooth, juxtaposed or subimbricate. Male with a long uninterrupted series of femoral and preanal pores, 30 or more on each side, forming a right angle in the middle, preceded by 4 additional preanal pores; no preanal groove. Tail round, tapering, covered with uniform flat scales. Limbs long; digits strong, slightly depressed at the base, strongly compressed at the end phalanges, inferior transverse lamellae well developed.

Both *R. serratus* and *R. caudatenuis* sp. nov. are separated from the other members of the genus *Rosenberggekko* gen. nov. including the four named above by having a close-set series of raised triangular orange-coloured or yellowish tubercles running along the length of the lateral fold on either side.

The genus *Rosenberggekko* gen. nov. is readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm SVL (310 mm total); divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color pattern consisting of paired elongate blotches (colouration of nominate subgenus) or alternatively a largely uniform dark colour marked with large white tubercles on the dorsum (*Melanogekko* subgen. nov.).

**Distribution:** *Rosenberggekko alexanderdudleyi* sp. nov. is known only from the immediate vicinity of the type locality of Bunisi Village, Milne Bay Province, Papua New Guinea, but presumably occurs in nearby parts of the Owen Stanley Range.

**Etymology:** *R. alexanderdudleyi* sp. nov. is named in honour of Alexander Dudley, originally from Kenthurst, Sydney, New South Wales, Australia in recognition of his many contributions to herpetology in Australia.

**ROSENBERGGEKKO FRITZMAARTENI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:FA2EEF34-F848-4D05-9ACD-2063C640A695**

**Holotype:** A preserved specimen at the Australian Museum in

Sydney, New South Wales, Australia, specimen number R115469 collected from Yuro, Chimbu Province, Papua New Guinea. This facility allows access to its holdings.

**Paratype:** A preserved specimen at the South Australian Museum, Adelaide, South Australia, Australia, specimen number R8369, collected from Karimui, New Guinea, Latitude -6.32 S., Longitude 144.8 E. This government-owned facility allows access to its holdings.

**Diagnosis:** *Rosenberggekko fritzmaarteni* sp. nov. has until now been treated as a divergent population of *R. loriae* (Boulenger, 1897), as has *R. merceicai* sp. nov. and *R. alexanderdudleyi* sp. nov. (e.g. Loveridge, 1948).

*R. merceicai* sp. nov. is readily separated from *R. loriae* by having a snout 1.5 times as long as the diameter of the eye, versus only slightly longer in *R. loriae* and twice as long in *R. alexanderdudleyi* sp. nov.; a reduced lateral fold, with similarly reduced tubercles as compared to the other species, as well as a different colouration that is a dorsal colouring that is grayish above speckled with brown, mainly on the tubercles and forming about eight, fine, wavy, transverse lines that are the outer, darker edges of four crossbands.

Venter is white, with each scale minutely flecked with black.

By contrast the other two species (*R. merceicai* sp. nov. and *R. alexanderdudleyi* sp. nov.) are brown above, with a series of paired blackish spots along the back, with three pairs between the fore and hind limbs. The last pair on the base of the tail, is confluent into a "V"; a V-shaped dark band from eye to eye, the apex on the nape. Lower parts are pale.

*R. alexanderdudleyi* sp. nov. is separated from both *R. merceicai* sp. nov. and *R. loriae* by having a body significantly longer than the tail versus tail is slightly longer than the body in *R. merceicai* sp. nov. and *R. loriae*.

*R. loriae* has a lateral fold with a series of slightly enlarged tubercles, while *R. alexanderdudleyi* sp. nov. has numerous prominently enlarged tubercles below the lateral fold.

The species *R. fritzmaarteni* sp. nov. is similar in most respects to *R. loriae* (as detailed above) but is separated from that species by its generally reddish-brown versus yellowish dorsum and having a snout 1.5 times as long as the diameter of the eye (versus only slightly longer).

The preceding species are in turn separated from others within the genus *Rosenberggekko* gen. nov. and all other species within the tribe Tetenditnguini tribe nov. by the following suite of characters: Head large; snout longer than the diameter of the orbit, which equals its distance from the ear-opening; forehead and lores concave; ear-opening roundish, one third the diameter of the eye. Head granular, with small round tubercles on the occiput and temples; rostral subquadrangular, nearly twice as broad as deep, with median cleft above; a large supranasal, separated from its fellow by a small azygous shield; nostril bordered by the rostral, the supranasal, the first upper labial, and three or four small granules. Twelve upper and ten or eleven lower labials; mental pentagonal or subtriangular; two or three pairs of chin-shields, median largest and forming a suture behind the mental. Throat with very small granules.

Body long, covered above with small flat granules, intermixed with small round, flat, feebly keeled tubercles. Dorsal tubercles in about 22-26 rows; ventral scales in about 46-56 rows; subcaudals quadrangular, the median series not transversely enlarged.

Lateral fold with a series of slightly enlarged tubercles (average size depends on species). Ventral scales small, smooth, juxtaposed or subimbricate. Male with a long uninterrupted series of femoral and preanal pores, 30 or more on each side, forming a right angle in the middle, preceded by 4 additional preanal pores; no preanal groove. Tail round, tapering, covered with uniform flat scales. Limbs long; digits strong, slightly depressed at the base, strongly compressed at the end phalanges, inferior transverse lamellae well developed.

Both *R. serratus* and *R. caudatenuis* sp. nov. are separated from the other members of the genus *Rosenberggekko* gen. nov. including the four named above by having a close-set series of

raised triangular orange-coloured or yellowish tubercles running along the length of the lateral fold on either side.

The genus *Rosenberggekko gen. nov.* is readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Adult size 120-165 mm SVL; (310 mm total); divided subcaudals; numerous enlarged femoral-preanal pores arrayed in a shallow chevron; dorsal color pattern consisting of paired elongate blotches (colouration of nominate subgenus) or alternatively a largely uniform dark colour marked with large white tubercles on the dorsum (*Melanogekko subgen. nov.*).

**Distribution:** *Rosenberggekko fritzmaarteni* sp. nov. is known only from the immediate vicinity of the type locality of Yuro, Chimbu Province, Papua New Guinea, but is presumably far more widespread.

**Etymology:** Named in honour of Fritz Maarten, one of the two owners of the famous Monbulk Animal Kingdom (with Andy Stevens), on the outskirts of Melbourne, Victoria, Australia in recognition of his important wildlife conservation and education activities in the 1970's and 1980's.

Their successful business was ultimately shut down at gunpoint by the Victorian State Government, who saw the Monbulk Animal Kingdom as competing successfully with their own dysfunctional zoo business, which operated the nearby disease infested "Healesville Wildlife Sanctuary".

**WELTERSCHULTESGEKKO GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:18A3660B-148B-4C55-B39D-AAE96FF79B8C

**Type species:** *Gymnodactylus louisiadensis* De Vis, 1892.

**Diagnosis:** The genus *Welterschultesgekko gen. nov.* is readily separated from all other species within *Tetenditunguini tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters: Moderately large to large adult size (90-160 mm SVL), a single row of enlarged subcaudals, more than 35 preanal/femoral pores; enlarged tubercles along the lateral skin fold of the lower part of the side of the body and only 4-7 dark bands on the body in a strongly banded pattern.

Species in the morphologically similar genus *Quantasia* Wells and Wellington, 1985 are characterised by having significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end, these colour trait/s separating them from *Welterschultesgekko gen. nov.*

**Distribution:** Solomon Islands, including Bougainville and excluding San Cristobal, as well as Milne Bay and offshore islands within that territory and the nearby north coastal region of south-east Papua New Guinea.

**Etymology:** *Welterschultesgekko gen. nov.* is named in honour of Francisco Welter-Schultes of Germany, being an expert on Molluscs, most specifically on non-marine species from Europe.

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/francisco-welter-schultes/>

As a commissioner with the International Commission on Zoological Nomenclature, and in 2020 its president, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Welterschultesgekko louisiadensis* (De Vis, 1892) (type

species); *W. epiroticus* (Kraus, 2008); *W. keilleri* sp. nov.; *W. klugei* (Kraus, 2008); *W. michaelsmythi* sp. nov.; *W. murua* (Kraus and Allison, 2006); *W. robustus* (Kraus, 2008); *W. salomonensis* (Rösler, Richards and Günther, 2007); *W. scottgranti* sp. nov.; *W. tomcottoni* sp. nov.; *W. tripartitus* (Kraus, 2008).

**WELTERSCHULTESGEKKO KEILLERI SP. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:FA782663-EEB5-4503-9B6C-68A2607ECC7A

**Holotype:** A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R87399, collected from within a 3 mile radius of Bitama, Malaita, Solomon Islands, Latitude 8.24 S., Longitude 160.36 E.

This facility allows access to its holdings.

**Paratypes:** 1/ Nine preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R137204, R137210, R137212, R137214-19, collected from Bsurata Village, Malaita, Solomon Islands, Latitude 8.49 S., Longitude 160.49 E.

2/ A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, specimen number BPBM 3484, collected from Dala, Malaita, Solomon Islands, Latitude 8.58333 S., Longitude 160.6667 E.

3/ A preserved specimen at the Museum of Comparative Zoology, Harvard University in Cambridge, Massachusetts, USA, specimen number MCZ 14467, collected from Auki, Malaita, Solomon Islands, Latitude 8.76 S., Longitude 160.70 E.

4/ Two preserved specimens at the Museum of Comparative Zoology, Harvard University in Cambridge, Massachusetts, USA, specimen numbers MCZ 115584 and MCZ 121244, both collected from Laugwata, Malaita, Solomon Islands, Latitude 8.38 S., Longitude 160.40 E.

5/ A preserved specimen at the Smithsonian Institution, National Museum of Natural History, Washington, DC, USA, specimen number USNM 313867, collected from near Arabala Village Malaita, Solomon Islands, Latitude 8.88 S., Longitude 160.77 E.

**Diagnosis:** The Solomon Island species *Welterschultesgekko keilleri* sp. nov. from Malaita Island, *W. scottgranti* sp. nov. from Guadalcanal, *W. michaelsmythi* sp. nov. from Bougainville and Shortland Islands and *W. tomcottoni* sp. nov. from the New Georgia group of islands have until now been treated as populations of *W. salomonensis* (Rösler, Richards and Günther, 2007) with a type locality of Santa Isabel Island, Solomon Islands, and prior to that *Welterschultesgekko louisiadensis* (De Vis, 1892) with a type locality of Sudest Island, Milne Bay Province, Papua New Guinea.

However the four relevant populations are morphologically and reproductively isolated, have not been in known contact during recent ice-age maxima, being times of lowest recent sea levels and are therefore reasonably interpreted as geographically allopatric species.

Furthermore the molecular results of Shea *et al.* (2011) corroborate this contention.

The five species, *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* are separated from all other species in the genus *Welterschultesgekko gen. nov.* including *W. louisiadensis* by having 34-39 rows of ventral scales, versus 45-58 in the other species.

*W. keilleri* sp. nov. is most readily separated from the four other species, namely *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by its strongly contrasting dorsal pattern of four purple-brown crossbands between fore and hind limbs, with beige between and the dark blotches being of consistent intensity across them, with intervening light areas twice the width of the darker bits, with there being a mid-dorsal division of the darker crossbands, converting them either into discrete blotches, or partially connected blotches; the lower flanks have between 22 and 40 raised yellow-white tubercles that are of medium size, but distinct as they are on a light purplish-brown background. The tail (original) is boldly ringed with blackish and whitish rings, the black ones usually wider than the white, with



the terminal portion whitish. There is a distinctive dark bar in front of the eye and a curled in "W" shape on the back of the head, posterior to the eyes. The iris is brownish.

*W. scottgranti* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a dorsal pattern usually so faded as to give the lizard a dull olive-brown appearance, with the banding typical of the genus being barely discernable. There is no mark in front of the eye, and the streak that runs from the back of the eye, along the temple and then turns to meet the opposite line at the back of the head is effectively absent, except for at the back of the head, where it is also faded. The tail is effectively unbanded, also being mainly olive-brown at the basal end and for half its length, before becoming whitish at the posterior end, this being a third to half its length (original tail). Iris is a bluey-grey colour.

*W. michaelsmythi* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a bold dorsal pattern consisting of distinct brown and beige bands, with some bands unbroken and others partially so, but still complete across the mid-line. The brown sections may have slight darkening on the outer edges (anterior and posterior), but are otherwise consistently coloured. The darker bands are wider than the lighter ones both on the body and along the tail, where they average about double the width.

The very end of the tail is a dusty white in colour, with the posterior dark bands peppered white. Iris is a blue-grey colour. There is no obvious marking or "W" shape on the top of the head behind the eyes.

Above the upper labials is a darkening, that extends to the eye and posterior to it is a temporal streak that runs to the back of the head before curling across the upper neck to join the other side.

Tubercles on the rear of the upper hind limbs are significantly larger than those elsewhere on the dorsum.

Ventrals in *W. michaelsmythi* sp. nov. are noticeably reduced in size and increased in number as compared to the other species.

*W. salomonensis* is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. michaelsmythi* sp. nov. by a dorsum that is brownish in colour punctuated by thin and broken irregular crossbands that are yellow in colour, the yellow parts being 3-4 times narrower than the generally brown interspaces. These interspaces are also heavily peppered yellow, giving the lizard a dusty appearance. The tail is banded dark brown to black with intervening yellow-white rings, these rings also being heavily peppered brown or black, making the bands less distinctive. The mid-section of the tail had blackish bands, the anterior brownish, similar to the dorsum of the body and the posterior quarter to fifth is mainly whitish. The upper surfaces of the limbs are brown and heavily peppered in line with most of the body. Iris is a brownish-blue-grey in colour.

*W. tomcottoni* sp. nov. is intermediate in dorsal colour between *W. salomonensis* and *W. michaelsmythi* sp. nov. in that the dorsal bands are reasonably prominent, but not even and not bold like in *W. michaelsmythi* sp. nov. or *W. keilleri* sp. nov.. Iris is a brownish-blue-grey in colour.

The dorsum and anterior tail is not heavily peppered as in *W. salomonensis*. Lighter bands on dorsum are narrower than darker ones, usually being about 2 times narrower than the darker interspaces. Iris is a brownish-blue-grey in colour.

*W. salomonensis* is depicted in life in Rösler *et al.* (2007) in photos 18 and 19.

*W. keilleri* sp. nov. is depicted in life in McCoy (2006), plate 11.

*W. scottgranti* sp. nov. is depicted in life in McCoy (2006), plate 10.

*W. michaelsmythi* sp. nov. is depicted in Rösler *et al.* (2007) in photo 20 and in life in McCoy (2006), plate 9.

The genus *Welterschultesgekko* gen. nov. is readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Moderately large to large adult size (90-160 mm SVL), a single row of enlarged subcaudals, more than 35 preanal/femoral pores; enlarged tubercles along the lateral skin fold of the lower part of the side of the body and only 4-7 dark bands on the body in a usually strongly banded pattern, although bands may be faded or irregular.

Species in the morphologically similar genus *Quantasia* Wells and Wellington, 1985 from far north Queensland, Australia, are characterised by having significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end, these colour traits separating them from *Welterschultesgekko* gen. nov..

**Distribution:** *W. keilleri* sp. nov. occurs on Malaita Island, Solomon Islands and probably nowhere else.

**Etymology:** *W. keilleri* sp. nov. is named in honour of well known snake catcher, Darren Keiller from Geelong, Victoria, Australia in recognition of his services to herpetology, including through his diligent efforts in dealing with online fraud in the reptile relocation and dog training businesses conducted by scammers.

**WELTERSCHULTESGEKKO SCOTTGRANTI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:0A92AA93-E944-490F-8183-60A81F5F2E99**

**Holotype:** A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R69569, collected from Visale, Guadalcanal, Solomon Islands, Latitude -9.16 S., Longitude 159.42 E. This facility allows access to its holdings.

**Paratype:** A preserved specimen at the Bernice P. Bishop Museum, Honolulu, Hawaii, specimen number BPBM 20914 collected from Mount Austen, Guadalcanal, Solomon Islands, Latitude -9.46667 S., Longitude 159.967 E.

**Diagnosis:** The Solomon Island species *Welterschultesgekko scottgranti* sp. nov. from Guadalcanal, *W. keilleri* sp. nov. from Malaita Island, *W. michaelsmythi* sp. nov. from Bougainville and Shortland Islands and *W. tomcottoni* sp. nov. from the New Georgia group of islands have until now been treated as populations of *W. salomonensis* (Rösler, Richards and Günther, 2007) with a type locality of Santa Isabel Island, Solomon Islands, and prior to that *Welterschultesgekko louisidensis* (De Vis, 1892) with a type locality of Sudest Island, Milne Bay Province, Papua New Guinea.

However the four relevant populations are morphologically and reproductively isolated, have not been in known contact during recent ice-age maxima, being times of lowest recent sea levels and are therefore reasonably interpreted as geographically allopatric species.

Furthermore the molecular results of Shea *et al.* (2011) corroborate this contention.

The five species, *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* are separated from all other species in the genus *Welterschultesgekko* gen. nov. including *W. louisidensis* by having 34-39 rows of ventral scales, versus 45-58 in the other species.

*W. scottgranti* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a dorsal pattern usually so faded as to give the lizard a dull olive-brown appearance, with the banding typical of the genus being barely discernable. There is no mark in front of the eye, and the streak that runs from the back of the eye, along the temple and then turns to meet the opposite line at the back of the head is effectively absent, except for at the back of the head, where it is also faded. The tail is effectively unbanded, also being mainly olive-brown at the basal end and for half its length, before becoming whitish at the posterior end, this being a third to half its length (original tail). Iris is a bluey-grey colour.

*W. keilleri* sp. nov. is most readily separated from the four other species, namely *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by its strongly contrasting dorsal pattern of four purple-brown crossbands

between fore and hind limbs, with beige between and the dark blotches being of consistent intensity across them, with intervening light areas twice the width of the darker bits, with there being a mid-dorsal division of the darker crossbands, converting them either into discrete blotches, or partially connected blotches; the lower flanks have between 22 and 40 raised yellow-white tubercles that are of medium size, but distinct as they are on a light purplish-brown background. The tail (original) is boldly ringed with blackish and whitish rings, the black ones usually wider than the white, with the terminal portion whitish. There is a distinctive dark bar in front of the eye and a curled in "W" shape on the back of the head, posterior to the eyes. The iris is brownish.

*W. michaelsmythi* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a bold dorsal pattern consisting of distinct brown and beige bands, with some bands unbroken and others partially so, but still complete across the mid-line. The brown sections may have slight darkening on the outer edges (anterior and posterior), but are otherwise consistently coloured. The darker bands are wider than the lighter ones both on the body and along the tail, where they average about double the width.

The very end of the tail is a dusty white in colour, with the posterior dark bands peppered white. Iris is a blue-grey colour. There is no obvious marking or "W" shape on the top of the head behind the eyes.

Above the upper labials is a darkening, that extends to the eye and posterior to it is a temporal streak that runs to the back of the head before curling across the upper neck to join the other side. Tubercles on the rear of the upper hind limbs are significantly larger than those elsewhere on the dorsum.

Ventrals in *W. michaelsmythi* sp. nov. are noticeably reduced in size and increased in number as compared to the other species.

*W. salomonensis* is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. michaelsmythi* sp. nov. by a dorsum that is brownish in colour punctuated by thin and broken irregular crossbands that are yellow in colour, the yellow parts being 3-4 times narrower than the generally brown interspaces. These interspaces are also heavily peppered yellow, giving the lizard a dusty appearance. The tail is banded dark brown to black with intervening yellow-white rings, these rings also being heavily peppered brown or black, making the bands less distinctive. The mid-section of the tail had blackish bands, the anterior brownish, similar to the dorsum of the body and the posterior quarter to fifth is mainly whitish. The upper surfaces of the limbs are brown and heavily peppered in line with most of the body. Iris is a brownish-blue-grey in colour.

*W. tomcottoni* sp. nov. is intermediate in dorsal colour between *W. salomonensis* and *W. michaelsmythi* sp. nov. in that the dorsal bands are reasonably prominent, but not even and not bold like in *W. michaelsmythi* sp. nov. or *W. keilleri* sp. nov.. Iris is a brownish-blue-grey in colour.

The dorsum and anterior tail is not heavily peppered as in *W. salomonensis*. Lighter bands on dorsum are narrower than darker ones, usually being about 2 times narrower than the darker interspaces. Iris is a brownish-blue-grey in colour.

*W. salomonensis* is depicted in life in Rösler *et al.* (2007) in photos 18 and 19.

*W. scottgranti* sp. nov. is depicted in life in McCoy (2006), plate 10.

*W. keilleri* sp. nov. is depicted in life in McCoy (2006), plate 11.

*W. michaelsmythi* sp. nov. is depicted in Rösler *et al.* (2007) in photo 20 and in life in McCoy (2006), plate 9.

The genus *Welterschultesgekko* gen. nov. is readily separated from all other species within Tetenditunguini *tribe* nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Moderately large to large adult size (90-160 mm SVL), a single row of enlarged subcaudals, more than 35 preanal/femoral pores; enlarged tubercles along the lateral skin fold of the lower part of the side of the body and only 4-7 dark bands on the body in a

usually strongly banded pattern, although bands may be faded or irregular.

Species in the morphologically similar genus *Quantasia* Wells and Wellington, 1985 from far north Queensland, Australia, are characterised by having significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end, these colour trait/s separating them from *Welterschultesgekko* gen. nov..

**Distribution:** *Welterschultesgekko scottgranti* sp. nov. occurs on Guadalcanal, Solomon Islands and probably nowhere else.

**Etymology:** Named in honour of Scott Grant, originally of Colac, western Victoria, Australia in recognition of his public benefit work as a licensed wildlife demonstrator and more recently through his conservation work as owner of the Whyalla Fauna Park in South Australia, Australia.

**WELTERSCHULTESGEKKO MICHAELSMYTHI SP. NOV.**  
**LSIDURN:LSID:ZOOBANK.ORG:ACT:3F5C23A0-092D-4AAA-A97D-27E90E568A60**

**Holotype:** A preserved specimen at the Smithsonian Institution, National Museum of Natural History, Washington, DC, USA, specimen number USNM 120883 collected from Cape Torokina, Bougainville Island, Latitude -6.25., Longitude 155.03 E. This facility allows access to its holdings.

**Paratypes:** 1/ A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R111210 collected from Kanua, Bougainville, Latitude -5.76 S., Longitude 154.72 E.

2/ Nine preserved specimens at the Museum of Comparative Zoology, Harvard University in Cambridge, Massachusetts, USA, specimen numbers MCZ 72211-12, 72214, 72216-17, 73880, 73882, 75886, 80905 all collected from Kanua, Bougainville, Latitude -5.76 S., Longitude 154.72 E.

**Diagnosis:** The Solomon Island species *Welterschultesgekko michaelsmythi* sp. nov. from Bougainville and Shortland Islands, *W. keilleri* sp. nov. from Malaita Island, *W. scottgranti* sp. nov. from Guadalcanal and *W. tomcottoni* sp. nov. from the New Georgia group of islands have until now been treated as populations of *W. salomonensis* (Rösler, Richards and Günther, 2007) with a type locality of Santa Isabel Island, Solomon Islands, and prior to that *Welterschultesgekko louisiadensis* (De Vis, 1892) with a type locality of Sudest Island, Milne Bay Province, Papua New Guinea.

However the four relevant populations of the four newly named taxa are morphologically and reproductively isolated, have not been in known contact during recent ice-age maxima, being times of lowest recent sea levels and are therefore reasonably interpreted as geographically allopatric species.

Furthermore the molecular results of Shea *et al.* (2011) corroborate this contention.

The five species, *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* are separated from all other species in the genus *Welterschultesgekko* gen. nov. including *W. louisiadensis* by having 34-39 rows of ventral scales, versus 45-58 in the other species.

*W. scottgranti* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a dorsal pattern usually so faded as to give the lizard a dull olive-brown appearance, with the banding typical of the genus being barely discernable. There is no mark in front of the eye, and the streak that runs from the back of the eye, along the temple and then turns to meet the opposite line at the back of the head is effectively absent, except for at the back of the head, where it is also faded. The tail is effectively unbanded, also being mainly olive-brown at the basal end and for half its length, before becoming whitish at the posterior end, this being a third to half its length (original tail). Iris is a bluey-grey colour.

*W. keilleri* sp. nov. is most readily separated from the four other species, namely *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by its strongly contrasting dorsal pattern of four purple-brown crossbands



between fore and hand limbs, with beige between and the dark blotches being of consistent intensity across them, with intervening light areas twice the width of the darker bits, with there being a mid-dorsal division of the darker crossbands, converting them either into discrete blotches, or partially connected blotches; the lower flanks have between 22 and 40 raised yellow-white tubercles that are of medium size, but distinct as they are on a light purplish-brown background. The tail (original) is boldly ringed with blackish and whitish rings, the black ones usually wider than the white, with the terminal portion whitish. There is a distinctive dark bar in front of the eye and a curled in "W" shape on the back of the head, posterior to the eyes. The iris is brownish.

*W. michaelsmythi* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a bold dorsal pattern consisting of distinct brown and beige bands, with some bands unbroken and others partially so, but still complete across the mid-line. The brown sections may have slight darkening on the outer edges (anterior and posterior), but are otherwise consistently coloured. The darker bands are wider than the lighter ones both on the body and along the tail, where they average about double the width.

The very end of the tail is a dusty white in colour, with the posterior dark bands peppered white. Iris is a blue-grey colour. There is no obvious marking or "W" shape on the top of the head behind the eyes.

Above the upper labials is a darkening, that extends to the eye and posterior to it is a temporal streak that runs to the back of the head before curling across the upper neck to join the other side. Tubercles on the rear of the upper hind limbs are significantly larger than those elsewhere on the dorsum.

Ventrals in *W. michaelsmythi* sp. nov. are noticeably reduced in size and increased in number as compared to the other species. *W. salomonensis* is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. michaelsmythi* sp. nov. by a dorsum that is brownish in colour punctuated by thin and broken irregular crossbands that are yellow in colour, the yellow parts being 3-4 times narrower than the generally brown interspaces. These interspaces are also heavily peppered yellow, giving the lizard a dusty appearance. The tail is banded dark brown to black with intervening yellow-white rings, these rings also being heavily peppered brown or black, making the bands less distinctive. The mid-section of the tail had blackish bands, the anterior brownish, similar to the dorsum of the body and the posterior quarter to fifth is mainly whitish. The upper surfaces of the limbs are brown and heavily peppered in line with most of the body. Iris is a brownish-blue-grey in colour.

*W. tomcottoni* sp. nov. is intermediate in dorsal colour between *W. salomonensis* and *W. michaelsmythi* sp. nov. in that the dorsal bands are reasonably prominent, but not even and not bold like in *W. michaelsmythi* sp. nov. or *W. keilleri* sp. nov.. Iris is a brownish-blue-grey in colour.

The dorsum and anterior tail is not heavily peppered as in *W. salomonensis*. Lighter bands on dorsum are narrower than darker ones, usually being about 2 times narrower than the darker interspaces. Iris is a brownish-blue-grey in colour.

*W. salomonensis* is depicted in life in Rösler *et al.* (2007) in photos 18 and 19.

*W. michaelsmythi* sp. nov. is depicted in Rösler *et al.* (2007) in photo 20 and in life in McCoy (2006), plate 9.

*W. scottgranti* sp. nov. is depicted in life in McCoy (2006), plate 10.

*W. keilleri* sp. nov. is depicted in life in McCoy (2006), plate 11.

The genus *Welterschultesgekko* gen. nov. is readily separated from all other species within Tetenditunguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Moderately large to large adult size (90-160 mm SVL), a single row of enlarged subcaudals, more than 35 preanal/femoral pores; enlarged tubercles along the lateral skin fold of the lower part of the side of the body and only 4-7 dark bands on the body in a

usually strongly banded pattern, although bands may be faded or irregular.

Species in the morphologically similar genus *Quantasia* Wells and Wellington, 1985 from far north Queensland, Australia, are characterised by having significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end, these colour trait/s separating them from *Welterschultesgekko* gen. nov..

**Distribution:** *W. michaelsmythi* sp. nov. is known only from Bougainville and Shortland Islands, in the greater Solomon Islands group.

**Etymology:** Named in honour of Michael Smyth of Ringwood, Victoria, Australia, a long-term member of the team at Snakebusters: Australia's Best Reptiles in recognition of his excellent work with wildlife education and conservation.

**WELTERSCHULTESGEKKO TOMCOTTONI SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:2BEC6DC0-B89B-4DD9-8578-82E9F03F4755**

**Holotype:** A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number R134930 collected from Mount Javi, 5 km north of Tatutiva Village, Marovoa, New Georgia Island, Solomon Islands Latitude -8.31 S., Longitude 157.52 E. This government-owned facility allows access to its collection.

**Paratypes:** Two preserved specimens at the Australian Museum, Sydney, New South Wales, Australia, specimen numbers R134931-32 collected from Mount Javi, 5 km north of Tatutiva Village, Marovoa, New Georgia Island, Solomon Islands Latitude -8.31 S., Longitude 157.52 E.

**Diagnosis:** The Solomon Island species *Welterschultesgekko michaelsmythi* sp. nov. from Bougainville and Shortland Islands, *W. keilleri* sp. nov. from Malaita Island, *W. scottgranti* sp. nov. from Guadalcanal and *W. tomcottoni* sp. nov. from the New Georgia group of islands have until now been treated as populations of *W. salomonensis* (Rösler, Richards and Günther, 2007) with a type locality of Santa Isabel Island, Solomon Islands, and prior to that *Welterschultesgekko louisidensis* (De Vis, 1892) with a type locality of Sudest Island, Milne Bay Province, Papua New Guinea. However the four relevant populations of the four newly named taxa are morphologically and reproductively isolated, have not been in known contact during recent ice-age maxima, being times of lowest recent sea levels and are therefore reasonably interpreted as geographically allopatric species.

Furthermore the molecular results of Shea *et al.* (2011) corroborate this contention.

The five species, *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* are separated from all other species in the genus *Welterschultesgekko* gen. nov. including *W. louisidensis* by having 34-39 rows of ventral scales, versus 45-58 in the other species.

*W. scottgranti* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a dorsal pattern usually so faded as to give the lizard a dull olive-brown appearance, with the banding typical of the genus being barely discernable. There is no mark in front of the eye, and the streak that runs from the back of the eye, along the temple and then turns to meet the opposite line at the back of the head is effectively absent, except for at the back of the head, where it is also faded. The tail is effectively unbanded, also being mainly olive-brown at the basal end and for half its length, before becoming whitish at the posterior end, this being a third to half its length (original tail). Iris is a bluey-grey colour.

*W. keilleri* sp. nov. is most readily separated from the four other species, namely *W. scottgranti* sp. nov., *W. michaelsmythi* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by its strongly contrasting dorsal pattern of four purple-brown crossbands between fore and hand limbs, with beige between and the dark blotches being of consistent intensity across them, with intervening light areas twice the width of the darker bits, with there being a

mid-dorsal division of the darker crossbands, converting them either into discrete blotches, or partially connected blotches; the lower flanks have between 22 and 40 raised yellow-white tubercles that are of medium size, but distinct as they are on a light purplish-brown background. The tail (original) is boldly ringed with blackish and whitish rings, the black ones usually wider than the white, with the terminal portion whitish. There is a distinctive dark bar in front of the eye and a curled in "W" shape on the back of the head, posterior to the eyes. The iris is brownish.

*W. michaelsmythi* sp. nov. is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. salomonensis* by having a bold dorsal pattern consisting of distinct brown and beige bands, with some bands unbroken and others partially so, but still complete across the mid-line. The brown sections may have slight darkening on the outer edges (anterior and posterior), but are otherwise consistently coloured. The darker bands are wider than the lighter ones both on the body and along the tail, where they average about double the width.

The very end of the tail is a dusty white in colour, with the posterior dark bands peppered white. Iris is a blue-grey colour. There is no obvious marking or "W" shape on the top of the head behind the eyes.

Above the upper labials is a darkening, that extends to the eye and posterior to it is a temporal streak that runs to the back of the head before curling across the upper neck to join the other side.

Tubercles on the rear of the upper hind limbs are significantly larger than those elsewhere on the dorsum.

Ventrals in *W. michaelsmythi* sp. nov. are noticeably reduced in size and increased in number as compared to the other species.

*W. salomonensis* is most readily separated from the four other species, namely *W. keilleri* sp. nov., *W. scottgranti* sp. nov., *W. tomcottoni* sp. nov. and *W. michaelsmythi* sp. nov. by a dorsum that is brownish in colour punctuated by thin and broken irregular crossbands that are yellow in colour, the yellow parts being 3-4 times narrower than the generally brown interspaces. These interspaces are also heavily peppered yellow, giving the lizard a dusty appearance. The tail is banded dark brown to black with intervening yellow-white rings, these rings also being heavily peppered brown or black, making the bands less distinctive. The mid-section of the tail had blackish bands, the anterior brownish, similar to the dorsum of the body and the posterior quarter to fifth is mainly whitish. The upper surfaces of the limbs are brown and heavily peppered in line with most of the body. Iris is a brownish-blue-grey in colour.

*W. tomcottoni* sp. nov. is intermediate in dorsal colour between *W. salomonensis* and *W. michaelsmythi* sp. nov. in that the dorsal bands are reasonably prominent, but not even and not bold like in *W. michaelsmythi* sp. nov. or *W. keilleri* sp. nov.. Iris is a brownish-blue-grey in colour.

The dorsum and anterior tail is not heavily peppered as in *W. salomonensis*. Lighter bands on dorsum are narrower than darker ones, usually being about 2 times narrower than the darker interspaces. Iris is a brownish-blue-grey in colour.

*W. salomonensis* is depicted in life in Rösler *et al.* (2007) in photos 18 and 19.

*W. michaelsmythi* sp. nov. is depicted in Rösler *et al.* (2007) in photo 20 and in life in McCoy (2006), plate 9.

*W. scottgranti* sp. nov. is depicted in life in McCoy (2006), plate 10.

*W. keilleri* sp. nov. is depicted in life in McCoy (2006), plate 11.

The genus *Welterschultesgekko* gen. nov. is readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Moderately large to large adult size (90-160 mm SVL), a single row of enlarged subcaudals, more than 35 preanal/femoral pores; enlarged tubercles along the lateral skin fold of the lower part of the side of the body and only 4-7 dark bands on the body in a usually strongly banded pattern, although bands may be faded or irregular.

Species in the morphologically similar genus *Quantasia* Wells and

Wellington, 1985 from far north Queensland, Australia, are characterised by having significant darkening of the posterior part of the darker cross-bands on the body and/or a posterior end of the tail that does not whiten towards the end, these colour trait/s separating them from *Welterschultesgekko* gen. nov..

**Distribution:** *W. tomcottoni* sp. nov. is known only from the New Georgia group of islands in the Solomon Islands.

**Etymology:** Named in honour of Tom Cotton, originally of Ringwood, Victoria, Australia, a long-term member of the team at Snakebusters: Australia's Best Reptiles in recognition of his excellent work with wildlife education and conservation.

**ZHIQIANGZHANGGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:2418A714-59A2-42AD-8D55-D7AF9AA4C338**

**Type species:** *Gymnodactylus consobrinus* Peters, 1871.

**Diagnosis:** The genus *Zhiqiangzhanggekko* gen. nov. is readily separated from all other species within *Tetenditunguini* tribe nov. as already formally described in this paper and relied upon in this description by one or other of the following unique combinations of characters:

1/ Generally stocky and large in terms of species in the tribe, with large head and thick neck; maximum SVL of up to 125 mm; 10-13 supralabials; 9-12 infralabials; weak tuberculation on dorsal surface of body; no tubercles on ventral surface of body; 37-60; paravertebral tubercles; 13-22 longitudinal tubercle rows; 34-62 ventral scales; 19-27 subdigital lamellae on fourth toe; no femoral pores; no enlarged femoral scales in most species, but up to six in some; 0-11 preanal pores; preanal slit or pit; blotches, dorsal body bands, and/or longitudinal stripes, sometimes being indistinct; dark bands usually narrower than interspaces; with or without a reticulated pattern on the parietal, which extends to the head on one species; no rostral chevron; and no single row of enlarged subcaudal scales, or;

2/ Or as above but with a lateral fold with round tubercles; male with preanal pores only; an angular series of 8 or 9 pores; no pubic groove; dorsum is a pale brown colour with dark brown markings.

There are several unnamed species within this genus, mostly in Peninsula Malaysia, previously misidentified as "*Cyrtodactylus consobrinus* (Peters, 1871)" which Grismer *et al.* (2021a) have explicitly laid claim to naming rights. Therefore the formal species-level descriptions of those taxa have been removed from this paper.

**Distribution:** Centred on the island of Borneo, but extending to include Peninsula Malaysia.

**Etymology:** *Zhiqiangzhanggekko* gen. nov. is named in honour of Zhi-Qiang Zhang, originally of China, but most recently of New Zealand, who's area of expertise is the systematics, diversity and ecology of the Acari (mites).

His expertise is outlined at:

<https://www.iczn.org/about-the-iczn/commissioners/zhi-qiang-zhang/>

He is also in charge of the PRINO online journal "*Zootaxa*", which has had a chequered publishing history, including some shocking acts of taxonomic vandalism and at other times some fantastic scholarly scientific works.

The business model of online taxonomy journals was largely pioneered by Zhi-Qiang Zhang, and while emulated by others with other journals (e.g. *Zookeys*), the taxonomic output of *Zootaxa* vastly exceeds all major rivals combined (as of mid 2021).

As a commissioner with the International Commission on Zoological Nomenclature, and in 2020 its president, in 2020, he voted against the taxonomic vandalism and dishonest practices of the Wolfgang Wüster gang in a widely publicized case (case number 3601) (ICZN 2021), by voting against their proposal "E" (AKA Rhodin *et al.* 2015), which would have effectively scuttled all rules applying to the science of taxonomy and the well-established rules of nomenclature that follows taxonomy in science.

The successful near unanimous vote by the ICZN against the Wüster gang, effectively made it clear that the ICZN and the global scientific community, whom they represent, have no tolerance for the lies, dishonesty, criminal misconduct, rule breaking, fake



science and online scams including so-called "Negative SEO" against people they perceive as rivals, as practiced by Wüster and his gang of thieves.

**Content:** *Zhiqiangzhanggekko consobrinus* (Peters, 1871) (type species); *Z. malayanus* (De Rooij, 1915); *Z. cavernicolus* (Inger and King, 1961); *Z. hamidiyi* (Riyanto, Fauzi, Sidik, Mumpuni, Mulyadi, Irham, Kurniawan, Ota, Okamoto, Hikida and Grismer, 2021); *Z. hikidai* (Riyanto, 2012); *Z. hantu* (Davis, Das, Leache, Karin, Brennan, Jackman, Nashriq, Chan and Bauer, 2021); *Z. limajalur* (Davis, Bauer, Jackman, Nashriq and Das, 2019); *Z. miriensis* (Davis, Das, Leache, Karin, Brennan, Jackman, Nashriq, Chan and Bauer, 2021); *Z. pubisulcus* (Inger, 1958).

**MACULAGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:72D7ACE9-8BB4-4433-AEB7-76283C8EA126**

**Type species:** *Cyrtodactylus marmoratus* Gray, 1831.

**Diagnosis:** The genus *Maculagekko gen. nov.* is readily separated from all other species within Tetenditungguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following unique combinations of characters:

- 1/ Large species with large head (SVL to 90 mm); lateral fold with round tubercles. Male with femoral or preanal pores, or both. Dorsal tubercles small; and one or other of:  
 A/ Male with preanal and femoral pores. On each side 4-6 femoral pores; 12 or 13 preanal pores in a longitudinal groove. Tail covered below with small scales. Numerous keeled to conical tubercles on the back. Body light brown above with dark brown spots, sometimes forming cross bands on the back (*M. marmoratus* (Gray, 1861) and *M. halmahericus* (Mertens, 1929)); or  
 B/ A continuous series of about 40-55 pores; a pubic groove. Ear-opening horizontal. Body grey-brown above with blackish spots, which sometimes form irregular cross bands; tubercles on the back are roundish, flat, and relatively few in number (*M. fumosus* (Müller, 1895)) or;  
 2/ SVL to 70 mm; internasals separated by a single large internasal; supra and postnasals 3; upper labials 11-12; postmentals 2; dorsal tubercles in 22-24 rows; lamellae under fourth toe 20-22; preanal pores about 8, concealed in a longitudinal preanal groove; a lateral fold (*M. papuensis* (Brongersma, 1934)), or;  
 3/ SVL to 75 mm; dorsal colouration consisting of relatively few large dark brown blotches, presence of a preanal groove and obvious whorls of dentate tubercles extending the length of the tail (*M. nuaulu* Oliver, Edgar, Mumpuni, Iskandar and Lilley, 2009)), or;  
 4/ SVL to 80 mm reaching 79.2 mm; tubercles on upper and lower arms; raised conical tubercles along the ventrolateral body folds; 49-50 ventral scales; pit-shaped preanal depression; 14 preanal pores arranged in the shape of an inverted "V"; enlarged preanal and femoral scales separated by smaller scales; enlarged femoral scales in two rows; preanal and femoral pores separated by poreless scales; five femoral pores on both sides; 20-24 lamellae under fourth toes; no transversely enlarged median subcaudals; tail not prehensile, and tubercles extend along about 60% of tail length in original tail (*M. tahuna* (Riyanto, Arida and Koch, 2018)). According to Grismer *et al.* (2021a) Riyanto *et al.* are in the process of naming a number of species (about five) in this genus from Java and nearby. *M. papuensis* (Brongersma, 1934) is also composite.
- Distribution:** The genus *Maculagekko gen. nov.* occurs from New Guinea westward across the Lesser Sundas and Java, to parts of southern and western Sumatra.
- Etymology:** *Maculagekko gen. nov.* is named in reflection of the fact that most species are mottled geckos, the first part of the name being taken from the Latin word "Macula" meaning mottled.
- Content:** *Maculagekko marmoratus* (Gray, 1831) (type species); *M. fumosus* (Müller, 1895); *M. halmahericus* (Mertens, 1929); *M. papuensis* (Brongersma, 1934); *M. nuaulu* (Oliver, Edgar, Mumpuni, Iskandar and Lilley, 2009); *M. tahuna* (Riyanto, Arida and Koch, 2018).

**MOROTAIGEKKO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:83BE0987-D9EA-41DF-A1BF-C7C86101C637**

**Type species:** *Gymnodactylus deveti* Brongersma, 1948.

**Diagnosis:** The monotypic genus *Morotaigekko gen. nov.* is readily separated from all other species within Tetenditungguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

- Head large and oviform; forehead strongly concave. The length of the snout is 1.4-1.5 times the distance from the orbit to the ear-opening and 1.1-1.2 times the diameter of the orbit. Ear-opening oval, vertical, its diameter one fourth to one third that of the orbit. Head covered with granules. Those on the snout largest; occiput, temples and supraocular region have tubercles among the granules. Rostral 1.5-1.7 times as broad as high, with a median cleft above; bordered above by a row of four small shields, the outer of which are the supranasals. Upper and lower lip bordered by 12 or 13 shields, and posteriorly by 2 or 3 small scales. Nostril bordered by the rostral, first upper labial, supranasal and three postnasals.
- Symphysial pentagonal, 1.6-1.8 times as broad as long. A median pair of large chinshields with a smaller one on each side. Behind the median pair is a shield of irregular shape or alternatively may be divided into two by a longitudinal suture. Throat covered with small granules, but there are no tubercles on the throat.
- Body slightly depressed, covered above with small granules and numerous quite small tubercles. These tubercles are convex, some are slightly keeled to trihedral. About 21 to 24 tubercles across the back. Lateral fold strongly developed, with numerous enlarged convex to more or less conical tubercles.
- Ventral scales very small (almost granular) at the sides, larger, cycloid and subimbricate on the middle of the belly; 38 to 40 scales across the belly from fold to fold. An angular series of 18 to 23 preanal and femoral pores, the outer very small. The series of scales with pores extends for a short distance below the thighs; at each end 2 to 4 scales without pores.
- From these scales towards the knee, the lower surface of the thigh is covered by very small scales (about 33 scales from the pore scales to the inside of the knee, i.e., a distance of about 10 mm). The pore scales are about as large as the row of scales in front of it. Between the pore scales and the vent the scales are very much smaller. No trace of a preanal groove.
- Tail slightly vertically oval in cross section, annulate; covered above with small scales, 10 in an annulus; below with large scales, the two median rows strongly enlarged, four in an annulus. Upper surface of tail with convex to slightly conical tubercles, arranged in transverse rows at the posterior border of each annulus; some other tubercles more or less irregularly positioned on the proximal part of each annulus. There are three or four large tubercles on each side of the base of the tail. Postanal slits and ossicles present. Digits depressed at the base, compressed distally; with transversely enlarged lamellae under the proximal phalanx. Fourth finger with 26 lamellae, the basal 13 transversely enlarged; fourth toe with 28 to 29 lamellae of which 15 are under the basal phalanx. The adpressed hindlimb reaches to between the elbow and the shoulder.
- Colour pattern is distinct. There is a broad purplish brown band that starts behind the orbit and curves across the occiput to the orbit of the other side; this band extends posteriorly on to the nape, where it ends in two protracted points. The lower (posterior) border of this band is marked by an irregular line of very dark brown. Specimens have one (thick) or two (thinner) broad cross-bands across the back; their purplish brown colour is continued along the sides and connects the two bands, with the posterior one sometimes dissolving into other markings. The bands have dark borders of almost blackish brown. A few small irregular dark spots are present in the pale areas. On the sacral region there is a longitudinal blackish streak that may be interrupted.
- Tail has three dark crossbands. Lower surface of head, body and tail is uniformly whitish (taken and modified from Brongersma 1948).

**Distribution:** Known only from the type locality of Morotai Island, Indonesia.

**Etymology:** *Morotaigekko gen. nov.* is named in reflection of the type locality for this apparently range-restricted genus, the first part of the name being the island where it comes from.

**Content:** *Morotaigekko deveti* (Brongersma, 1948) (monotypic).

**INFIGO GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:B9D39377-DDEF-48BA-988F-136E068339B6**

**Type species:** *Gymnodactylus marmoratus var. Novae-Guineae* Schlegel, 1837.

**Diagnosis:** The species within the genus *Infigo gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

HW/SVL 0.18-0.24, enlarged tubercles across the infra-angular region and often extending across the throat, mid-dorsal tubercles in 21 to 27 rows at midpoint of body, subcaudal scales not transversely widened, high number of mid-body ventral scales in transverse series (49-60), moderate number of femoral and preanal pores (9-38, but usually over 20) in a continuous, nearly continuous or broken chevron; enlarged tubercles extending the length of the tail; tubercles on the lateral fold; narrow dark brown barring on the throat, labials and usually venter, sometimes absent and a dorsal colour pattern on torso including distinctly or indistinctly defined alternating dark-brown, medium-brown and whitish regions, with darker bands sometimes black edged.

Tallowin *et al.* (2018), found the species in this newly named genus diverged from their nearest living relatives, *Quantasia* Wells and Wellington, 1985 about 13.1 MYA.

**Distribution:** *Infigo gen. nov.* occurs across a range encompassing the main part of New Guinea.

**Etymology:** *Infigo* is Latin for impressive, and these lizards are relatively large and impressive as compared to most other members of the tribe Tetenditnguini *tribe nov.*

**Content:** *Infigo novaeguineae* (Schlegel, 1837) (type species); *I. aaroni* (Günther and Rösler, 2003); *I. equestris* (Oliver, Richards, Mumpuni and Rösler, 2016); *I. irianjayaensis* (Rösler, 2001); *I. mimikanus* (Boulenger, 1914); *I. jackyhoseræ sp. nov.*; *I. rex* (Oliver, Richards, Mumpuni and Rösler, 2016); *I. zugi* (Oliver, Tjaturadi, Mumpuni, Krey and Richards, 2008).

**INFIGO JACKYHOSERAE SP. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:240FD75D-1718-40DF-B7AF-C388BAD33986**

**Holotype:** A preserved specimen at the Australian Museum, Sydney, New South Wales, Australia, specimen number AMS R122410, collected from Waro, Southern Highlands Province, Papua New Guinea, Latitude 6.32' S., Longitude 143.11 E.

**Paratype:** A preserved specimen at the South Australian Museum, Adelaide, South Australia, specimen number SAMA R62648, collected from Libano, (Kikori River basin), Southern Highlands Province, Papua New Guinea, Latitude -6.39906 S., Longitude 142.97614 E.

**Diagnosis:** *Infigo jackyhoseræ sp. nov.* has until now been treated as an eastern population of *Infigo novaeguineae* (Schlegel, 1837) (AKA *Cyrtodactylus novaeguineae*) with a type locality of the Triton Bay area, Irian Jaya (e.g. Oliver *et al.* 2016). However *Infigo jackyhoseræ sp. nov.* is both morphologically divergent from nominate *I. novaeguineae* and occurs in a separate biogeographical region within Papuan realm. See for example the distributions of the various species of *Chondropython* Meyer, 1874, as documented by Natusch *et al.* (2020), see at Fig. 1.

With disjunct distribution and morphological divergence, I have no hesitation in formally naming this taxon as a new species.

While morphologically similar to *I. novaeguineae*, *I. jackyhoseræ sp. nov.* is readily separated from that species by usually having four brown dorsal bands, poorly defined on the anterior margin, versus three well defined dorsal bands, well defined at both anterior and posterior margins in nominate *I. novaeguineae*. The two anterior white bands on the (original) tail are less than half as wide as the darker brownish-black bands between them in *I.*

*jackyhoseræ sp. nov.*, versus being of similar width in *I. novaeguineae*.

*I. jackyhoseræ sp. nov.* has a dark brown iris.

Both *I. jackyhoseræ sp. nov.* and *I. novaeguineae* are separated from all other members of the genus *Infigo gen. nov.* by the following suite of characters: SVL to 129 mm, relatively narrow head HW/SVL 0.18-0.19, enlarged tubercles on the infra-angular region and often extending across the posterior region of the throat, mid dorsal tubercles in 21 to 22 rows, subcaudal scales not transversely widened, 31-44 mid-body ventral scales (31-44) and a continuous or near-continuous, relatively straight row of femoral and preanal pores in adult males being up to at least 43 pores in total (modified from Oliver *et al.* 2016).

The species within the genus *Infigo gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

HW/SVL 0.18-0.24, enlarged tubercles across the infra-angular region and often extending across the throat, mid-dorsal tubercles in 21 to 27 rows at midpoint of body, subcaudal scales not transversely widened, high number of mid-body ventral scales in transverse series (49-60), moderate number of femoral and preanal pores (9-38, but usually over 20) in a continuous, nearly continuous or broken chevron; enlarged tubercles extending the length of the tail; tubercles on the lateral fold; narrow dark brown barring on the throat, labials and usually venter, sometimes absent and a dorsal colour pattern on torso including distinctly or indistinctly defined alternating dark-brown, medium-brown and whitish regions, with darker bands sometimes black edged.

Tallowin *et al.* (2018), found the species in this newly named genus diverged from their nearest living relatives, *Quantasia* Wells and Wellington, 1985 about 13.1 MYA.

A photo of *I. jackyhoseræ sp. nov.* in life and a colour drawing of the holotype of *I. novaeguineae* can be found in Oliver *et al.* (2016).

**Distribution:** *I. jackyhoseræ sp. nov.* is currently only known from western Papua New Guinea, south of the central cordillera, being found in the Gulf, Southern Highlands and Western Provinces.

**Etymology:** *I. jackyhoseræ sp. nov.* is named in honour of Jacky Hoser, my youngest daughter, (of Park Orchards, Victoria, Australia) in recognition of more than 20 years spent working with the Snakebusters team for the benefit of wildlife conservation and education.

**CAUDACINGITUR GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:30E98270-6185-40E0-9B91-F129814B9B3C**

**Type species:** *Gymnodactylus oldhami* Theobald, 1876.

**Diagnosis:** The species within the genus *Caudacingitur gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

No web present on hand or foot; only zero, one or two preanal pores present on either side in males; a median series of transversely widened subcaudals in a continuous series except on the basal 24 millimeters of tail (original in adults); dorsum is brown or dark brown with whitish elongate or rounded spots tending to form longitudinal rows; there is a curved dark light-edged band from eye around the occiput; distinctive, well-marked black and white or yellow and brown tail rings, being of similar thickness, or as preceding, except for having a body banded with (usually) seven transverse dark-edged bands, separated by narrow gray interspaces; top of head with a light reticulum enclosing darker spots; the presence of eight or nine preanal pores on either side in males.

Grismer *et al.* (2021a) claimed to be in the process of naming a number of forms in this genus (as defined here) and so I have abstained from naming any taxa within the genus.

**Distribution:** *Caudacingitur gen. nov.* is confined to the Thai-Malay Peninsula of southern Thailand and Myanmar, extending slightly north to southern Thailand, including offshore islands to the east



and potentially far north Peninsula Malaysia.

**Etymology:** The new genus name *Caudacingitur* in Latin means ringed tail, which is a diagnostic feature for the genus.

**Content:** *Caudacingitur oldhami* (Theobald, 1876) (type species); *C. lenya* (Mulcahy, Thura and Zug, 2017); *C. payarhtanensis* (Mulcahy, Thura and Zug, 2017); *C. sayok* (Panitvong, Sumontha, Tunprasert and Pauwels, 2014); *C. sanook* (Pauwels, Sumontha, Latinne and Grismer, 2013); *C. sumonthai* (Bauer, Pauwels and Chanhome, 2002); *C. thirakhupti* (Pauwels, Bauer, Sumontha and Chanhome, 2004); *C. zebraicus* (Taylor, 1962).

#### RUSSETOCOLORE GEN. NOV.

**LSIDURN:LSID:ZOOBANK.ORG:ACT:CF30A595-1FD6-4B5E-853A-D95B5E439DCD**

**Type species:** *Gymnodactylus peguensis* Boulenger, 1893.

**Diagnosis:** The species within the genus *Russetocolore gen. nov.* are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by one or other of the following three unique combinations of characters:

1/ Maximum adult SVL to 76 mm; relatively short limbs and digits, one pair of enlarged postmental scales in broad contact behind mental; dorsum with relatively smooth texture, with 13-25 longitudinal rows of tubercles which are domed to weakly conical or weakly keeled or rarely moderately keeled, 25-35 paravertebral tubercles; 6-9 supralabials and 6-9 infralabials; 31-43 ventral scales across midbody, ventrolateral folds absent, no preanal groove, 12 preanal pores in a single series in females, no femoral pores; in males 12-20 femoral pores; 7-10 preanal pores; 0-3 rows of post-preanal scales; subcaudal scales either forming broad transverse plates or not doing so, depending on the species, dorsal pattern of 6 thin dark bands (one nuchal and five between shoulders and sacrum), each bordered posteriorly by a thin white line and head with or without any dorsal pattern. Tail with alternating light and dark banding. 8 to 11 subdigital lamellae beneath 4th toe of pes distal to basal digital inflection, 4 to 8 broad lamellae basal to inflection (*Russetocolore peguensis* (Boulenger, 1893), *R. annandalei* (Bauer, 2003), *R. consobrinoides* (Annandale, 1905), *R. meersi* (Grismer, Wood, Quah, Murdoch, Grismer, Herr, Espinoza, Brown and Lin, 2018), *R. myintkyawthurai* (Grismer, Wood, Quah, Murdoch, Grismer, Herr, Espinoza, Brown and Lin, 2018), *R. nyinyikyawi* (Grismer, Wood, Thura, Win and Quah, 2019), *R. pyadalinensis* (Grismer, Wood, Thura, Win and Quah, 2019), *R. pyinyaungensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017), *R. wakeorum* (Bauer, 2003)), or:

2/ As above except for the presence of 51-55 paravertebral tubercles; 37 or 38 mid-body ventral scale rows; no preanal groove; 4-7 weakly pitted femoral scales on each side separated by 17 or 18 smaller non-pored scales from a single series of 10 or 11 pitted preanal scales on females; The condition of females with preanal and femoral pores separated by a diastema being unique in this genus (*R. bhupathyi* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018)), or:

3/ Maximum adult SVL to 72 mm; 36-45 paravertebral tubercles; 34-37 mid-body ventral scale rows; no preanal groove; eight or nine preanal pores in a single series on males and 7-9 smaller pores on females, 6-9 femoral pores on each side on males separated from preanal pores by twelve or thirteen scales, femoral pores absent on females. Five to seven basal and 10-13 apical subdigital lamellae beneath front pes toe 4, with two or three intervening rows of non-lamellar granular scales between basal and distal lamellae series. Subcaudal scalation of original tail without median series of paired enlarged plates. Dorsal pattern of six or seven paired transversely arranged small dark spots on trunk and sacrum, longitudinal markings on the neck. Original tail with approximately 12 dark bands (first five similar to dorsal spots), alternating with light brown bands proximally, and white bands distally beyond the sixth dark band *R. gubernatoris* (Annandale, 1913).

**Distribution:** *Russetocolore gen. nov.* occurs in the eastern Himalayas of India bordering Bhutan and Nepal, eastward to

Myanmar across the Ayeyarwady Basin to the western edge of the Shan Plateau.

**Etymology:** *Russetocolore* in Latin means russet colour, which reflects the appearance of most species in the genus.

**Content:** *Russetocolore peguensis* (Boulenger, 1893) (type species); *R. annandalei* (Bauer, 2003); *R. bhupathyi* (Agarwal, Mahony, Giri, Chaitanya and Bauer, 2018); *R. consobrinoides* (Annandale, 1905); *R. gubernatoris* (Annandale, 1913); *R. meersi* (Grismer, Wood, Quah, Murdoch, Grismer, Herr, Espinoza, Brown and Lin, 2018); *R. myintkyawthurai* (Grismer, Wood, Quah, Murdoch, Grismer, Herr, Espinoza, Brown and Lin, 2018); *R. nyinyikyawi* (Grismer, Wood, Thura, Win and Quah, 2019); *R. pyadalinensis* (Grismer, Wood, Thura, Win and Quah, 2019); *R. pyinyaungensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017); *R. wakeorum* (Bauer, 2003).

#### NIGRICANSALVUM GEN. NOV.

**LSIDURN:LSID:ZOOBANK.ORG:ACT:109A99E2-CFF7-4882-9B5E-E320251797E4**

**Type species:** *Cyrtodactylus russelli* Bauer, 2003.

**Diagnosis:** The species within the genus *Nigricansalvum gen. nov.* are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

A very large size (to 120 mm SVL), body moderately slender; ventrolateral folds well developed, limbs stout, digits long; one pair of enlarged postmental scales in broad contact behind mental; dorsum with 22 longitudinal rows of small, conical to keeled tubercles; 35-41 ventral scales across midbody to ventrolateral folds, no preanal groove, 9-15 preanal pores in a single series in males, 11-12 or 16-19 femoral pores on each thigh separated from preanal pores by a diastema in males, (absent in females); subcaudal scales forming broad transverse plates, but distinctly narrower than tail width, and dorsal pattern poorly defined, including paired dark elongate blotches or bands on the upper surface, or alternatively wavy markings and scattered lighter blotches on flanks. Tail with alternating light and dark banding. About thirteen subdigital lamellae beneath 4th toe of pes distal to basal digital inflection, and about nine broad lamellae basal to inflection.

**Distribution:** Endemic to Myanmar (Burma).

**Etymology:** *Nigricansalvum* is Latin for "blackish blotches" which typically adorn the dorsum of both species in one form or other.

**Content:** *Nigricansalvum russelli* (Bauer, 2003) (type species); *N. slowinskii* (Bauer, 2002).

#### FACILEOCCULTATUR GEN. NOV.

**LSIDURN:LSID:ZOOBANK.ORG:ACT:3530430A-5938-4FF2-9E0A-0C92B5A44535**

**Type species:** *Gonydactylus philippinicus* Steindachner, 1867.

**Diagnosis:** *Facileoccultatur gen. nov.* is a large assemblage of morphologically diverse species with a centre of origin in the Philippines that has spread to nearby areas to the south including Borneo

The species within the genus *Facileoccultatur gen. nov.* are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by one or other of the following eight unique combinations of characters:

1/ Maximum adult SVL 90mm; tail maximum 100 mm; head rather large, not especially depressed, much longer than wide, depth of head in occipital region equal to length of snout; eye large, its distance from nostril equal to or a little greater than its distance from the auricular opening; rostral large, subrectangular, somewhat rugose, partially divided by a cleft from above, which forks near the middle of the scale; nostril surrounded by rostral (which enters it broadly), first labial (usually), two or three postnasals and enlarged supranasal; latter broadly in contact with rostral but separated from its fellow by two or three scales; ten to twelve upper labials, ten or eleven lower labials; mental large, regularly triangular, followed by a pair of chin shields broadly in contact with first labial and with each other; a slightly enlarged scale separating them from second

labial; usually a second pair of small chin shields, in contact with first pair and with each other; granules on throat small, increasing slightly in size toward labials; region behind nostrils depressed, forming a "nose;" snout depressed above, the granules here larger than those on occiput or body; body covered above with minute granules intermixed with about twenty rows of enlarged (sometimes keeled) tubercles; tail with rows of tubercles marking caudal annulations; belly covered with small, cycloid, imbricating scales; lower lateral fold with an almost continuous series of slightly enlarged scales, sometimes with enlarged scattered tubercles; about sixty rows of ventral scales across the belly; males with preanal pores in two parallel series in a deep longitudinal groove, bordered by three rows of enlarged scales, of which the outer are smaller; a small group of slightly enlarged scales in outer femoral region; three or four strongly enlarged tubercles at base of tail; females with a series of similarly enlarged preanal scales without pores, sometimes with a slight groove filled in with minute granules; legs long, hind leg reaching axilla or beyond; digits strong, somewhat depressed at the base, remaining portion strongly compressed; transverse plates under toe not or but slightly differentiated in basal portion.

Dorsal colour is yellowish brown traversed with several brown, irregular, darker-edged bands, but may range to darker variants and near black; a distinct brownish line from snout through eye which usually joins its fellow on the occiput; labials spotted with yellow; belly yellowish, yellowish brown, or blackish gray; tubercles above usually light, sometimes yellowish (*F. philippinicus* (Steindachner, 1867)), or:

2/ Adult maximum SVL 86 mm; with large, barely depressed head; no preanal groove; 9-12 preanal pores forming a narrow angular series in a distinct hollow or pre-cloacal pit, separated from 6-9 femoral pores in larger femoral scales of the boundary (in males) otherwise known as an interspace; a sharp boundary of scale size in thigh between large ventral scales and posterior granular scales; largest subdigital of basal phalanges is four times as adjacent scales; 17-23 subdigital scales on fourth toe; 40-58 mid-ventral scale rows between lateral folds; irregular dark crossbands or blotches on the dorsum. Tail covered below with enlarged transverse scales (*F. baluensis* (Mocquard, 1890), *F. ingeri* (Hikida, 1990), *F. yoshii* (Hikida, 1990)), or:

3/ As for "2" but with adult maximum SVL of 100 mm; males without femoral pores; males with 12 preanal pores forming a wide angular series (*F. matsuii* (Hikida, 1990)), or:

4/ Head slightly flattened, moderately large, with a shallow depression delineating supraorbital regions and continuing on the snout; depressed area behind nostrils not prominent; eye comparatively small, its diameter little less than half the length of the snout; distance of eye to auricular opening slightly less than distance of eye to nostril; height of head in occipital region equal to length of snout; rostral subquadrangular, with a suture entering above, bifurcating a little above the middle of the scale; nostril bounded by three or four postnasals, the first labial usually, the rostral, and a supranasal; latter rather large, in contact with rostral, separated from its fellow by one or two small internasals; twelve to fourteen upper labials with a row of rather enlarged keeled scales above; ten to thirteen lower labials; mental large, triangular, with a pair of much enlarged chin shields bordering it behind; these are also in contact with each other and with first labial, but separated from second labial by an enlarged scale; second pair of chin shields frequently present, of variable size, usually small, in contact with each other and with first pair; snout covered with granules slightly larger than those on occiput or body; body covered with minute granules intermixed with large, round, trihedral tubercles in fourteen to sixteen irregular longitudinal rows; tail covered above with small uniform granules arranged in transverse rows; at the base a few transverse rows of tubercles marking annulations; granules on neck small, increasing a little in size toward labials; belly with cycloid, imbricating scales, fifty to sixty between the lateral skin folds, which run from axilla to groin; tail below with somewhat larger scales in irregular transverse rows; males with a narrow angular series of four to six (very rarely seven) preanal pores inclosing a distinct groove bordered by two or three rows of

enlarged scales rapidly diminishing in size (none in females); scales immediately in front of anus small; females with a distinctly differentiated series of four to six preanal scales bordered with larger scales; no femoral pores; lateral skin fold without, or with only very small, tubercles; digits moderately compressed, the plates under digits well differentiated at base, about eighteen to twenty under longest toe. Dorsum with light brown to black-brown above, with four or five broad, irregular, darker brown spots or bands, usually with darker edges; tail marked with darker and lighter annulations; yellow to light brown or grayish below; tubercles above usually lighter; head reticulated with darker brown (*F. annulatus* (Taylor, 1915), *F. jambangan* (Welton, Siler, Diesmos and Brown, 2010), *F. taubatorum* (Welton, Siler, Diesmos and Brown, 2009)), or:

5/ Head large, oviform, with a depressed area above delineating supraorbital regions and continuing some distance on the snout; depressed areas behind nostrils giving the appearance of a "nose;" eye very large, its diameter only slightly less than its distance from nostril, which equals distance of eye to auricular opening; depth of head in occipital region equals length of snout; auricular opening obliquely oval to triangular, greatest diameter equal to one-third the diameter of eye; rostral large, much wider than high, subrectangular, broadly entering nostril, deeply notched above, almost surrounding an "inter-rostral" scale, which is usually present but of varying size; bounded behind by two supranasals; the latter separated by one or two internasals; nostril bounded by rostral, first labial, two postnasals, and a supranasal; ten to twelve upper labials, rather roughened with a row of keeled scales immediately above; eleven lower labials; mental triangular, large; a pair of large chin shields bordering mental, much longer than wide, in contact with first labial and a somewhat enlarged scale on the side, sometimes two or three other enlarged scales following; scales on snout, especially those in front of eye, largest; scales on chin and throat small, granular, growing larger toward labials; body above with minute granules intermingled with eighteen to twenty irregular rows of enlarged, conical, or trihedral tubercles of varying sizes; those on tail arranged in transverse rows, marking annulations, but disappearing about halfway back on tail; three or four enlarged tubercles on each side of base of tail; abdomen limited by a skin fold on which is a row of tubercles; ventral scales larger, imbricate, in forty-six to fifty longitudinal rows; preanal region with a large area of much-enlarged scales with two or three rows of enlarged femoral scales; males and females with preanal and femoral pores; preanal pores in a broadly angular series, eight to eleven altogether; femoral pores widely separated from the former, eight to eleven on each side; those in females much smaller but visible; digits depressed basally and compressed, the remaining part each with a well-defined crook; subdigital lamellae well defined, 25-27 under the longest toe; tail rather cylindrical, tapering, no wide or transverse plates below.

Dorsal colour is grayish above with broad, irregular, dark brown crossbands; tail above annulated with broad, dark brown to black rings, separated by narrow, cream-white to grayish brown bands; a broad brown band from snout through eye to occiput; a lighter line above and below this; upper light line usually curving and meeting its fellow on the occiput; labials darker, spotted with yellowish; younger specimens much darker than older specimens, with markings more strongly contrasted (*F. agusanensis* (Taylor, 1915), *F. gubaot* (Welton, Siler, Linkem, Diesmos and Brown, 2010), *F. mawanwa* (Welton, Siler, Linkem, Diesmos and Brown, 2010), *F. sumuroi* (Welton, Siler, Linkem, Diesmos and Brown, 2010)), the preceding (1-5) all being species within the nominate subgenus (*Facileocultatur* subgen. nov.), or:

6/ A species within *Tetendituguini* *tribe* nov. with an angular series of 5 to 8 preanal pores; 8 to 9 femoral pores in the males (absent in females); no ventro-lateral fold and a distinctive pattern of 3 light crossbands between the level of the axilla and the groin (*F. redimiculus* (King, 1962)), or:

7/ Small, low, conical, unkeeled body tubercles; tubercles absent from forelimbs and posterior to base of tail; 45-51 ventral scales across the belly; transversely enlarged, median subcaudal scales; proximal subdigital lamellae transversely expanded; abrupt



transition between the large posterior and small ventral femoral scales; no enlarged femoral scales or pores; presence of a preanal groove; enlarged preanal scales; presence of preanal pores; faint, lightly colored reticulate pattern on top of head; body banded as an adult (*F. aurens* (Grismer, 2005)), or:

8/ Maximum SVL of 100 mm; 10-13 supralabials; 8-11 infralabials; weak tuberculation on body; no tubercles on the ventral surface of forelimbs, gular region, or ventrolateral folds; 33-54 paravertebral tubercles; 13-15 longitudinal tubercle rows; 33-42 ventral scales; 19-22 subdigital lamellae on fourth toe; 5 femoro-preanal pores; enlarged median row of transverse scales; shallow preanal groove in males; 5-8 dark dorsal body bands; dark body bands as wide as or slightly wider than interspaces; no rostral chevron; no white line edging the body bands and nuchal loop; no scattered white tubercles on the dorsum; nine dark caudal bands on original tail (*F. muluensis* (Davis, Bauer, Jackman, Nashriq and Das, 2019)); the preceding three species (6-8) being the composition of the subgenus *Purpuraoculus subgen. nov.*

Perry Wood and Luke Welton claimed in 2021 to be working on naming various well-known and yet currently unnamed Philippine taxa within this genus and so I have deferred doing so here.

**Distribution:** Philippines and areas to the south including Borneo and adjacent islands.

**Etymology:** The genus name *Facileocclutatur gen. nov.* comes from the Latin words "*facile occultatur*" which means "easily hidden" in reflection of the fact that most species have cryptic colouration, making them hard to find and therefore easily hidden.

**Content:** *Facileocclutatur philippinicus* (Steindachner, 1867) (type species); *F. agusanensis* (Taylor, 1915); *F. annulatus* (Taylor, 1915); *F. aurens* (Grismer, 2005); *F. baluensis* (Mocquard, 1890); *F. gubaot* (Welton, Siler, Linkem, Diesmos and Brown, 2010); *F. ingeri* (Hikida, 1990); *F. jambangan* (Welton, Siler, Diesmos and Brown, 2010); *F. mamananwa* (Welton, Siler, Linkem, Diesmos and Brown, 2010); *F. matsuii* (Hikida, 1990); *F. muluensis* (Davis, Bauer, Jackman, Nashriq and Das, 2019); *F. redimiculus* (King, 1962); *F. sumuroi* (Welton, Siler, Linkem, Diesmos and Brown, 2010); *F. tautbatorum* (Welton, Siler, Diesmos and Brown, 2009); *F. yoshii* (Hikida, 1990).

#### **PURPURAOCULUS SUBGEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:1F4FD39D-377F-4C42-8D38-A8BD507F63CF**

**Type species:** *Cyrtodactylus muluensis* Davis, Bauer, Jackman, Nashriq and Das, 2019.

**Diagnosis:** The species within the subgenus *Purpuraoculus subgen. nov.*, being the only subgenus other than the nominate subgenus within *Facileocclutatur gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following three unique combinations of characters:

1/ A species within Tetenditnguini *tribe nov.* with an angular series of 5 to 8 preanal pores; 8 to 9 femoral pores in the males (absent in females); no ventro-lateral fold and a distinctive pattern of 3 light crossbands between the level of the axilla and the groin (*F. redimiculus* King, 1962), or:

2/ Small, low, conical, unkeeled body tubercles; tubercles absent from forelimbs and posterior to base of tail; 45-51 ventral scales across the belly; transversely enlarged, median subcaudal scales; proximal subdigital lamellae transversely expanded; abrupt transition between the large posterior and small ventral femoral scales; no enlarged femoral scales or pores; presence of a preanal groove; enlarged preanal scales; presence of preanal pores; faint, lightly colored reticulate pattern on top of head; body banded as an adult (*F. aurens* Grismer, 2005), or:

3/ Maximum SVL of 100 mm; 10-13 supralabials; 8-11 infralabials; weak tuberculation on body; no tubercles on the ventral surface of forelimbs, gular region, or ventrolateral folds; 33-54 paravertebral tubercles; 13-15 longitudinal tubercle rows; 33-42 ventral scales; 19-22 subdigital lamellae on fourth toe; 5 femoro-preanal pores; enlarged median row of transverse scales; shallow preanal groove in males; 5-8 dark dorsal body bands; dark body bands as wide as

or slightly wider than interspaces; no rostral chevron; no white line edging the body bands and nuchal loop; no scattered white tubercles on the dorsum; nine dark caudal bands on original tail (*F. muluensis* Davis, Bauer, Jackman, Nashriq and Das, 2019), the preceding three species (1-3) being the composition of the subgenus *Purpuraoculus subgen. nov.*

The species within the subgenus *Facileocclutatur subgen. nov.* within the newly named genus *Facileocclutatur gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by one or other of the following five unique combinations of characters:

1/ Maximum adult SVL 90mm; tail maximum 100 mm; head rather large, not especially depressed, much longer than wide, depth of head in occipital region equal to length of snout; eye large, its distance from nostril equal to or a little greater than its distance from auricular opening; rostral large, subrectangular, somewhat rugose, partially divided by a cleft from above, which forks near the middle of the scale; nostril surrounded by rostral (which enters it broadly), first labial (usually), two or three postnasals and enlarged supranasal; latter broadly in contact with rostral but separated from its fellow by two or three scales; ten to twelve upper labials, ten or eleven lower labials; mental large, regularly triangular, followed by a pair of chin shields broadly in contact with first labial and with each other; a slightly enlarged scale separating them from second labial; usually a second pair of small chin shields, in contact with first pair and with each other; granules on throat small, increasing slightly in size toward labials; region behind nostrils depressed, forming a "nose;" snout depressed above, the granules here larger than those on occiput or body; body covered above with minute granules intermixed with about twenty rows of enlarged (sometimes keeled) tubercles; tail with rows of tubercles marking caudal annulations; belly covered with small, cycloid, imbricating scales; lower lateral fold with an almost continuous series of slightly enlarged scales, sometimes with enlarged scattered tubercles; about sixty rows of ventral scales across the belly; males with preanal pores in two parallel series in a deep longitudinal groove, bordered by three rows of enlarged scales, of which the outer are smaller; a small group of slightly enlarged scales in outer femoral region; three or four strongly enlarged tubercles at base of tail; females with a series of similarly enlarged preanal scales without pores, sometimes with a slight groove filled in with minute granules; legs long, hind leg reaching axilla or beyond; digits strong, somewhat depressed at the base, remaining portion strongly compressed; transverse plates under toe not or but slightly differentiated in basal portion.

Dorsal colour is yellowish brown traversed with several brown, irregular, darker-edged bands, but may range to darker variants and near black; a distinct brownish line from snout through eye which usually joins its fellow on the occiput; labials spotted with yellow; belly yellowish, yellowish brown, or blackish gray; tubercles above usually light, sometimes yellowish (*F. philippinicus* (Steindachner, 1867)), or:

2/ Adult maximum SVL 86 mm; with large, barely depressed head; no preanal groove; 9-12 preanal pores forming a narrow angular series in a distinct hollow or pre-cloacal pit, separated from 6-9 femoral pores in larger femoral scales of the boundary (in males) otherwise known as an interspace; a sharp boundary of scale size in thigh between large ventral scales and posterior granular scales; largest subdigital of basal phalanges is four times as adjacent scales; 17-23 subdigital scales on fourth toe; 40-58 mid-ventral scale rows between lateral folds; irregular dark crossbands or blotches on the dorsum. Tail covered below with enlarged transverse scales (*F. baluensis* (Mocquard, 1890), *F. ingeri* (Hikida, 1990), *F. yoshii* (Hikida, 1990)), or:

3/ As for "2" but with adult maximum SVL of 100 mm; males without femoral pores; males with 12 preanal pores forming a wide angular series (*F. matsuii* Hikida, 1990), or:

4/ Head slightly flattened, moderately large, with a shallow depression delineating supraorbital regions and continuing on the snout; depressed area behind nostrils not prominent; eye comparatively small, its diameter little less than half the length of

the snout; distance of eye to auricular opening slightly less than distance of eye to nostril; height of head in occipital region equal to length of snout; rostral subquadrangular, with a suture entering above, bifurcating a little above the middle of the scale; nostril bounded by three or four postnasals, the first labial usually, the rostral, and a supranasal; latter rather large, in contact with rostral, separated from its fellow by one or two small internasals; twelve to fourteen upper labials with a row of rather enlarged keeled scales above; ten to thirteen lower labials; mental large, triangular, with a pair of much enlarged chin shields bordering it behind; these are also in contact with each other and with first labial, but separated from second labial by an enlarged scale; second pair of chin shields frequently present, of variable size, usually small, in contact with each other and with first pair; snout covered with granules slightly larger than those on occiput or body; body covered with minute granules intermixed with large, round, trihedral tubercles in fourteen to sixteen irregular longitudinal rows; tail covered above with small uniform granules arranged in transverse rows; at the base a few transverse rows of tubercles marking annulations; granules on neck small, increasing a little in size toward labials; belly with cycloid, imbricating scales, fifty to sixty between the lateral skin folds, which run from axilla to groin; tail below with somewhat larger scales in irregular transverse rows; males with a narrow angular series of four to six (very rarely seven) preanal pores inclosing a distinct groove bordered by two or three rows of enlarged scales rapidly diminishing in size (none in females); scales immediately in front of anus small; females with a distinctly differentiated series of four to six preanal scales bordered with larger scales; no femoral pores; lateral skin fold without, or with only very small, tubercles; digits moderately compressed, the plates under digits well differentiated at base, about eighteen to twenty under longest toe. Dorsum with light brown to black-brown above, with four or five broad, irregular, darker brown spots or bands, usually with darker edges; tail marked with darker and lighter annulations; yellow to light brown or grayish below; tubercles above usually lighter; head reticulated with darker brown (*Fannulatus* (Taylor, 1915), *F. jambangan* (Welton, Siler, Diesmos and Brown, 2010), *F. tautatorum* (Welton, Siler, Diesmos and Brown, 2009)), or:

5/ Head large, oviform, with a depressed area above delineating supraorbital regions and continuing some distance on the snout; depressed areas behind nostrils giving the appearance of a "nose;" eye very large, its diameter only slightly less than its distance from nostril, which equals distance of eye to auricular opening; depth of head in occipital region equals length of snout; auricular opening obliquely oval to triangular, greatest diameter equal to one-third the diameter of eye; rostral large, much wider than high, subrectangular, broadly entering nostril, deeply notched above, almost surrounding an "inter-rostral" scale, which is usually present but of varying size; bounded behind by two supranasals; the latter separated by one or two internasals; nostril bounded by rostral, first labial, two postnasals, and a supranasal; ten to twelve upper labials, rather roughened with a row of keeled scales immediately above; eleven lower labials; mental triangular, large; a pair of large chin shields bordering mental, much longer than wide, in contact with first labial and a somewhat enlarged scale on the side, sometimes two or three other enlarged scales following; scales on snout, especially those in front of eye, largest; scales on chin and throat small, granular, growing larger toward labials; body above with minute granules intermingled with eighteen to twenty irregular rows of enlarged, conical, or trihedral tubercles of varying sizes; those on tail arranged in transverse rows, marking annulations, but disappearing about halfway back on tail; three or four enlarged tubercles on each side of base of tail; abdomen limited by a skin fold on which is a row of tubercles; ventral scales larger, imbricate, in forty-six to fifty longitudinal rows; preanal region with a large area of much-enlarged scales with two or three rows of enlarged femoral scales; males and females with preanal and femoral pores; preanal pores in a broadly angular series, eight to eleven altogether; femoral pores widely separated from the former, eight to eleven on each side; those in females much smaller but visible; digits depressed basally and

compressed, the remaining part each with a well-defined crook; subdigital lamellae well defined, 25-27 under the longest toe; tail rather cylindrical, tapering, no wide or transverse plates below. Dorsal colour is grayish above with broad, irregular, dark brown crossbands; tail above annulated with broad, dark brown to black rings, separated by narrow, cream-white to grayish brown bands; a broad brown band from snout through eye to occiput; a lighter line above and below this; upper light line usually curving and meeting its fellow on the occiput; labials darker, spotted with yellowish; younger specimens much darker than older specimens, with markings more strongly contrasted (*F. agusanensis* (Taylor, 1915), *F. gubaot* (Welton, Siler, Linkem, Diesmos and Brown, 2010), *F. mawanwa* (Welton, Siler, Linkem, Diesmos and Brown, 2010), *F. sumuroi* (Welton, Siler, Linkem, Diesmos and Brown, 2010), the preceding (1-5) all being species within the nominate subgenus (*Facileocclatur* subgen. nov.).

**Distribution:** The three locally restricted species in this subgenus occur in Sarawak, (Malaysia), Pulau Aur, Johor (West Malaysia) and Palawan Island in the Philippines.

**Etymology:** The name *Purpuraoculus* subgen. nov. derived from the Latin "*Purpura oculus*" which means purple eye, is in reflection of the orange-brown-red-purple eye seen in most living specimens in the genus.

**Content:** *Facileocclatur* (*Purpuraoculus*) *muluensis* (Davis, Bauer, Jackman, Nashriq and Das, 2019) (type species); *F. (Purpuraoculus) redimiculus* (King, 1962); *F. (Purpuraoculus) aurensis* (Grismer, 2005).

#### **FASCIACORPUS GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:71FC4536-5F9B-408A-BDA2-47708F36CC61**

**Type species:** *Cyrtodactylus sadansinensis* Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017.

**Diagnosis:** The species within the genus *Fasciacorpus* gen. nov. are readily separated from all other species within Tetenditnguini tribe nov. as already formally described in this paper and relied upon in this description by the following unique combination of characters:

8-11 supralabial scales; seven or eight infralabial scales; dorsal body tubercles low, weakly keeled, not extending beyond base of tail; 25-31 paravertebral tubercles; 9-14 longitudinal rows of body tubercles; 31-41 ventral scales; 20-24 subdigital lamellae on the fourth toe; 14-34 enlarged femoral scales; femoral scales usually equal in size; 8-21 femoral pores in males; 9-15 enlarged preanal scales; 5-14 preanal pores in males; two or three post-preanal scale rows; medial subcaudal scales three times wider than long, extending onto the lateral subcaudal region; top of head bearing dark, mottled pattern with no yellow reticulum; no anterior, azygous notch in nuchal loop; dark band on nape; 4-6 regularly shaped body bands with lightened centres, not edged with light tubercles; anterodorsal margins of thighs and brachia pigmented; ventrolateral fold not whitish; 6-11 light caudal bands not encircling tail; 7-10 dark caudal bands and maximum adult SVL of 69.6-73.9 mm (taken from Grismer *et al.* 2017).

There are further undescribed species within this genus.

**Distribution:** *Fasciacorpus* gen. nov. is restricted to the lowland flood plain of the Salween River Basin in Mon State, Myanmar (Burma).

**Etymology:** The new genus name *Fasciacorpus* is taken directly from the Latin words "fascia corpus" which means body band/s, as is the dorsal colouration of the species within the genus.

**Content:** *Fasciacorpus sadansinensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017) (type species); *F. pharbaungensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017); *F. sanpelensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017).

#### **BRUNNEISOCULURA GEN. NOV.**

**LSIDURN:LSID:ZOOBANK.ORG:ACT:FEE208F0-82A4-413E-9CA8-B1E4402DA3EB**

**Type species:** *Cyrtodactylus yathepyanensis* Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017.



**Diagnosis:** The species within the genus *Brunneisoculura gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

9-11 supralabials; 7-9 infralabials; dorsal body tubercles raised, moderately to strongly keeled, extending beyond base of tail; 13-19 longitudinal rows of body tubercles; 26-33 paravertebral tubercles; 30-38 ventral scales; 21-24 subdigital lamellae; 12-37 enlarged femoral scales, proximal scales one-half to one-third the size of distal scales; 12-14 femoral pores in males; 9-13 enlarged preanal scales; 2-6 preanal pores in males; three or four post-preanal scale rows; transverse caudal scales two or three times as wide as long, extending onto lateral surface of tail; top of head bearing dark, mottled pattern; no anterior, azygous notch in nuchal loop; band on nape; 4-6 regularly shaped body bands lacking or with only faint, lightened centres, edged with light tubercles; anterodorsal margins of thighs darkly pigmented; ventrolateral folds not whitish; 13-16 light caudal bands not completely encircling the tail; 13-17 dark caudal bands and maximum SVL 72.3-78.0 mm (taken from Grismer *et al.* 2017).

There are further undescribed species within this genus.

**Distribution:** *Brunneisoculura gen. nov.* occurs on the lowland flood plain of the Salween River Basin of Kayin and Mon states Myanmar (Burma).

**Etymology:** The new genus name *Brunneisoculura* comes directly from the Latin words *brunneis* *ocularis* which means brown eye, in reflection of the brown iris of specimens in this genus. The spelling of the genus name *Brunneisoculura* is a deliberate modification of the Latin to avoid risk of potential homonymy.

**Content:** *Brunneisoculura yathepyanensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017) (type species); *B. linnoensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017); *B. sadanensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017).

#### LINGUAROSEA GEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:87B23A81-7D21-4717-BC3D-4C317F7E950E

**Type species:** *Gymnodactylus sermowaiensis* De Rooij, 1915.

**Diagnosis:** The species within the genus *Linguarosea gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Lateral fold with slightly enlarged round tubercles, lacking enlarged femoral scales and in males lacking femoral/preanal pores.

Ventral scales slightly larger, but ventral scales small, cycloid, imbricate, smooth, 45 across the middle of the belly. Head large, broader than the body; snout longer than the diameter of the orbit, which equals its distance from the ear opening; forehead and lores concave; ear-opening oval, vertical, about one third the diameter of the eye. Head granular, the granules enlarged on the snout, with few very small tubercles on the temples. Rostral very large, twice as broad as high, subquadrangular, with median cleft above; a supranasal, separated from its fellow by two small shields, one over the other; nostril bordered by the rostral, the supranasal, the first labial and two small shields. About 14 upper and about twelve lower labials; mental triangular, a pair of larger chin-shields forming a suture behind the mental and a smaller shield on each side. Throat with very small granules. Body long and slender, covered above with small granules and small flat, roundish, feebly keeled tubercles, becoming larger on the flanks. No preanal or femoral pores; the lower surface of the thighs covered with uniform granules without enlarged scales. Tail cylindrical, tapering, covered above with uniform small flat scales, a few conical tubercles at the upper basal part; below with somewhat larger, smooth, quadrangular scales. Limbs long and slender, covered above with small granules and small keeled tubercles; digits strong, depressed at the base, which is covered below with enlarged transverse, imbricate lamellae (13 or 14 under the fourth toe), strongly compressed in the distal portion.

Dorsum is light brown, with 6 pairs of large, blackish, quadrangular spots between the fore and hind limbs, which may form bands in some specimens or species. The interspaces are light with paired, smaller dark spots. A V-shaped band from eye to eye, an M-shaped one on the base of the tail. Head with a dark network of markings, yellow-brown or orange-brown; iris is bluish-grey with brownish tinge in centre, tongue usually bright pink; limbs with small dark cross bands. Tail with 6 broad, black cross bands, the interspaces narrower, light, with a small blackish cross line. Lower surface dirty white, each scale with a number of minute black dots. Adult SVL to 100 mm, tail to 130 mm (modified from De Rooij 1915).

**Distribution:** *Linguarosea gen. nov.* occurs at lower elevations north of the central Cordillera in New Guinea as well as Karkar Island and Manus Island.

**Etymology:** The new genus name *Linguarosea* comes directly from the Latin words "*lingua rosea*" which literally means "pink tongue", which seems to be a diagnostic feature of all species in the genus (in life).

**Content:** *Linguarosea sermowaiensis* (De Rooij, 1915) (type species); *L. atremus* (Kraus and Weijola, 2019); *L. crustulus* (Oliver, Hartman, Turner, Wilde, Austin and Richards, 2020).

#### ALBATUBERCULA GEN. NOV.

LSIDURN:LSID:ZOOBANK.ORG:ACT:DD4DE622-7220-4430-89B1-3D5FFB98D518

**Type species:** *Cyrtodactylus sinyineensis* Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017.

**Diagnosis:** The species within the genus *Albatubercula gen. nov.* are readily separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

8-10 supralabials; 6-8 infralabials; dorsal body tubercles raised, moderately to strongly keeled, usually extending beyond the base of the tail; 30-36 paravertebral tubercles; 13-19 longitudinal rows of body tubercles; 19-30 ventral scales; 19-22 total subdigital lamellae; enlarged femoral and preanal scales continuous; 25-36 enlarged femoral scales nearly the same size throughout; 13-36 femoral pores in males; 5-13 enlarged preanal scales; 4-9 preanal pores in males; three post-preanal scale rows; transverse, median subcaudal scales usually twice as wide as long, not extending onto lateral surface of tail; top of head bearing a dark mottled pattern; no anterior azygous notch in nuchal loop; dark band on nape; five or six variably shaped body bands generally lacking lightened centres; anterodorsal margins of thighs and brachia darkly pigmented; 9-11 light caudal bands encircling tail; 9-11 dark caudal bands and adult maximum SVL 69.3-91.6 mm (modified from Grismer *et al.* 2017).

There are further undescribed species within this genus.

**Distribution:** *Albatubercula gen. nov.* occurs from the uplands of the southern section of the Shan Hills in Kayin State to the lowland flood plain of the Salween River Basin in Kayin and Mon states, all in Myanmar (Burma).

**Etymology:** The new genus name *Albatubercula* comes from the Latin words "alba tubercula" which means "white tubercles", with the scattered white tubercles on the dorsum being a diagnostic character of most species in the genus.

**Content:** *Albatubercula sinyineensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017) (type species); *A. aequalis* (Bauer, 2003); *A. amphipetraeus* (Chomdej, Suwannapoom, Pawangkhanant, Pradit, Nazarov, Grismer and Poyarkov, 2020); *A. bayinnyiensis* (Grismer, Wood, Thura, Quah, Murdoch, Grismer, Herr, Lin and Kyaw, 2018); *A. chaunghanakwaensis* (Grismer, Wood, Thura, Quah, Murdoch, Grismer, Herr, Lin and Kyaw, 2018); *A. dammathetensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017); *A. dattkyaikensis* (Grismer, Wood, Quah, Grismer, Thura, Oaks and Lin, 2020); *A. inthanon* (Kunya, Sumontha, Panitvong, Dongkumfu, Sirisamphan and Pauwels, 2015); *A. kunyai* (Pauwels, Sumontha, Keeratikiat and Phanamphon, 2014); *A.*

*maelanoi* (Grismer, Rujirawan, Termprayoon, Ampai, Yodthong, Wood, Oaks and Aowphol, 2020); *A. naungkayaingensis* (Grismer, Wood, Thura, Quah, Murdoch, Grismer, Herr, Lin and Kyaw, 2018); *A. taungwineensis* (Grismer, Wood, Quah, Grismer, Thura, Oaks and Lin, 2020); *A. variegatus* (Blyth, 1859); *A. welpyanensis* (Grismer, Wood, Thura, Zin, Quah, Murdoch, Grismer, Lin, Kyaw and Lwin, 2017).

**GRAYSONGEKKO GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:979263C2-E5A3-42D3-8B58-645B1DDAB8CF

**Type species:** *Gymnodactylus sworderi* Smith, 1925.

The species within the genus *Graysongekko gen. nov.* are readily separated from all other species within Tetenditungiini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Adult maximum SVL ranging from 69-82 mm, 8-13 supralabials, 8-10 infralabials, 32-39 paravertebral tubercles, 28-51 ventral scales; proximal subdigital lamellae transversely expanded; 16-23 subdigital lamellae on the fourth toe, 0-15 preanal pores in males; large, conical, keeled, body tubercles; tubercles present on top of head, occiput, nape, and limbs and extend posteriorly beyond base of tail; no transversely enlarged median subcaudal scales; smooth or abrupt transition between posterior and ventral femoral scales; femoral scales may or may not be enlarged; no femoral pores; preanal groove absent.

**Distribution:** *Graysongekko gen. nov.* occurs only on the Thai-Malay Peninsula south of the Isthmus of Kra of southern Thailand, with four of five described species restricted to Peninsula Malaysia.

**Etymology:** *Graysongekko gen. nov.* is named in honour of Grayson O'Conner, of Box Hill North, Victoria, Australia, owner of Grayson's Gutters and who has provided logistical services to the wildlife breeding facility of this author.

**Content:** *Graysongekko sworderi* (Smith, 1925) (type species); *G. guakanthanensis* (Grismer, Belabut, Quah, Onn, Wood and Hasim, 2014); *G. gunungsenyumensis* (Grismer, Wood, Anuar, Davis, Cobos and Murdoch, 2016); *G. quadrivirgatus* (Taylor, 1962); *G. ranongensis* (Sumontha, Pauwels, Panitvong, Kunya and Grismer, 2015); *G. tebuensis* (Grismer, Anuar, Muin, Quah and Wood, 2013).

**OBSCURAMACULA GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:996689D7-D2CE-43E1-8ABA-305EDE48B899

**Type species:** *Cyrtodactylus biordinis* Brown and McCoy, 1980.

**Diagnosis:** There is only one described species in the genus *Obscuramacula gen. nov.* and it is readily separated from all other species within Tetenditungiini *tribe nov.* as already formally described in this paper and relied upon in this description by the males having two rows of femoral pores.

It is also further separated from all other species in the Tetenditungiini *tribe nov.* by the following unique combination of characters:

Adult SVL to 100 mm; tail roughly same length as SVL; Head large, slightly depressed and covered with small conical scales. Rostral with a slight median groove. Nostrils bordered by the rostral, first labial, a single large anterior circumnasal and 2 to 3 posterior circumnasals which are often indistinguishable from the surrounding scales. Dorsally covered with very small conical scales with a series of enlarged conical granules forming more or less longitudinal rows. A distinct lateral fold. Tail slender, rounded in cross section, covered with subimbricate scales, no transversely enlarged scales on the underside. Males with a double parallel row of femoral pores, usually separated from the single preanal pore series. 60 or more femoral and preanal pores, not counting those in the double femoral series. Digits compressed distally, slender and strongly clawed.

Dorsally light to grey brown. There is a thick grey band running from the eye along the neck in a dorsolateral position, usually joining the line on the opposite side of the body at a point slightly posterior to the forelimbs. A single large dot is present on the nape of the neck. 1 to 4 smaller spots are usually present on the occiput. 2 to 3 broad, unevenly margined dark bands are present dorsally, these

bands edged posteriorly with white. The tail is banded black and white for the proximal third of its length and black for the distal portion except for the tip which is grey during the day and white at night when the gecko is active. Venter is grey-white (derived from McCoy 2006). When moving this gecko often holds its tail arched above its back.

**Distribution:** *Obscuramacula gen. nov.* is known only from Guadalcanal Island, Solomon Islands.

**Etymology:** The new genus name *Obscuramacula* derives directly from the Latin words "*Obscura macula*" meaning "dark spot" which is in reference to the dark spot present on the nape of the neck, characteristic of the sole species in this divergent genus.

**Content:** *Obscuramacula biordinis* (Brown and McCoy, 1980) (monotypic).

**VINICULATIGRIS GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:F1183753-B443-48F0-96D1-58714186689C

**Type species:** *Cyrtodactylus tigroides* Bauer, Sumontha and Pauwels, 2003.

**Diagnosis:** There is only one described species in the genus *Vinulatigris gen. nov.* and it is separated from all other species within Tetenditungiini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Slender body, largely homogeneous body scalation, low number of rows (usually 13) of small tubercles; elongate digits and tail, 8-9 preanal pores separated from series of 5-7 femoral pores in enlarged scales on each thigh (males and females), absence of preanal groove and dorsal color pattern consisting of alternating light and dark bands.

**Distribution:** *Vinulatigris gen. nov.* is found in western Thailand in the Sai Yok District near the border of Myanmar.

**Etymology:** The new genus name *Vinulatigris* comes from the Latin words "vinula tigris" which means "tiger bands", which relates to the bold tiger-like bands (patterning) on adult specimens of the sole species in the genus.

**Content:** *Vinulatigris tigroides* (Bauer, Sumontha and Pauwels, 2003) (monotypic).

**SPINAGEKKO GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:DAD9DC08-A8B5-46C3-AC53-721A3917F5D9

**Type species:** *Cyrtodactylus spinosus* Linkem, McGuire, Hayden, Setiadi, Bickford and Brown, 2008.

**Diagnosis:** There is only one described species in the genus *Spinagekko gen. nov.* and it is separated from all other species within Tetenditungiini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

A row of spines along ventrolateral body fold; six lateral rows of small, unkeeled body tubercles, with most ventral row intermixed with spines; two spines on temporal region of head; 31 spine-adorned annuli encircling original tail; tubercles on fore and hind limbs; spines on postantefemoral portion of hind limb. Additional characters distinguishing the species in this monotypic genus include: proximal subdigital lamellae transversely expanded; 19-21 subdigital lamellae on toe four; 38-44 mid body ventral scales; most scales in femoral region small, granular; 7-12 enlarged femoral series scales lacking pores; presence of pre-cloacal groove in males (absent in females); presence of pre-cloacal pores (12-13) in a chevron-shaped groove; subcaudals not transversely expanded; dorsally with three chevron-shaped dark bands on a grayish-brown background (derived from Linkem *et al.*, 2008).

**Distribution:** *Spinagekko gen. nov.* is confined to Sulawesi (Indonesia).

**Etymology:** The new genus name *Spinagekko* comes directly from the Latin words "spina gekko" which means "spiny gecko", in relation to the spines on various parts of the lizard's body.

**Content:** *Spinagekko spinosus* (Linkem, McGuire, Hayden, Setiadi, Bickford and Brown, 2008) (monotypic).



**MACULATUMETGLOBUM GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:BD6EFF7B-9320-4518-9FAF-09FE755D99D8

**Type species:** *Cyrtodactylus wangkulangkulae* Sumontha, Pauwels, Suwannakarn, Nutatheera and Sodob, 2014.

**Diagnosis:** There is only one described species in the genus *Maculatametglobum gen. nov.* and it is separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

Adult SVL up to 75 mm, with tail about 1.3 times this; unkeeled dorsal tubercles arranged in 10 regular longitudinal rows at midbody; dorsal tubercles occurring from shoulder region onto base of tail, absent on postocular region, crown, occiput and limbs; 38 midbody scale rows across belly between ventrolateral skin folds; median subcaudal scales transversely enlarged; series of enlarged femoral scales separated from enlarged preanal scales by a diastema; absence of femoral and preanal pores; absence of preanal groove; complex blotched and banded dorsal pattern including four dark bands between limbs insertions; tail with 9 light rings; bluish grey iris.

**Distribution:** Satun Province, southern Thailand.

**Etymology:** The new genus name *Maculatametglobum* is taken directly from the Latin words "maculatum et globum" meaning blotched and banded, with reference to the patterning on the dorsum and flanks of the only species in the genus.

**Content:** *Maculatametglobum wangkulangkulae* (Sumontha, Pauwels, Suwannakarn, Nutatheera and Sodob, 2014) (monotypic).

**TUBERCULATASINUS GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:9C05553D-4B83-49B7-A4A3-253637BDBE6D

**Type species:** *Cyrtodactylus stresemanni* Rösler and Glaw, 2008.

**Diagnosis:** There is only one described species in the genus *Tuberculatasinus gen. nov.* and it is separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

13 supralabials; 10 infralabials; 13 longitudinal rows of dorsal tubercles; conical tubercles along the lateral skin folds; 63 ventrals between the lateral skin folds; a deep, narrow preanal groove; femoral scales and femoral pores not enlarged; subcaudals not enlarged; tubercles on dorsal and ventral side of the tail; vertebral stripe grey-brown; three pairs of brown-olive, elongated markings on the back; tail with distinct bands (modified from Rösler and Glaw, 2008).

**Distribution:** Perak Province, (Peninsula) Malaysia.

**Etymology:** The new genus name *Tuberculatasinus* is taken directly from the Latin words "tuberculata sinus" that means "tuberculate folds" with reference to the tubercles on the lateral folds of the only species in this genus.

**Content:** *Tuberculatasinus stresemanni* (Rösler and Glaw, 2008) (monotypic).

**FASCIAINCOMPLETUM GEN. NOV.**

LSIDURN:LSID:ZOOBANK.ORG:ACT:22329826-DB7C-4CD5-8689-74ECC7B97566

**Type species:** *Cyrtodactylus thuongae* Phung, Van Schingen, Ziegler and Nguyen, 2014.

**Diagnosis:** There is only one described species in the genus *Fasciaincompletum gen. nov.* and it is separated from all other species within Tetenditnguini *tribe nov.* as already formally described in this paper and relied upon in this description by the following unique combination of characters:

1/ Dorsal pattern consisting of irregular blotches on dorsum and occiput; nuchal loop sometimes interrupted medially; 2/ Preanal pore absent or one in males; 3/ Femoral pore series separated from preanal pore series, 0-3 on each thigh in males; 4/ Ventrals in 29-44 longitudinal rows at midbody; 5/ Lateral skin folds present, without interspersed tubercles; 6/ Dorsal tubercles in 16-18 irregular rows; 7/ Enlarged femoral scales and preanal scales present; 8/ Postcloacal spurs two or three; 9/ Subcaudal scales

slightly enlarged; and 10/ Preanal groove absent; 11/ Adult maximum SVL of 78 mm (modified from Phung *et al.* 2014).

**Distribution:** Tay Ninh Province, Southern Vietnam.

**Etymology:** The new genus name *Fasciaincompletum* is taken directly from the Latin words "fascia incompletum" which means "incomplete bands", with reference to the dorsal colouration of adults in this genus, characterised by irregular blotching that tends to form incomplete bands.

**Content:** *Fasciaincompletum thuongae* (Phung, Van Schingen, Ziegler and Nguyen, 2014) (monotypic).

**CONCLUSIONS**

The preceding split up of *Cyrtodactylus* Gray, 1827 *sensu lato* (Tetenditnguini *tribe nov.*) was inevitable and overdue. The main reason it has not been split and in spite of the overwhelming evidence produced in countless molecular and phylogenetic studies is due to three words "Wells and Wellington".

To break up *Cyrtodactylus* Gray, 1827 on any logical way, would require resurrection of other genera and pressure has been brought to bear against numerous authors, including myself, not to resurrect from synonymy and use Wells and Wellington names. Wells and Wellington (1985) proposed the name *Quantasia* for the Australian lineage within the tribe. Clearly this name would be in the first four to be used in any split of a greater *Cyrtodactylus*. I prefer to deal with science than petty personality hatreds and will not black-ban these authors because there is an envy against them by some of their peers.

I had no hesitation in resurrecting *Quantasia* and the other three relevant available names and to break the ice in properly classifying the relevant group of lizards.

The split of one large putative genus (*Cyrtodactylus*) into 45 genera, may seem like a wholly unjustified break up to those without knowledge of the said group. However it is fully justified on the evolutionary divergence of the groups themselves alone. Many of the newly erected genera still have in excess of 20 named species, which are by no means small genera in the context of existing reptile taxonomy and nomenclature for other geckoes or even more widely.

While there are several monotypic genera for divergent species, even if including these in the genera count within the tribe, one finds an average of more than 7 species in each of the 45 genera. Noting that it is likely that in terms of the tribe Tetenditnguini *tribe nov.* there are probably as many or more undescribed species than currently named forms, this will in turn mean the number average for each genus is likely to sit at about 15 or more for most of the genera, indicating in crude terms that the split is not excessive. Stripping out the divergent monotypic forms, the average species count for each newly erected genus will still probably end up in excess of 20 by the time all unnamed forms are formally described. Genus level splits have also been kept at over 10 MYA divergences where data is available and in a small number of cases where molecular data has not been published or is otherwise unavailable, genera have only been created for forms that are clearly exceptionally divergent.

In any event, should it be viewed that genus-level distinction is unpalatable in the short term, identification of species groups as subgenera is clearly more preferable to lumping all into a widely divergent assemblage called "*Cyrtodactylus*". The scientific basis of the preceding is also made out convincingly in the references cited, including the molecular studies cited already and to that extent, it is appropriate to note that those who will probably claim otherwise (the Wüster gang and associates) (e.g. Rhodin *et al.* 2015), will be making false and baseless claims. The south-east Asia and west Pacific region is a growth zone in terms of human population and environmental destruction. The long term risk to the survival of many species within Tetenditnguini *tribe nov.* is real and to that extent it is important that not all within the tribe be treated as mere variants of common widespread forms, with the corresponding view that they need not be conserved at the local level.

18 previously unnamed species formally named herein are but the tip of the iceberg in terms of unnamed forms. One hopes that

those claiming to be working on unnamed species, which I have abstained from formally naming herein, do in fact comply with Appendix A2 of the *International Code of Zoological Nomenclature*, as failure to do so, may put the ultimate survival of some these forms at risk.

#### TAXONOMIC VANDALISM WITH RESPECT OF THE GECKOS.

Some of the authors of Grismer *et al.* (2021a) have a shady background of stealing the works of others and renaming taxa in direct breach of the *International Code of Zoological Nomenclature*. Taxonomic vandalism is best defined as the deliberate renaming of a previously named entity (e.g. a species), with full knowledge that the new name is a synonym **combined** with the ongoing use of the newer name in preference to the correct ICZN name and recklessly attempting to get others to do likewise.

It is this second element of the action that is critically important in terms of separating taxonomic vandalism from the otherwise (also not good) practice of bad science in the form of unnecessarily creating synonym names, but then not improperly trying to foist this new name onto the scientific community after the first error is made known.

The relevant authors have cited the discredited blog of Kaiser *et al.* (2013), superseded by Rhodin *et al.* (2015), which was rejected wholesale by the ICZN in 2000 (ICZN 2021). At issue were close to 100 renamed taxa, the majority of which had been named by myself (Hoser) over the previous 2 decades.

Relevant authors of Grismer *et al.* (2021a) had by 2021 illegally renamed about 17 species or genera previously named by myself in anticipation of a plenary ruling by the ICZN formally squashing those names published by myself prior (as stated explicitly in Grismer *et al.* 2021, who cited as justification for their actions the discredited documents Kaiser *et al.* 2013; Kaiser 2014 and Wood *et al.* 2020b). The ICZN refused to issue their wanted plenary order against the Hoser publications, by nearly unanimously voting against the proposal of Rhodin *et al.* (2015), which was aggressively supported by Grismer and some of his listed co-authors (ICZN 2021).

Hence the synonym names coined by Grismer and co-authors prior to 2021 should not be used unless subjective synonyms are demonstrated to be different taxa to the earlier named forms, which in every case, is extremely unlikely.

Species and genera illegally renamed by this specific cohort (as opposed to all the thieves using the so-called "Kaiser *et al.* (2013) veto" to overwrite earlier authors names), and the justification given by the authors for their illegal action in each case (where known or otherwise) is given as follows:

Incorrect illegally coined junior synonym:

*Archipelagekko* Wood *et al.* 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Extentusventersquamus* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Japonigekko* Wood *et al.* 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Sparsuscolotes* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Rhacogekko* Wood *et al.* 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Alexteescolotes* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Sundagekko* Wood *et al.* 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Scelotretus* Fitzinger, 1843.

Incorrect illegally coined junior synonym:

*Ptychozoon cicakterbang* Grismer *et al.* 2019.

Authors over-written Hoser names previously. See for *Mopanveldophis* (Figuero *et al.*, 2016).

Correct ICZN name is *Cliveevattcolotes* (or alternatively *Ptychozoon*) *steveteesi* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Gehyra arnhemica* Oliver *et al.* 2020.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Phryia paulhorneri* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus aignanus* Kraus, 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Shireenhosergecko jarradbinghami* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus kwasnickae* Kraus, 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Adelynhosergecko brettbarnetti* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus mitchelli* Kraus, 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Adelynhosergecko stevebennetti* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus pollostos* Karkkainen, Richards, Kraus, Tjaturadi, Krey and Oliver 2020.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Adelynhosergecko sloppi* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus sacrolineatus* Kraus and Oliver, 2020.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Bobbottomcolotes bobbottomi* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Lepidodactylus zweifeli* Kraus, 2019.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Bobbottomcolotes potens* Hoser, 2018.

Incorrect illegally coined junior synonym:

*Oedura nesos* Oliver *et al.* 2020.

Cited Kaiser *et al.* (2013) as a basis to illegally ignore rules of ICZN's code.

Correct ICZN name is *Oedura bulliardi* Hoser, 2017.

Incorrect illegally coined junior synonym:

*Oedura luritja* Oliver and McDonald, 2016.

Falsely alleged Wells and Wellington, 1985 name not code compliant.

Correct ICZN name is *Oedura greeri* Wells and Wellington, 1985.

Ironically, Grismer *et al.* have also themselves been victims of the Kaiser anarchy, because the thieves like to steal from one another! See the example that follows:



Incorrect illegally coined junior synonym:

*Cyrtodactylus klakahensis* Hartmann, Mecke, Kieckbusch, Mader and Kaiser, 2016.

No reason given to overwrite earlier name, other than authorship of Kaiser *et al.* (2013).

Correct senior synonym and ICZN name is *Cyrtodactylus petani* Riyanto, Grismer and Wood, 2015.

**In summary, should Grismer or associates illegally coin duplicate names for the genera named within this paper, they should not be used.**

**THE WÜSTER PROBLEM: TAXONOMIC VANDALISM, NOMENCLATURAL ANARCHY AND OTHER DISHONEST PRACTICES ARE AN EXISTENTIAL THREAT TO THE CODE.**

*“Bad taxonomy is easily dealt with by way of synonymy. Good taxonomy is dealt with by usage of correct nomenclature.”*

For over 200 years, this has been how the Linnaean system of classification and nomenclature has worked. In the case of personality clashes including by way of short term boycotts of authors and their names, these have been beaten back by adherence to the rules of the system by almost 100% of the scientific community.

The recent case of myself (Hoser) versus Wolfgang Wüster *et al.* (Case 3601) (Hoser 2013b), has been improperly characterised in *BZN* by the Wüster gang and his followers as a battle of scientists (his side), versus (alleged) non-scientists Raymond Hoser and others.

However nothing could be further from the truth.

The opposite is in fact the case.

The false allegations against myself (Hoser) and other victims targeted by the Wüster gang have been varied and often conflicting over time. They have often relied on the false claim of “evidence free taxonomy” (sometimes paraphrased as taxonomic vandalism), when this very such claim is best sheeted home to Wolfgang Wüster, Hinrich Kaiser, Wulf Schleip and their small band of followers, including quite often the Lee Grismer cohort, who are best described as card carrying members of the Wüster gang of thieves.

The reality of the Wüster versus Hoser conflict is nothing more than a personality clash that Wüster let get completely out of control over a period spanning decades

Wüster’s obsessive hatred of myself, morphed into a lifelong war against me, which outran any sense of reason many years ago. Outside the ICZN, Wüster’s attacks on myself, my family and my business have been of the stuff one would expect to see in a Hollywood movie!

My family, business and myself have been subjected to armed attacks in the street, attacks on our successful educational wildlife displays business, a car smashed with axes in a car park, snakes stolen in organized raids, police militarized to make armed raids on our home and business as a result of false complaints, dozens of telephone death threats, non-stop online defamation on Facebook accusing me of bashing and raping ex-wives (I have none), false claims of animal cruelty, a Wikipedia hate page accusing me of killing my daughter (she is still alive), allegations of scientific fraud, faking data and the like, countless criminal allegations and more (Hoser 2007, 2009, 2012a-b, 2013a, 2015a-f).

Over more than 20 years this Wüster inspired war has had zero regard for any collateral damage, even if it happens to be the rules of nomenclature affecting all scientists and disciplines that reply on these rules, including zoology, wildlife conservation and so on. Unfortunately a lot of people have been duped by the ever changing claims of the Wüster cohort, including so it seems, one dissenting ICZN Commissioner, Frank Krell, who wrote a very misleading piece in *BZN* in 2021 (Krell 2021), which I will address specifically shortly.

**NON-TAXA**

In 2001, Wüster alleged that species I had formally named in the previous three years were merely “non-taxa” and therefore not worthy of being recognized. In attacking my science, which he alleged was non-existent, he said, and with a great deal of force, that the species I’d named, were simply variants of similar species and therefore should be ignored within herpetology.

This post he put on Kingsnake dot com, was then “shopped” to others to list as co-authors, to give his views “more weight” (his words). The same unedited document later appeared in the journal *Litteratura Serpenti* (Wüster *et al.* 2001).

In science and the rules of the ICZN, taxonomic freedom and the nomenclature that flows from that are paramount and to that extent, Wüster was not yet a problem for the ICZN.

That some of the species I’d named were potentially endangered, their potential non-recognition, did have conservation implications, but that was another matter.

This “strategy” of Wüster, to simply deny the existence of Hoser-named taxa, worked to a limited extent in stopping others from recognizing Hoser-named taxa or using the relevant ICZN names. That was his express intent and it was ego driven, not science based.

However by definition science is a rational assessment of facts and a search for the truth. As scientific methods improved, including molecular methods of determining species boundaries, an ever increasing number of herpetologists revisited the Hoser works and agreed that the taxa named were valid and provable as such.

Wüster even asked Ken Aplin at the Western Australian Museum and his colleague Steve Donnellan at the South Australian Museum to do DNA work to prove that the newly named Hoser species were nothing more than variants of other well-known species.

Problem was that Aplin and Donnellan found the opposite!

At that stage, Wüster had no “plan B” and so the Hoser taxa were validated and the Hoser names were the only ones available to be used.

Names such as *Acanthophis wellsei* Hoser, 1998, *Leiopython hoserae* Hoser, 2000 and *Brogghammerus* Hoser, 2014, identified obviously unique taxa and hence they moved into general usage and appeared in major texts within a few short years.

I should state here, that from day one, I had presented my findings backed up with a body of evidence, reviewed by other herpetologists. However, Wüster’s assertions to the contrary made mostly online and to the point of saturation, were believed by many. This was because at the same time he made his false claims, he also made a point of not directing readers to my papers from which they could make their own rational conclusions.

Wüster’s cohort went further and had my works or references to them “banned” from Researchgate, Inaturalist, Wikipedia, Academia, Peter Uetz’s “the reptile database” and any other sites they could attack and nobble or otherwise vandalise.

**TAXONOMIC VANDALISM**

In 2009, Wüster, as co-author engaged in his first act of taxonomic vandalism (Wallach, Wüster and Broadley 2009).

To make it clear and as already mentioned already, taxonomic vandalism, as defined here, is the deliberate renaming of a taxon combined with the act of directing others to use the junior synonym, while knowing full-well it is not the valid ICZN name.

It is not something, I, Raymond Hoser has even engaged in. However, through his fanatical posts online, Wüster has managed to convince many vaguely interested people that the words “Taxonomic Vandalism” and “Raymond Hoser” are effectively synonyms.

If you do a “Google” search for one pair of words, the other will come up.

Wüster’s cohort have also defined “Taxonomic Vandals” as “those who name scores of new taxa without presenting sufficient evidence for their finds”, (Darren Naish in an online blog), or in a similar vein elsewhere, simultaneously alleging I, Raymond Hoser is the one guilty of the charge.

Key to maintaining this charge has been making sure that third parties do not get to see the said papers of myself. To that extent, Wüster's gang, Kaiser *et al.* (2013), as amended, including Rhodin *et al.* (2015) have made a point of trying to ban or suppress readership of the Hoser papers they seek to attack.

This included Hinrich Kaiser making unlawful threats to "Researchgate" and having all pdf files of Hoser papers removed from that server.

The claim "those who name scores of new taxa without presenting sufficient evidence for their finds" is also best sheeted home to the Wüster gang, rather than myself, including for example the 17 odd taxa renamed by Grismer and that part of the Wüster gang, renamed on exactly the same evidence earlier presented by myself.

In terms of science and taxonomy, one needs look no further than the taxonomic history of the White-lipped Python, genus *Leiopython*.

Treated as a single species for over a century, Hoser (2000) split it into two.

After denying the obvious for 8 years Wüster and Schleip, "created" three more species out of thin air for the genus *Leiopython* (Schleip, 2008), also belatedly admitting Hoser had been correct in his 2000 paper, so they chose to finally recognize the Hoser (2000) species as well..

In the abstract of his paper, Schleip falsely claimed to have DNA evidence to support his new species, but in the paywall hidden paper, there was not a shred of any such evidence.

Quite correctly I pointed this out and labelled Schleip and Wüster as fraudulent (Hoser 2009).

None of this stopped Wüster and Schleip selling their names like a used car salesman to all the reptile databases and indexes, including Peter Uetz's "The Reptile Database", which is effectively controlled by Wüster. The fictitious Schleip species were listed there and countless other places as valid species and (allegedly) determined so on the basis of a body of scientific evidence (as per Kaiser *et al.* 2013), when none in fact existed.

It took another 12 years for the Wüster cohort to finally admit that the taxonomy of Hoser (2000) was wholly correct and that Schleip's had been wrong all along (Natusch *et al.* 2021), but Natusch *et al.* (2021), made a point of pretending the paper of Hoser (2000) did not even exist!

Meanwhile, in order to satisfy his desire for "immortality" with respect to the snake genus *Leiopython*, Schleip had renamed *Leiopython hoserae* Hoser, 2000 as *Leiopython meridionalis* more than a decade later (Schleip 2014a), knowing full well it had been properly named by Hoser, as he had cited and used the name in his 2008 paper.

Or see the example of Hinrich Kaiser being part of a cohort that recklessly overwrote *Cyrtodactylus petani* Riyanto, Grismer and Wood, 2015 in an online "journal" without credible peer review, with their own name *Cyrtodactylus klakahensis* the following year.

It should be noted that taxonomic vandalism as defined for the purpose of this paper, is not the accidental act of renaming an entity, after which the author (or later authors) realises their mistake and then uses the correct senior synonym.

The latter is common in zoology and has happened for centuries and is exactly how the Linnaean system works.

Taxonomic vandalism is not the alternative definition of one or more species being named in the absence of evidence because this is common in zoology, as evidenced by the massive synonyms lists in existence. I also note that the use of the term taxonomic vandalism to describe these actions is conspicuous by its absence, as seen for example, by the lack of application of the words "taxonomic vandalism" to the evidence free "science" of Wulf Schleip and others in the Wüster cohort.

In late 2009, Wüster and two close friends Van Wallach and Don Broadley, renamed the Cobra genus *Spracklandus* Hoser, 2009, with their own coined name "*Afronaja*".

This was taxonomic vandalism, as defined above and I note that Wüster has done this many times since 2009.

To justify their act of taxonomic vandalism, also called "name

authority theft" in the case of renaming *Spracklandus*, Wüster and friends made a series of false claims against myself and my vehicle of publication, being the *Australasian Journal of Herpetology* (*AJH*).

They lied and claimed no hard copies of *Australasian Journal of Herpetology* had been published.

In 2009 I published a rebuttal of the Wüster claims online and formally published a detailed rebuttal of their claims in 2012 in a special edition of *AJH*, which has always been a print journal.

With the ICZN Code compliant publication of *AJH* Issue 7 confirmed, *Spracklandus* should have been the only name used thereafter and *Afronaja* as an objective synonym should have been dumped!

In an act of defiance, in 2012, Wüster, authored a document that he published on kingsnake.com later rebadged as Kaiser *et al.* (2013) in which he added six co-authors, including his mate Hinrich Kaiser as the new lead author.

This rant laid down a manifesto which while directed principally against myself (Hoser), laid down a means they had devised to overwrite names of any publishing scientist, in direct violation of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Known generally as "Kaiser *et al.*" or "The Wüster doctrine", it essentially became a weapon to be used against any publishing author who was deemed worth attacking in order to steal their "name authority" under the rules of the Code.

I, Raymond Hoser, was the first person on the so-called "hit list", but as Wüster and his cohort shopped their paper for authors or supporters, the list of targeted authors grew to include many others, including the likes of John Edward Gray and Wilhelm Karl Hartwich Peters, both scientific greats from the 1800's, and contemporary authors such as Bill McCord, Ross Wellington, Richard Wells and many others.

The list of authors to attack was motivated by ego and malice and had no scientific basis whatsoever.

To justify this overt defiance of the rules of the Code, the Wüster doctrine simply called for the stealing author to make allegations against the targeted author. Phrases such as "unscientific works", "not peer reviewed", "evidence free taxonomy", "online journals" and even "taxonomic vandalism" were used to describe targeted authors and their works.

The defamatory claims against the targeted authors didn't need to be true, but they simply had to be made to justify the otherwise heinous crime of overwriting the names of another scientist in violation of the Code.

So it soon emerged that almost always the accusations levelled against the targeted authors were false, but due to the number of times these allegations were made, they often appeared to be true. Gaming the internet with fake accounts, robot generated content and other means of flooding the online space with comment and blogs, Wüster and his relatively small cohort, were able to falsely portray to others that their view was both correct and that of the majority of herpetologists.

Fact is that neither were ever the case!

Internet junkies have a term for what Wüster got up to and it is called "Negative SEO".

Otherwise it could be described as gaming Google and the internet to destroy a person's business or reputation based on false information.

#### **CASE 3601 (HOSER) VS RHODIN ET AL.**

Case 3601 (Hoser 2013a, 2015g) and the response by Wüster and his cohort (e.g. Kaiser 2013, 2014a-b, Schleip 2014b, Thomson 2014, Wüster *et al.* 2014), lead to Rhodin *et al.* (2015) as their document superseding all previous publications on the matter. It was a formal request to the ICZN to have the ICZN formally erase the works of Hoser from the scientific record. It was perhaps the most audacious ever attack on the rules of the Code and the Linnaean system of classification in its history.

If Rhodin *et al.* (2015) had succeeded and if the Wüster doctrine took hold, other contemporary authors, including for example, Richard Wells, Ross Wellington, Roman Holynski or Bill McCord



would have had their works similarly stolen by others almost immediately.

There would then have been a free for all, whereby thieves would usurp name priority for an ever increasing number of authors. Within a very short time the long-standing rules of priority and homonymy would have been erased and stability of nomenclature as created by the Code would have been completely destroyed. Knowing this potential inevitability, whereby zoological nomenclature descends into anarchy and mob rule, as in rule by the noisiest minority best at "negative SEO", is exactly why the ICZN had no choice but to rule almost unanimously that *AJH* was formally published and that the names proposed within the journal (for the first time) must have priority (ICZN 2021).

#### THE FUTURE OF THE ICZN TO STRONGLY CONDEMN TAXONOMIC VANDALISM AND KRELL, 2021

The ruling by the ICZN in 2021 was in effect a strong statement against taxonomic vandalism and the Wüster gang.

But the failure of the ICZN to explicitly issue a strong statement condemning taxonomic vandalism as defined above at the time they issued a ruling on Case 3601 (ICZN 2021), potentially by mere oversight, has left the ICZN and the Code vulnerable to yet further attacks from the Wüster cohort and other like-minded thieves.

They will exploit perceived weaknesses and disunity in the ICZN to try to undermine the Code for their own selfish interests.

Wüster *et al.* (2021) is a holotype example of this rule-breaking cohort ignoring the ruling of the ICZN in Case 3601 and advocating for others to engage in similar destructive attacks against the Code.

They advocate usage of their non-ICZN names in favour of the correct ICZN ones for the same entities.

Wüster *et al.* (2021) falsely alleges a majority of herpetologists support their view. They claim wider usage for their non-ICZN names over the ICZN names of Hoser. However the reality is 3-1 usage in favour of Hoser names, versus the Wüster gang's names if one lines up the numbers in Wüster *et al.* (2021) versus (Hawkeswood 2021).

In case I haven't made it clear, Kaiser *et al.* (2013) and Rhodin *et al.* (2015) were the point where the Wüster gang gave up arguing against the science of Hoser and others they targeted to attack, or to claim it was somehow inadequate.

They simply ran the mantra, the authors were their enemies and therefore fit to have their name authorities stolen.

If people like Wüster are allowed to continue to pollute zoology with their non-ICZN nomenclature, while masquerading as being within the ICZN ambit, the stability of names that the code strives for will all but evaporate. The noisiest or those most internet savvy and best at "negative SEO", would eventually steal name authority for whatever they wanted and on an ever changing basis, with Linnaean scientific nomenclature being effectively emasculated. When these thieves move on, other thieves would simply repeat the process, with scientific names being rewritten as fast as authors die.

It is for this reason that the suggestions of dissenting ICZN Commissioner, Frank Krekk, in Krell (2021) to disobey the rules of the Code were so dangerous and need to be answered here.

Krell (2021) has been creatively interpreted by Wüster in countless online posts as a license to disobey the rules of the ICZN, and interpreted as some sort of formal ICZN mandate to do so.

I note that Krell (2021) made it clear his views were his own and not those of the ICZN (which formed a majority view against him), but Wüster has chosen to either ignore this or play it down.

Following on from the unsuccessful attempt by the Wüster cohort to get ICZN backing in their attempt to overwrite more than 1,000 Hoser names and who knows how many other authors and names they intended adding to this list, Krell appears to have inadvertently done the bidding for the Wüster cohort. He did this by suggesting they use Kaiser *et al.* (2013) as a basis for Wüster's cohort to get what they want, viz renaming Hoser named taxa.

Krell's suggestion is both flawed and dangerous!

Firstly the authors of Kaiser *et al.* (2013), as co-authors of Rhodin *et al.* (2015), stated explicitly that the later document superseded the earlier one (and all others they had published).

This effectively meant that the cohort had put all their faith in the ICZN process and in effect would abide by their ruling.

Kaiser *et al.* (2013) had been made redundant by Rhodin *et al.* (2015).

This ICZN ruling as we know, was not to suppress *AJH* or any of the other publications the Wüster cohort had taken names from to rename.

They explicitly voted against Rhodin *et al.* (2015) by near unanimous majority.

That should have been the end of the Wüster campaign and the point at which the rules of ICZN and names flowing from that entered universal usage.

There is no room in the rules of the ICZN for a dual (or triple, etc) nomenclature and now is not a time to change this.

In Australia, the five pre-eminent taxonomists, Hal Cogger, Allen Greer, Richard Wells, Ross Wellington and Glenn Shea have all already stated that they will be accepting the ruling of the ICZN in Case 3601 and using the Hoser priority names in favour of those synonyms coined by Wüster and his cohort. This is significant as I have named more taxa from Australia than anywhere else (single country), the total number being in the hundreds.

Krell's suggestion via Krell (2021) to try the Wüster doctrine, via Kaiser *et al.* (2013) is not only likely to destabilize herpetology, but if this sort of action gathers a head of steam, it is likely to spread outside of herpetology and literally undermine the entire Code.

Kaiser *et al.* (2013) explicitly stated that their methods can be used outside of herpetology and recommended to people to do so!

We saw this impact with the publications of Bílý and Volkovitch (2017) and Bílý *et al.* (2018) seeking to suppress the work of Roman Holynski.

Those suppression attempts also appear to have failed (Krell 2021).

If the science of myself (Hoser) or anyone else, is defective (or "bad science" as stated earlier), it may be refuted and the relevant names synonymised. If the science is OK, as in the evidence presented supports the conclusion made (with taxonomy and nomenclature to follow) either now or at some time in the future, then the names should be used.

The same applies for every other author in zoology!

It has been like that for more than 200 years!

Krell has followed Wüster *et al.* in dealing with personalities and not science.

This is not scientific at all.

In his own diatribe, Krell falsely accused me of publishing all my taxonomic works in *AJH*. In fact I have published papers naming taxa and dealing with taxonomy and nomenclature in several journals wholly outside my control and separate to *AJH* (e.g. Hoser 2000 and others cited therein).

Krell has believed Wüster's lies without questioning them, which is not scientific at all!

In fact it appears that all or most of Krell was written by Wüster in the same way he has done in the past for other rants he has published under the names of his friends.

Words and phrases in Krell (2021) are no different to those used by Wüster previously.

Worse still, Krell's encouragement of the dishonest, anti-rules and anti-science practices of the Wüster cohort serve to encourage these thieves and any other like-minded thieves, or potential thieves, at the very time the ICZN should collectively be standing up to their actions.

Krell and the ICZN should be encouraging use of the scientific method and best protocols, including peer review as well as strict adherence to the rules of the Code as outlined by Hoser (2012a-b, 2013a, 2015a-f).

#### FINAL RECOMMENDATIONS

I must say that I find it odd that an ICZN Commissioner (Krell), who dissented against a majority vote in support of the rules of the

Code can in effect be apparently campaigning against the Code and the rules he is meant to be upholding and supporting. It is like a judge in a court of law telling people to go out and break the law the judge is charged with upholding. It would be unlikely to happen.

While it is not within the remit of the ICZN to deal with matters of taxonomy, ethics and the like, there is a role for the ICZN to make statements affirming that:

1/ Dishonesty and false claims have no place in science, and  
2/ The Code will only exist by way of strict compliance by all in zoology and not by way of renegades seeking out ways to undermine it in one way or other.

Side-stepping or ignoring the rules of the code is not compliance. Looking for "loopholes" in the rules to circumvent them, or to circumvent and ignore them by way of outlandish creative interpretations (e.g. Schleip 2014a) is not science and needs to be formally condemned.

Getting other people (including the likes of Lee Grismer, Fred Kraus, Paul Oliver and Perry Wood) to similarly not comply with the rules of the Code is also not complying.

Phylocode was not a threat to the ICZN and the Code because it was always outside the ICZN and in any event was a fundamentally flawed system.

By contrast, Wüster and his cohort do pose a threat to the code because they pretend to sit within the code. They masquerade as supporting it, when in reality Wüster's gang do not and it appears that through Krell and potentially a few others, they may have even infiltrated the ICZN by proxy.

In 2012, when I first approached the ICZN about the Wüster problem, a number of commissioners at the time didn't believe the threat was real or was big enough to warrant dealing with. A decade later, the ICZN needs to face up to the reality of this well organized threat and deal with it decisively before it is too late. What Covid-19 did to the world economy and to society in years 2020 and 2021 will be tame compared to the havoc Wüster and his gang may do to the ICZN and the Code if they are not convincingly stopped as soon as possible.

The ruling against the Wüster gang in 2021 was a good first step (ICZN 2021), but in my view the ICZN now needs to go further and explicitly condemn the taxonomic vandalism and general dishonesty of the Wüster gang.

Scott Thomson, who has engaged in taxonomic vandalism in recent years, correctly stated (on internet chat forum 'kingsnake.com' 29 December 2003):

"Ignoring names that meet the requirements of the ICZN is not an option. This cannot be done under strict application of the rules as the names if valid are Available and must be used. The alternative is to refute them. So disagree with the names all you like, 'Refute or Accept'. That is, publish a valid refutation of the taxon to which the name applies. ... Nomenclature is pretty black and white. There are a set of rules. Apply them, if the name is valid, use it, if not reject it. If you don't like it. ... well I don't recall that being in the rules."

Nothing has changed in the two decades since!

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**CONFLICT OF INTEREST**

None.

**Cite this paper as:**

**Hoser, R. T. 2021. Clawing their way out of synonymy! *Cyrtodactylus* Gray, 1827 sensu lato: The overdue break up of a large assemblage of pan-Asian geckos. *Australasian Journal of Herpetology* 54:1-64.**

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