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**A revision of the genus level taxonomy of the Acontinae and Scincinae,  
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Raymond T. Hoser (Issue 28:1-64 and Issue 29:65-128).**

**Cover photo: Raymond Hoser.**

# A revision of the genus level taxonomy of the Acontinae and Scincinae, with the creation of new genera, subgenera, tribes and subtribes.

RAYMOND T. HOSER

488 Park Road, Park Orchards, Victoria, 3134, Australia.

Phone: +61 3 9812 3322 E-mail: snakeman (at) snakeman.com.au

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## ABSTRACT

The genus-level taxonomy the genera *Acontias* Cuvier, 1817 and *Typhlosaurus* Wiegmann, 1834 *sensu lato* (placed herein tentatively within the Acontinae) finds the currently used classification inconsistent in relation to other groups of lizard species.

Based on recent molecular and morphological studies and an objective assessment of these, a new taxonomic framework is presented that better reflects relationships between the relevant groups in line with the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), or "The Code".

A new genus within that group is also erected as well as two subgenera.

In terms of the Scincinae and following a similar audit, new genera and subgenera are erected. At a higher level, tribes and subtribes are erected to accommodate the various genera in a logical configuration that reflects both phylogeny, morphology and consistent treatment among most other lizard genera.

Some obvious unnamed species and subspecies are also formally named for the first time, although other well-known species-level taxa remain scientifically unnamed.

In total this paper formally names for the first time, 8 new tribes, 14 new subtribes (including nominate ones defined), 18 new genera, 24 additional subgenera (not including nominate subgenera); 8 new species and one new subspecies.

**Keywords:** Taxonomy; nomenclature; lizards; Scincidae; Acontinae; Scincinae; reptile; Acontinae; Acontini; *Ophiomorus*; *Brachymeles*; *Davewakeum*; *Typhlosaurus*; *Acontias*; *Mesoscincus*; *Hemipodion*; *Zygnopsis*; *Sphenocephalus*; *Eumeces*; *Eurylepis*; *Scincus*; *Scincopus*; *Plestiodon*; *Pariocela*; *Neoseps*; *Janetaescincus*; *Pamelaescincus*; *Gongylomorphus*; *Chalcides*; *Sphenops*; *Allodactylus*; *Elfakhariscincus*; *Sepsina*; *Typhlacontias*; *Feylinia*; *Melanoseps*; *Hakaria*; *Proscelotes*; *Scelotes*; *Herpetosaura*; *Paracontias*; *Madascincus*; *Pseudoacontias*; *Amphiglossus*; *Pygomeles*; *Androngo*; *Voeltzkowia*; *Nessia*; *Sirenoscincus*; new tribes; *Starkeyscinciini*; *Parabrachymeliini*; *Adelynhoserscinciini*; *Eumeciini*; *Janetaescinciini*; *Gongylomorphiini*; *Sloppyscinciini*; *Nessiini*; new subtribes; *Typhlosauriina*; *Culexlineatascinciina*; *Starkeyscinciina*; *Adelynhoserscinciina*; *Asiascinciina*; *Funkiskinkiina*; *Gongylomorphiina*; *Chalcidiina*; *Sloppyscinciina*; *Paracontina*; *Sirenosciniina*; *Hakariina*; *Scelotiina*; *Feyliniina*; new genera; genus; *Kalahariacontias*; *Culexlineatascincus*; *Starkeyscincus*; *Pelleyus*; *Parabrachymeles*; *Californiascincus*; *Bermudascincus*; *Funkiskinkus*; *Asiascincus*; *Adelynhoserscincea*; *Jackyhoserscincea*; *Notascelotes*; *Sloppyscincus*; *Clarascincus*; *Crottyscincus*; *Oxyscincus*; *Rubercaudatus*; *Cummingscincea*; new subgenera; subgenus; *Namibtyphlosaurus*; *Marleneswileia*; *Moroccoscincus*; *Mexicoscincus*; *Mississippiscincus*; *Floridascincus*; *Forestaescincea*; *Veracruzscincus*; *Marmolejoscincus*; *Japanscincus*; *Ryukyuscincus*; *Sichuanscincus*; *Sinoskinkus*; *Ebolaseps*; *Parascelotes*; *Efossokalahari*; *Brygooscincus*; *Commendatscincus*; *Degenerescincus*; *Comorosscincus*; *Rubercollumus*; *Roseacaudatus*; *Gracilescincus*; *Leucolabialis*; new species; *macconchiei*; *pelleyi*; *funki*; *dixonii*; *nosymangabeensis*; *edwardsi*; *cummingae*; *demiperkinsae*; new subspecies; *punjabensis*.

## INTRODUCTION

Taxonomic relationships between scincid lizards have been difficult to resolve due to a host of factors including the conservative morphology of many species (yes they often look alike), cryptic habits and in turn a lack of material to examine resulting from species commonly only being found in remote or otherwise inaccessible locations.

For various reasons the lack of a good available fossil record has not assisted herpetologists in their quest to ascertain relationships between morphologically similar species that on the surface appear to be closely related. Notwithstanding these difficulties, herpetologists have over the past 2 centuries developed a generally good understanding of the relationships between species and constructed a robust taxonomic framework for the majority of taxa which have been tested as accurate in the wake of newer molecular methods, which offer an alternative means to test relationships.

As part of an ongoing review of the world's herpetofauna the Scincid subfamilies Acontiinae and Scincinae were both reviewed in the light of all available studies to see whether or not the most widely used classification for these groups at the genus level was the best possible.

To that effect the overwhelming majority of placements at the genus level were found to be correct in that they best reflected relationships between monophyletic groups.

Notwithstanding this, some areas in need of improvement were found and to that end, a modified classification is presented here.

Most genera remain unchanged and to that end, I do not rehash readily available diagnostic information here that has been previously published in the references cited below, save where required for clarity, context and the like, although all major generic and tribal groups are defined herein to enable proper separation of species within each.

Where generic diagnoses are provided they are usually similar to those previously published as per the references cited within, however they have been appropriately modified to be accurate within the new generic and subgeneric arrangements within this paper.

In other words the diagnostic information within this paper effectively supports and provides justification for the taxonomy within it.

This is what is known as evidence-based taxonomy. It is something quite the opposite to that practiced by Kaiser (2012a, 2012b, 2014b) and Kaiser *et al.* (2013).

Where changes were required in order to better reflect taxonomic reality, the provisions of the *International Code for Zoological Nomenclature* (Ride *et al.* 1999) (known as "the code", "*International Code of Zoological Nomenclature*" or "rules of zoology"), were invoked, meaning that available names were used and if none were available, then new taxon groups were named and defined according to the code.

As mentioned in the abstract, based on recent molecular and morphological studies and an objective assessment of these, a new taxonomic framework is

presented that better reflects relationships between the relevant groups, which also happens to conform to morphologically similar groups as well.

Below I formally define one new Acontiinae genus, while using available names for the remaining taxa.

Some new Scincinae genera are also defined for the first time. New Scincinae subgenera are also erected and defined herein. At a higher level, a tribe is erected to accommodate all extant Acontiinae species, and more to accommodate the Scincinae genera. These in turn are subdivided into subtribes as required in terms of the extant phylogenetic and morphological affinities.

## MATERIALS AND METHODS

The body of literature available in terms of the relevant species is extensive and formed the primary basis for developing the taxonomy presented within this paper.

While it is not practical for me to list all the published material reviewed, specimens examined or herpetologists consulted in the 30 year period preceding the writing of this paper, some key publications of relevance are listed herein.

I also note that a considerable body of relevant materials was stolen from my property during an illegal armed raid on my facility on 17 August 2011, representing an accumulation of data spanning more than three decades. While the Court of Appeal in Victoria on 5 September 2014 found the raid to be illegal and ordered the government wildlife officers to return the stolen material, pay costs and the like, this has not yet happened and the relevant officers have made it clear that they do not intend returning me any of my stolen property.

Although I note that as of June 2015, I am engaged in litigation to effect the return of stolen materials, damages, monies owed, etc.

The most obvious manifestation of this series of events includes the inability of myself to herein describe some species due to the theft of relevant and irreplaceable materials.

I can only hope that these species are in fact described to science and conserved before their last remaining habitats are obliterated by the human population juggernaut.

In terms of the taxonomy of the subfamily Acontiinae (as recognized herein), relevant publications include: Angel (1942), Auerbach (1987), Bates *et al.* (1999), Boettger (1894), Boulenger (1887), Branch (1993), Broadley (1968, 1971, 1995, 2006), Broadley and Howell (1991), Brygoo (1981b), Cuvier (1817), Daniels *et al.* (2002, 2005, 2006), Duméril and Bibron (1839), Fitzsimons (1941), Grandidier (1869), Haacke (1964, 1975), Hallermann (1998), Heideman *et al.* (2008), Herrmann and Branch (2013), Huey and Pianka (1974), Huey *et al.* (1974), Lamb *et al.* (2010), Loveridge (1942), Mashinini (2010), Mashinini *et al.* (2008), Peters (1882), Pianka (1971), Rosa *et al.* (2012), Schmitz *et al.* (2005), Spawls *et al.* (2002), Wagner *et al.* (2012), Werner (1913), Whiting *et al.* (2003), and sources cited therein.

In terms of the taxonomy of the subfamily Scincinae (as recognized herein), relevant publications include:

- Abraham (1984), Andreone and Greer (2002), Andreone *et al.* (2001), Al-Quran (2009), Anderson (1871a, 1871b, 1896), Anderson (1950), Anderson (1999), Anderson and Leviton (1966), Andersson (1916), Andreone *et al.* (2000), Angel (1923, 1930, 1933, 1942, 1949), Arnold and Leviton (1977), Ashton (2005), Ashton and Knipps (2011), Andreone and Greer (2002), Austin and Arnold (2006), Baig *et al.* (2008), Baird (1849), Baird and Girard (1852), Bar and Haimovitch (2012), Barbour (1909, 1917, 1918), Barbour and Loveridge (1928), Bartlett (1994), Bartlett and Bartlett (1991), Bauer *et al.* (1995, 2003a, 2003b), Beddome (1870), Bibron (1833), Blandford (1993), Blyth (1854), Bobrov and Semenov (2008), Bocage (1866a, 1866b, 1867, 1873, 1889, 1896), Bocourt (1879), Borquin (1977), Beolens *et al.* (2011), Boettger (1882, 1887, 1896), Bonetti (2002), Boone and Sowell (1999), Boulenger (1887, 1888, 1889, 1890a, 1890b, 1891, 1896a, 1896b, 1897, 1898, 1899, 1909, 1918, 1920), Bourret (1937), Branch (1993), Brandley *et al.* (2012), Broadley (1962, 1973, 1990, 1994, 1988), Broadley and Cotterill (2004), Broadley and Howell (1991), Broadley *et al.* (1997, 2006), Brown (1984), Brown (1956), Brown and Alcalá (1980, 1995), Brown and Rabor (1967), Brown *et al.* (2000), Brygoo (1980a, 1980b, 1981a, 1981c, 1983, 1984, 1985a, 1985b, 1987), Brygoo and Roux-Esteve (1982, 1983), Burger *et al.* (2004), Caputo (1993, 2004), Caputo *et al.* (1993, 1999, 2000, 2008), Carranza *et al.* (2008), Chabanaud (1917), Chirio and Ineich (2006), Chirio and Lebreton (2007), Clark and Hall (1970), Conant and Collins (1991), Cooper (1981, 1988, 2005), Cope (1861, 1880), Crottini *et al.* (2009), Cruz *et al.* (1979), Daan and Hillenius (1966), Das (1996, 2004), Daudin (1802), Davis *et al.* (2014), Deraniyagala (1934, 1940), de Silva *et al.* (2005), Desjardin (1831), de Witte and Laurent (1943), Disi *et al.* (2001), Dixon (1969, 2000), Dugès (1891), Duméril and Bibron (1839), Dundee and Rossman (1989), Dunn (1933), Dunn and Conant (1937), Eiselt (1940), El-Toubi (1938), Enderson *et al.* (2014), Evans and Evans (1980), Fera-Ortiz and Garcia-Vázquez (2012), Fera-Ortiz *et al.* (2011), Fischer (1884), Fitch (1954), FitzSimons (1930, 1938, 1939, 1943, 1950), Forskål (1775), Fowler (1946), Garbutt (1992), Garcia-Vázquez and Fera-Ortiz (2006), Gasc and Renous (1980), Geniez *et al.* (2004), Giacomini (1891, 1906), Gibbons *et al.* (2009), Glaw and Vences (1994), Goris and Maeda (2004), Grandidier (1872), Gravenhorst (1851), Gray (1838, 1845), Green and Pauley (1987), Greenbaum (2005), Greenbaum *et al.* (2006), Greer (1970a, 1970b, 1991, 2002), Greer and Wilson (2001), Greer *et al.* (1998), Griffith (1991), Griffith *et al.* (2000), Günther (1864a, 1864b, 1877, 1880, 1882, 1885, 1889), Haacke (1964, 1977), Haas (1957), Hallowell (1854, 1857, 1861), Harlan (1824), Hawlitschek *et al.* (2011), Hediger (1935), Heideman *et al.* (2011), Henkel and Schmidt (2000), Heilprin (1888), Hewitt (1929, 1932), Heyer (1972), Hibbitts *et al.* (2000), Hikida (1982, 1988, 1989), Hikida and Darevsky (1987), Hikida and Motokawa (1999), Hikida *et al.* (2001), Honda *et al.* (2008), Hoser (2012b), Jackson (2002), Jacobsen (1987, 2009), Jacobsen *et al.* (2010), Jensen *et al.* (2008), Jongbloed (2000), Kalboussi *et al.* (2006), Karunarathna *et al.* (2011), Kazemi *et al.* (2011), Kelaart (1853), Khan and Khan (1997), Kingman (1932), Kirchhof *et al.* (2010), Köhler *et al.* (2009), Kramer (1979), Krüger (1999), Kurita and Hikida (2014a, 2014b), Kwet (2012, 2013), Lanza (1957), Lanza and Corsi (1981), Lataste and Rochebrune (1876), Lazell and Ota (2000), Lazell *et al.* (1999), Lebanowski and Lowin (2011), LeBreton (1999), Legler and Webb (1960), Leviton and Anderson (1967), Leviton *et al.* (1992), Linnaeus (1758, 1766), LiVigni (2013), Loveridge (1920, 1935, 1936, 1942), Liu-Yu (1970), Lu *et al.* (2014), Malkmus *et al.* (2002), Malonza *et al.* (2012), Manthey (1981), Manthey and Grossmann (1997), Martof (1956), Martof *et al.* (1980), Mausfeld *et al.* (2000), McCauley (1939), McCoy *et al.* (2010), McCranie (2015), McDiarmid *et al.* (1976), Meirte (2000), Mermer (1996), Meyer (2014), Miralles and Vences (2013), Miralles *et al.* (2011a, 2011b, 2012), Mitchell (1994), Mitchell and Reay (1999), Mocquard (1894, 1897, 1905, 1906), Motokawa and Hikida (2003), Müller (1890), Müller (1910), Murray (1884, 1886), Murthy (2010), Noble and Mason (1933), Nussbaum and Raxworthy (1995), O'Shaughnessy (1879), Palmer and Braswell (1995), Pasteur (1981), Pauwels and David (2008), Pauwels and Vande weghe (2008), Pauwels *et al.* (2004), Pawlowski (2013), Pawlowski and Krämer (2009), Perera *et al.* (2011), Peters (1854, 1864, 1874, 1878, 1880), Peters and Donoso-Barros (1970), Pike and Rosnik (2009), Pollo (1997), Pope (1935), Poulakakis *et al.* (2008), Pyron *et al.* (2013), Raxworthy and Nussbaum (1993), Raw (1973), Reeder (1990), Richmond (2006), Rödder *et al.* (2009), Rodgers (1944), Rösler and Wranik (2009), Roux (1907a, 1907b), Rovero *et al.* (2014), Sakata and Hikida (2003), Sang *et al.* (2009), Savage (2002), Schleich *et al.* (1996), Schlüter (2006), Schmidt (1919, 1939, 1941), Schmidt and Marx (1956), Schmitz *et al.* (2004), Schneider (1801), Shaw and Nodder (1813), Siler and Brown (2010), Siler *et al.* (2009, 2010, 2011a, 2011b), Sindaco and Jeremcenko (2008), Smith (1935), Smith (1946), Smith and Smith (1952), Smith and Taylor (1950), Smith *et al.* (1975), Solis *et al.* (2014), Somaweera and Somaweera (2009), Spawls *et al.* (2002), Steindachner (1899), Stejneger (1898, 1901, 1907, 1910a, 1910b, 1924a, 1924b), Sternfeld (1917), Szczerbak (2003), Taylor (1917, 1932, 1933, 1936a, 1936b, 1943, 1950, 1953, 1955, 1956), Telford (1959, 1969), Theobald (1868), Tiedemann and Grillitsch (1999), Tiedemann *et al.* (1994), Tornier (1901, 1902), Trape *et al.* (2012), Valente *et al.* (2014), Van Denburgh (1896), Venugopal (2010), Vesey-Fitzgerald (1947), Vigni (2006), Vinson (1973), Vinson and Vinson (1969), Vitt (1974), Vitt and Cooper (1985), Wagler (1830), Wagner and Schmitz (2006), Wagner *et al.* (2012), Welch (1982), Werner (1898, 1910, 1929), Werner (1968, 1971, 1988, 1998), Werning (2012), Whiting *et al.* (2003, 2004), Wilms (2009), Witberg (2012), Witte (1933a, 1933b), Wood (1998), Wranik (1998, 2003), Zahran *et al.* (1995), Zhao and Adler (1993), Ziesmann *et al.* (2007), Zulueta (1909) and sources cited therein.

## A SUMMARY OF RESULTS AND TAXONOMIC ACTIONS.

Before detailing the taxonomic actions within this paper, it is trite for me to note that the nomenclature follows the taxonomy and is used in accordance with the rules, recommendations and spirit of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), known as “the code”, or “the rules”.

The lizards currently treated as a subfamily including the genera *Acontias* and *Typhlosaurus* currently referred to in the literature as Acontiinae Gray, 1838 (e.g. Pyron *et al.* 2013), yet spelt in other publications as Acontinae, was found to potentially be a homonym of Acontiini Guenée, 1841 (Lepidoptera: Noctuidae: Acontiinae) (Hacker 2010) and hence may be unavailable under the rules and principles of coordination and homonymy and under Article 55 and other relevant parts of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999). As a result, it may be preferable under this Article (55.33.1) to refer the matter to the Commission for resolution.

In terms of the descriptions below, if and when a name is found to be in error in terms of formation, gender or similar, it should not be amended in any way, unless totally mandatory under the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

In terms of order of preference for use of new names by a first revisor, in the event that they seek to merge defined taxonomic entities as defined herein, then the order should be in page priority order as seen in the text herein. Those entities named first take priority.

The Acontiinae has generally been divided by most authors into two genera, namely *Acontias* Cuvier, 1817 and *Typhlosaurus* Wiegmann, 1834. Additionally other genera have been named for what were thought to be divergent species associated with *Acontias*, including *Acontophiops* Sternfeld, 1911 and *Microacontias* Daniels *et al.*, 2006.

More recent authors (e.g. Lamb *et al.* 2010) have subsumed both the genera *Acontophiops* and *Microacontias* within *Acontias*.

This is maintained. However *Microacontias* is recognized as a subgenus. *Acontophiops* is not herein recognized. The species *Typhlosaurus gariepensis* FitzSimons, 1941, most recently placed in the genus *Acontias* by Lamb *et al.* 2010, is herein placed in its own monotypic genus *Kalahariacontias gen. nov.* as defined below. Phylogenetically and morphologically it is sufficiently divergent from taxa otherwise placed in *Typhlosaurus* and *Acontias* to be placed within its own genus. In many respects it is intermediate in form between members of both genera and as no one has recently proposed to merge the other genera, I see the better position as being the erection of a new genus to accommodate this taxon.

The five species of *Typhlosaurus* Wiegmann, 1834 form two or three well defined species groups.

The three species including the type species originally described as “*Acontias caecus* Cuvier, 1817”, as well as *Typhlosaurus lomiae* Haacke, 1986 and *Typhlosaurus*

*vermis* Boulenger, 1887 form one obviously similar group. The other two species, *Typhlosaurus meyeri* Boettger, 1894 and *Typhlosaurus braini* Haacke, 1964, while sharing obvious affinities, are in my view sufficiently divergent from the other three species and one another as to warrant being placed in separate subgenera. They are therefore both formally named below.

In terms of the Scincinae, there are a number of important changes to existing taxonomy.

The genus *Mesoscincus* Griffith *et al.*, 2000, currently consisting three species from Middle America while clearly consisting a monophyletic group, contains two sufficiently divergent lineages as to warrant taxonomic recognition. Therefore the most divergent member of the clade is herein placed in a new genus *Culexlineatascincus gen. nov.* defined below according to the *International Code of Zoological Nomenclature*.

Poulakakis *et al.* (2008) reliably estimated the divergence of the taxa currently known as *Ophiomorus punctatissimus* (Bibron and Bory De St. Vincent, 1833) and *Ophiomorus latastii* Günther, 1864 at 11.8 MYA.

While both are of similar sizes, the taxa are sufficiently divergent to warrant placement in separate genera. The same applies for the other well-defined and long-known species groups. Anderson and Leviton (1966) effectively defined these groups as did Boulenger (1887) via his diagnostic key for the genus as then recognized.

There are available names for all genera except two so all are resurrected and defined herein for the first time and with reference to the other relevant genera. The newly named genus for the taxon *Ophiomorus latastii* Günther, 1864 is herein named *Starkeyscincus gen. nov.* The group of species once referred to as *Sphenocephalus* Blyth, 1853 is herein named *Pelleyus gen. nov.*

The entirety of *Ophiomorus* Duméril and Bibron, 1839 as previously recognized and *Mesoscincus* Griffith *et al.* 2000 as previously identified are placed within a tribe named formally herein and then this is split into two component subtribes. Because the term Ophiomorpha is already in widespread use in zoology, the tribe name *Starkeyscinciini tribe nov.* is taken from the genus *Starkeyscincus gen. nov.*

Within *Ophiomorus sensu lato*, two new species and a subspecies are formally named for the first time. One of the new species *Ophiomorus macconchiei* was shown by Poulakakis *et al.* 2007 to have diverged from *O. punctatissimus* 8.6 MYA and has been geographically disconnected ever since.

There are also consistent differences that easily separate the taxa and it is surprising that it has not been formally named before now.

The other two named *Ophiomorus sensu lato* taxa while not confirmed as distinct by molecular analysis are separated from congeners by significant geographical / geological barriers.

Both are within the genus *Pelleyus gen. nov.*, with one being conservatively described as a subspecies. *Brachymeles* Duméril and Bibron, 1839 is split into two

with the Philippines specimens remaining in *Brachymeles* and the sole species from Borneo being placed in a new genus *Parabrachymeles gen. nov.*

Specimens from Thailand, remain within *Brachymeles*, but the genus *Davewakeum* Heyer, 1972, coined for the Thailand specimens is herein resurrected from synonymy of *Brachymeles* at the subgenus level.

*Plestiodon* Duméril and Bibron, 1839 as recognized currently includes nearly 50 recognized species.

Numerous authors including Griffith *et al.* (2000) have found that the genus should be broken up into several. This is done herein along the lines indicated by Brandley *et al.* (2012) using available names when possible and erecting new genera to accommodate unnamed phylogenetic groups. Conservatively, some groups are classed herein as subgenera only.

Significant and because the remainder of *Eumeces* Wiegmann, 1834, *Eurylepis* Blyth, 1854, *Scincopus* Peters, 1864 and *Scincus* Laurenti, 1768 are also dealt with in this paper, herein is presented for the first time in more than a century, a consistent and workable taxonomic framework for the so-called *Eumeces*-complex.

The genus *Plestiodon sensu-lato* (as recognized until now) (defined below) has been split into 8 genera, with a further 10 subgenera split from these in order to provide nomenclature to match the taxonomy derived from the well-established morphological and molecular evidence, which also happens to match geographical distributions of the relevant taxa. Within this assemblage two available names are resurrected from synonymy, *Neoseps*, Stejneger, 1910 as a genus and *Pariocela* Fitzinger, 1843 as a subgenus within *Plestiodon*. All the other genera and subgenera are formally named for the first time according to the *International Code of Zoological Nomenclature* with the majority of names being derived from the geographical location the species tend to be found. I also note that in line with the results of Brandley *et al.* (2012) it is reasonable to assert that the species diversity of the relevant assemblage of lizards has been substantially under-estimated to date, with the actual total number of species being well in excess of 50.

I also note that while Brandley *et al.* (2012) gave their arguments in favour of not splitting the genus they defined as *Plestiodon*, by contrast Dubois (2011), gave a counterargument in favour of splitting taxon groups generally. I prefer the Dubois (2011) argument in terms of the relevant species subject of this paper.

*Plestiodon sensu lato*, is also redefined as a tribe and three subtribes, the break-up being more-or-less in line with the divisions of Brandley *et al.* (2012). That is the groups identified in that paper as "species series" and Clades A, B, and C, are herein defined and named as subtribes according to the *International Code of Zoological Nomenclature* (Ride *et al.* 1999). These are: Adelynhoserscinciina, Asiascinciina and Funkiskinkiina. Within the genus *Funkiskinkus gen. nov.*, the population of skinks from 9 miles west of Atenquique, Jalisco, Mexico, treated until now as an isolated north-western population of "*Plestiodon indubitus* (Taylor, 1933)" is

described as a new species, namely *Funkiskinkus* (*Funkiskinkus*) *funki sp. nov.*

A population until now treated as an outlier of "*Plestiodon dugesii* (Thomiot, 1883)" is also described as a new species, namely *Funkiskinkus* (*Funkiskinkus*) *dixonii sp. nov.*

The Indian Ocean genera *Janetaescincus* Greer, 1970 and *Pamelaescincus* Greer, 1970 are both placed in a newly defined tribe *Janetaescinciini tribe nov.*

The genus *Gongylomorphus* Fitzinger, 1843 is placed in a tribe with *Chalcides sensu lato*, treated herein as a single genus, with four subgenera, defined within this paper for the first time, all using available names. Each major group is also defined as a subtribe.

The genus *Melanoseps* Boulenger, 1887 has long been known to contain two widely divergent clades, these being one centred on Tanzania, East Africa and the other in West Africa. The western clade is herein described as a new subgenus *Ebolaseps subgen. nov.* and due to the division of the type species into two, utilizing available names and the inclusion of a species formerly erroneously placed within *Scelotes* Fitzinger, 1826, it contains three known species.

The species known as *Scelotes poensis* Bocage, 1895, based on the original description does not appear to fit within that genus as is now known, either morphologically or by distribution. It is therefore tentatively placed within the subgenus *Ebolaseps subgen. nov.*

The species *Scelotes uluguruensis* Barbour and Loveridge, 1928, clearly is not appropriately placed in the genus *Scelotes* Fitzinger, 1826, being isolated from the rest of the genus both morphologically and by distribution. Greer (1970), quite properly removed any notion that the species should be placed in the otherwise similar genus *Proscelotes* De Witte and Laurent, 1943, even though they do share clear morphological and phylogenetic similarities.

While Greer (1970), merely retained the status quo by leaving *Scelotes uluguruensis* Barbour and Loveridge, 1928 in *Scelotes*, this situation has been in need of formal remedy ever since. Therefore as part of this review I place the taxon within a new genus, formally named for the first time, according to the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999). The genus is named *Notascalotes gen. nov.*

Greer (1970) correctly placed three species within *Proscelotes* De Witte and Laurent, 1943 and that arrangement is maintained. However the type species in the genus *P. eggeli* Tornier, 1902 is both morphologically and geographically divergent from the other two species. Therefore the other two more southern taxa are herein placed in a new subgenus, *Parascalotes subgen. nov.* formally named for the first time.

*Scelotes* Fitzinger, 1826 is divided into two obvious genera, utilizing the existing name *Herpetosaura* Peters, 1854 for the so-called *arenicolus* group.

*Paracontias* Mocquard, 1894, as currently accepted by herpetologists is left as is.

*Amphiglossus* Duméril and Bibron, 1839 *sensu lato*,

including *Madascincus* Brygoo, 1981 *sensu lato*, which in turn includes other named genera and subgenera is rearranged for the first time ever according to both molecular data and morphology.

Most of the recent re-arrangements of species within these genera have been both inconsistent in terms of deciding which species are placed within discrete groups and which remain within the older genera, and also with respect to the proper application of the rules of the *International Code of Zoological Nomenclature*.

An example of the latter is seen in the placement of species within a large group incorporated within *Madascincus* Brygoo, 1981 and treated as such (e.g. Pyron *et al.* 2013). This is in spite of the fact that within the group are species of *Pseudoacontias* Bocage, 1889, a genus that has clear date priority over the former.

In any event, divergent species within these broad generic groups, should if treated consistently with other scincinae, be placed in separate genera or subgenera, with *Amphiglossus* Duméril and Bibron, 1839 *sensu lato*, including *Madascincus* Brygoo, 1981 *sensu lato* in turn being united at a higher level (tribe and family).

To correct the taxonomy and nomenclature, all species are placed within appropriate generic and subgeneric groupings using available names and erecting others when none are available.

To that effect, *Amphiglossus* Duméril and Bibron, 1839 *sensu lato* (excluding *Madascincus* Brygoo, 1981 *sensu lato*) is herein divided into seven genera and further subgenera, including the genus *Pygomeles* Grandidier, 1867, which includes *Androngo* Brygoo, 1982 as a subgenus and including *Voeltzkowia* Boettger, 1893 as a genus; while *Madascincus* Brygoo, 1981 *sensu lato* is divided into 4 genera, including *Pseudoacontias* Bocage, 1889 and two being newly named, with two of these in turn divided into subgenera.

In the context of the above, I note that there are over 50 currently recognized species within *Amphiglossus* Duméril and Bibron, 1839 *sensu lato* (including *Madascincus* Brygoo, 1981 *sensu lato*), but that a recent study by Miralles and Vences (2013) indicated that the actual species diversity may be in the order of about 3 times the currently accepted number, leaving in eventuality a potential average of about 14 species per genus, which implies that there is no so-called over-splitting of genera herein.

Four obviously unnamed species within *Madascincus* Brygoo, 1981 *sensu lato* are also formally described according to the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) for the first time.

These are one species within *Madascincus*, one within *Rubercaudatus gen. nov.*, and two within *Cummingscincea gen. nov.*. It is quite evident that many other species within *Amphiglossus* Duméril and Bibron, 1839 *sensu lato* (including *Madascincus* Brygoo, 1981 *sensu lato*) await formal naming.

#### ACONTINAE GRAY, 1845.

##### GENUS ACONTIAS CUVIER, 1817.

**Type species:** *Anguis meleagris* Linnaeus, 1758.

**Diagnosis:** Acontinae are defined as follows: Elongate,

limbless burrowers, characterised by a short tail which is less than 25% of length, lacking an ear opening; frontal bones paired; palatine bones separated medially; palatal ramus of pterygoid not reaching posterior margin of infraorbital vacuity, which is bordered by the palatine; Meckel's groove closed and fused; eyes small; movable transparent or translucent lower eyelid present; eyelids fused to form immovable transparent spectacle or eyes vestigial and covered by head shields; a single transversely enlarged preloacal scale.

The genus *Acontias* is defined as follows: Body moderately attenuate (SVL 20-33 times body diameter), 12-20 midbody scale rows, 145-195 ventral scale rows, subcaudals 22-46, dorsal head shields 29-50, 3-5 chin shields bordering mental, snout not strongly acutely angled, movable eyelids present, lower eyelid immovable, or eyes covered by head shields, dorsal coloration variable, dorsum solid or striped, but never pigmentless. Jugal present or absent, pectoral girdle rod-shaped or nodular, typically 21-29 (or more) caudal vertebrae.

The genus *Kalahariacontias gen. nov.* formerly often included in *Acontias* and defined in detail below is separated from the genus *Acontias* Cuvier, 1817 including *Acontophiops* Sternfeld, 1911 and *Microacontias* Daniels *et al.*, 2006 by having one as opposed to 2 or more supraciliaries.

*Kalahariacontias gen. nov.* is separated from *Typhlosaurus* in which it was formerly often included by the following suite of characters: Snout with a sharp horizontal edge and flattened below. Rostral sub equal to or a little shorter than other head shields together; mental with posterior border not incised. Three upper labials, not vertically elongated; no subocular; a single supraciliary; 12 scales round the middle of the body.

**Distribution:** Southern Africa.

**Content:** *Acontias meleagris* (Linnaeus, 1758) (type species); *A. aurantiacus* (Peters, 1854); *A. bicolor* (Hewitt, 1929); *A. breviceps* Essex, 1925; *A. cregoi* (Boulenger, 1903); *A. gracilicauda* Essex, 1925; *A. jappi* (Broadley, 1968); *A. kgalagadi* (Lamb, Biswas and Bauer, 2010); *A. lineatus* Peters, 1879; *A. litoralis* Broadley and Greer, 1969; *A. meleagris* (Linnaeus, 1758); *A. namaquensis* Hewitt, 1938; *A. occidentalis* FitzSimons, 1941; *A. orientalis* Hewitt, 1938; *A. percivali* Loveridge, 1935; *A. plumbeus* Bianconi, 1849; *A. poecilus* Bourquin and Lambris, 1996; *A. richardi* (Jacobsen, 1987); *A. rieppeli* (Lamb, Biswas and Bauer, 2010); *A. schmitzi* Wagner, Broadley and Bauer, 2012; *A. tristis* Werner, 1910.

#### SUBGENUS MICROACONTIAS LAMB ET AL. 2010.

**Type species:** *Acontias lineatus* Peters, 1879.

**Diagnosis:** Small slender bodied, with a snout vent length (SVL) ranging from 119 mm to 148 mm, tail flattened below, transparent lower eyelid, the enlarged flat rostrum, four to five upper labials, 12-14 midbody scale rows (from Lamb *et al.* 2010).

**Distribution:** South-west Africa.

**Content:** *Acontias (microacontias) lineatus* Peters, 1879 (type species); *A. (microacontias) litoralis* Broadley and Greer, 1969.

**GENUS TYPHLOSAURUS WIEGMANN, 1834.**

**Type species:** *Acontias caecus* Cuvier, 1817.

**Diagnosis:** The genus *Typhlosaurus* is defined as follows: Body highly attenuate (snout-vent 31-62 times body diameter), 10-14 midbody scale rows, 189 or more ventral scale rows (except *T. lomiae*, with 140-181), subcaudals 35-60 (except *T. lomiae* 24-27), dorsal head shields 20-27, five or more chinshields bordering mental, snout strongly acutely angled, eye covered by scales, dorsal pigmentation absent or, if present, consisting of a single or multiple stripes. Lacrimal absent (except *T. meyeri*), jugal absent, 25 or more caudal vertebrae, pectoral girdle nodular or absent.

**Distribution:** Southern Africa.

**Content:** *Typhlosaurus caecus* (Cuvier, 1817) (type species); *T. braini* Haacke, 1964; *T. lomiae* Haacke, 1986; *T. meyeri* Boettger, 1894; *T. vermis* Boulenger, 1887.

**SUBGENUS NAMIBTYPHLOSAURUS SUBGEN. NOV.**

**Type species:** *Typhlosaurus braini* Haacke, 1964.

**Diagnosis:** *Namibtyphlosaurus subgen. nov.* is readily separated from all other *Typhlosaurus* species by the extreme reduction of dorsal head shields. In this subgenus a single large head scale is present lying between the rostral and the parietals. Referred to herein as the frontal, it is presumably a fusion of the frontal, prefrontal or frontonasals and interparietal. The first 8-10 dorsal head scales behind the defined head scales are much shorter than the rest of the body scales.

Further details are provided by Haacke (1964).

The genus *Typhlosaurus* is defined as follows: Body highly attenuate (snout-vent 31-62 times body diameter), 10-14 midbody scale rows, 189 or more ventral scale rows (except *T. lomiae*, with 140-181), 35-60 subcaudals (except *T. lomiae* 24-27), 20-27 dorsal head shields, five or more chinshields bordering mental, snout strongly acutely angled, eye covered by scales, dorsal pigmentation absent or, if present, consisting of a single or multiple stripes. Lacrimal absent (except *T. meyeri*), jugal absent, 25 or more caudal vertebrae, pectoral girdle nodular or absent.

**Distribution:** Known only from the central Namib desert from Kuiseb River to Koichab River, Namibia.

**Etymology:** Named in reflection of the centre of distribution for the taxon that bears the generic name and the genus it was derived from.

**Content:** *Typhlosaurus (Namibtyphlosaurus) braini* (Haacke, 1964) (monotypic).

**SUBGENUS MARLENESWILEA SUBGEN. NOV.**

**Type species:** *Typhlosaurus meyeri* Boettger, 1894.

**Diagnosis:** *Marleneswilea subgen. nov.* is readily defined by having a lacrimal present as opposed to absent for all other *Typhlosaurus*.

Alternatively, this subgenus is separated from all other *Typhlosaurus* by the following suite of characters: Snout is conical. Rostral longer than other head shields together; Rostral a little longer than other head shields together; interparietal present; 14 midbody rows.

The genus *Typhlosaurus* is defined as follows: Body

highly attenuate (snout-vent 31-62 times body diameter), 10-14 midbody scale rows, 189 or more ventral scale rows (except *T. lomiae*, with 140-181), 35-60 subcaudals (except *T. lomiae* 24-27), 20-27 dorsal head shields, five or more chinshields bordering mental, snout strongly acutely angled, eye covered by scales, dorsal pigmentation absent or, if present, consisting of a single or multiple stripes. Lacrimal absent (except *T. (Marleneswilea) meyeri*), jugal absent, 25 or more caudal vertebrae, pectoral girdle nodular or absent.

**Distribution:** Namibia, Spencer Bay, south to Orange River and into Richtersveld, Republic of South Africa.

**Etymology:** Named in honour of Marlene Swile of Mitchell's Plain, Cape Town, South Africa in recognition of her contributions to herpetology in Africa.

**Content:** *Typhlosaurus (Marleneswilea) meyeri* (Boettger, 1894) (monotypic).

**GENUS KALAHARIACONTIAS GEN. NOV.**

**Type species:** *Typhlosaurus garipeensis* FitzSimons, 1941.

**Diagnosis:** *Kalahariacontias gen. nov.* is separated from the genus *Acontias* Cuvier, 1817 including *Acontophiops* Sternfeld, 1911 and *Microacontias* Daniels *et al.*, 2006 by having one as opposed to 2 or more supraciliaries.

*Kalahariacontias gen. nov.* is separated from *Typhlosaurus* by the following suite of characters: Snout with a sharp horizontal edge and flattened below. Rostral sub equal to or a little shorter than other head shields together; one or two supraciliaries: mental with posterior border not incised. Three upper labials, not vertically elongated; no subocular; a single supraciliary; 12 midbody rows.

*Kalahariacontias gen. nov.* is further defined as follows: Head generally more depressed and narrowed than in *Typhlosaurus lineatus* Boulenger, 1887. Snout strongly projecting, flattened inferiorly: with a sharp horizontal edge. Rostral as long as other head shields together; posterior border more or less straight. Frontonasal very broad, slightly less than three times as broad as long, forming a broad suture with rostral. Frontal subpentagonal: a little narrower than frontonasal but almost twice as long. A pair of parietals in contact with one another behind frontal. Eye just discernible as a dark spot below suture of two small oculars, which rest on the first upper labial; anterior ocular in contact with a moderately large loreal, which separates the first upper labial from the frontonasal above; a small supraciliary between posterior ocular and anterior supraocular; a large postocular resting on the first and second upper labials; two supraoculars, the anterior larger and in contact with loreal and anterior ocular. Three upper labials, first largest and as long as deep, third smallest (labials not vertically elongate as in *T. lineatus*). Mental large, extending about as far back as the rostral, posterior border feebly convex. Three lower labials. Scales on body hexagonal much broader than long, those of two median dorsal rows being broadest and over twice as broad as long; twelve midbody rows of scales. A single large, semicircular preanal plate. Tail



very short and obtusely pointed at the end.

Colour is dorsally, yellow. with four longitudinal series of dark brown spots over back and tail, those of the two median rows (arising on parietals) are larger, confluent and broadest on tail; outer series of spots from eye are confluent only on tail; a short stripe on side of head from posterior end nasal groove, passing through eye and fading out on side of neck. Sides and lower surfaces creamy yellow.

Dimensions based on the holotype of "*Typhlosaurus garipeensis* FitzSimons, 1941", (Type SAM, No. 11232), Head and body 110 mm, tail 20 mm, length of head (to posterior border parietals) 4.5 mm, breadth head 3.1 mm.

**Distribution:** South-west Botswana (Kalahari Gemsbok National Park), Namibia and the Republic of South Africa (Northern cape Province).

**Etymology:** Named in reflection of the centre of distribution for the taxon that bears the generic name and the genus it was derived from.

**Content:** *Kalahariacontias garipeensis* (FitzSimons, 1941) (monotypic).

#### SUBFAMILY ACONTINAE, GRAY, 1845.

(Terminal taxon: *Anguis meleagris* Linnaeus, 1758).

**Diagnosis:** Elongate, limbless burrowers, characterised by a short tail which is less than 25% of length, lacking an ear opening; frontal bones paired; palatine bones separated medially; palatal ramus of pterygoid not reaching posterior margin of infraorbital vacuity, which is bordered by palatine; Meckel's groove closed and fused; eyes small; movable transparent or translucent lower eyelid present; eyelids fused to form immovable transparent spectacle or eyes vestigial and covered by head shields; a single transversely enlarged preloacal scale.

**Distribution:** Southern Africa.

**Content:** *Acontias* Cuvier, 1817 (including subgenus *Microacontias* Daniels *et al.*, 2006); *Kalahariacontias gen. nov.*; *Typhlosaurus* Wiegmann, 1834 (including subgenera *Namibtyphlosaurus subgen. nov.* and *Marleneswilea subgen. nov.*).

#### TRIBE ACONTININI, GRAY, 1845.

(Terminal taxon: *Anguis meleagris* Linnaeus, 1758).

**Diagnosis:** Elongate, limbless burrowers, characterised by a short tail which is less than 25% of length, lacking an ear opening; frontal bones paired; palatine bones separated medially; palatal ramus of pterygoid not reaching posterior margin of infraorbital vacuity, which is bordered by palatine; Meckel's groove closed and fused; eyes small; movable transparent or translucent lower eyelid present; eyelids fused to form immovable transparent spectacle or eyes vestigial and covered by head shields; a single transversely enlarged preloacal scale.

**Distribution:** Southern Africa.

**Content:** *Acontias* Cuvier, 1817 (including subgenus *Microacontias* Daniels *et al.*, 2006); *Kalahariacontias gen. nov.*; *Typhlosaurus* Wiegmann, 1834 (including subgenera *Namibtyphlosaurus subgen. nov.* and *Marleneswilea subgen. nov.*).

#### SUBTRIBE ACONTININI, GRAY, 1845.

(Terminal taxon: *Anguis meleagris* Linnaeus, 1758).

**Diagnosis:** This subtribe is defined as being one or other of:

1/ Lower eyelid movable, elongate, transparent or translucent and with 3-4 supraciliaries, or,

2/ Lower eyelid immovable, oval and transparent; 2 supraciliaries, or,

3/ Snout with a sharp horizontal edge and flattened below. Rostral sub equal to or a little shorter than other head shields together; one or two supraciliaries: mental with posterior border not incised. Three upper labials, not vertically elongated; no subocular; a single supraciliary; 12 scales round the middle of the body.

**Distribution:** Southern Africa.

**Content:** *Acontias* Cuvier, 1817 (including subgenus *Microacontias* Daniels *et al.*, 2006); *Kalahariacontias gen. nov.*

#### SUBTRIBE TYPHLOSOURIINA SUBTRIBE NOV.

(Terminal taxon: *Acontias caecus* Cuvier, 1817).

**Diagnosis:** The subtribe can be simply defined as by exclusion of the other subtribe Acontinini Gray, 1845.

The genus *Typhlosaurus* is defined as follows: Body highly attenuate (snout-vent 31-62 times body diameter), 10-14 midbody scale rows, 189 or more ventral scale rows (except *T. lomiae*, with 140-181), 35-60 subcaudals (except *T. lomiae* 24-27), 20-27 dorsal head shields, five or more chinshields bordering mental, snout strongly acutely angled, eye covered by scales, dorsal pigmentation absent or, if present, consisting of a single or multiple stripes. Lacrimal absent (except *T. (Marleneswilea) meyeri*), jugal absent, 25 or more caudal vertebrae, pectoral girdle nodular or absent.

*Namibtyphlosaurus subgen. nov.* is readily separated from all other *Typhlosaurus* species by the extreme reduction of dorsal head shields. In this subgenus a single large head scale is present lying between the rostral and the parietals. Referred to herein as the frontal, it is presumably a fusion of the frontal, prefrontal or frontonasals and interparietal. The first 8-10 head scales behind the defined head scales are much shorter than the rest of the body scales.

Further details are provided by Haacke (1964).

Acontinini Gray, 1845 are defined as elongate, limbless burrowers, characterised by a short tail which is less than 25% of length, lacking an ear opening; frontal bones paired; palatine bones separated medially; palatal ramus of pterygoid not reaching posterior margin of infraorbital vacuity, which is bordered by palatine; Meckel's groove closed and fused; eyes small; movable transparent or translucent lower eyelid present; eyelids fused to form immovable transparent spectacle or eyes vestigial and covered by head shields; a single transversely enlarged preloacal scale.

**Distribution:** Southern Africa.

**Content:** *Typhlosaurus* Wiegmann, 1834 (including subgenera *Namibtyphlosaurus subgen. nov.* and *Marleneswilea subgen. nov.*).

**SCINCINAE GRAY, 1825.****GENUS MESOSCINCUS GRIFFITH ET AL. 2000.**

**Type species:** *Eumeces schwartzei* Fischer, 1884.

**Diagnosis:** The genus *Mesoscincus* Griffith *et al.*, 2000, is herein defined as follows: 27 presacral vertebrae.

Limbs relatively slender, lamellae not expanded. Dorsal surface of head somewhat depressed in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism not distinct. Scales shiny, separated by shallow sutures.

Two loreals, followed by three presubocular scales. Post-nasal scales present. Palpebral and superciliary scales not separated by a groove. Elevated numbers (4 or 5 pairs) of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlies small lateral pair. Ear lobules small and rounded, but conspicuous. Color pattern variable, but generally consists of irregular spots and longitudinal striping. 14 Nuchals; 34 middorsals; legs meeting; anteriorly with three broad stripes; posteriorly with spots in lines.

The genus *Culexlineatascincus gen. nov.* defined herein is separated from *Mesoscincus* Griffith *et al.*, 2000 by having 17 nuchals; 52 middorsals; legs widely separated, and no broad stripes but spots in lines.

**Distribution:** Mexico (Michoacán, Yucatan, Tabasco, Campeche), Guatemala, Belize.

**Content:** *Mesoscincus schwartzei* (Fischer, 1884) (type species); *M. altamirani* (Duges, 1891).

**GENUS CULEXLINEATASCINCUS GEN. NOV.**

**Type species:** *Eumeces managuae* Dunn, 1933.

**Diagnosis:** The genus *Culexlineatascincus gen. nov.* defined herein is separated from *Mesoscincus* Griffith *et al.*, 2000 by having 17 nuchals; 52 middorsals; legs widely separated, and no broad stripes but spots in lines, versus 14 nuchals; 34 middorsals; legs meeting; anteriorly with three broad stripes; posteriorly with spots in lines.

Both the genus *Culexlineatascincus gen. nov.* and the genus *Mesoscincus* Griffith *et al.*, 2000, are further defined and separated from all other skink genera by the following suite of characters:

27 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Dorsal surface of head somewhat depressed in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by three presubocular scales. Post-nasal scales present. Palpebral and superciliary scales not separated by a groove. Elevated numbers (4 or 5 pairs) of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlies small lateral pair. Ear lobules small and rounded, but conspicuous. Color pattern variable, but generally consists of irregular spots and longitudinal striping in some form.

**Distribution:** Costa Rica, Nicaragua, Honduras, El Salvador along the Pacific Coast.

**Ertmology:** From the Latin with reference to the

colouration of the lizards, usually spotted in a linear manner and with additional reference to the fact it is a skink lizard.

**Content:** *Culexlineatascincus managuae* (Dunn, 1933) (monotypic).

**GENUS OPHIOMORUS DUMÉRIL AND BIBRON, 1839.**

**Type species:** *Anguis punctatissimus* Bibron and Bory De St. Vincent, 1833.

**Diagnosis:** The genus *Ophiomorus* and all other species formerly included in the genus are defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Ophiomorus* is separated from the other genera (defined immediately below) by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Starkeyscincus gen. nov.* is separated from the other genera by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus gen. nov.* is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

**Distribution:** Southern Greece (*Ophiomorus punctatissimus* (Bibron and Bory De St. Vincent, 1833)) and South-west Turkey (*Ophiomorus macconchiei sp. nov.*).

**Content:** *Ophiomorus punctatissimus* (Bibron and Bory De St. Vincent, 1833) (type species); *O. macconchiei sp. nov.*

**SPECIES OPHIOMORUS MACCONCHIEI SP. NOV.**

**Holotype:** Specimen number AMNH 17819, at the American Museum of Natural History, New York, USA, collected from Xanthus, Turkey.

The American Museum of Natural History is a facility that allows access to specimens by scientists.

**Diagnosis:** *Ophiomorus macconchiei sp. nov.* has until now been treated as a regional variant of *Ophiomorus punctatissimus* (Bibron and Bory De St. Vincent, 1833). However it is readily distinguished by consistent

differences in markings on the head. *Ophiomorus macconchiei* sp. nov. is characterised by having dark bars on the upper labials in front of the eye, as opposed to mere flecks or occasionally darkening along the scale sutures as seen in *O. punctatissimus*.

The lower labials of *O. macconchiei* sp. nov. are characterised by a pattern of thick dark bars or triangles versus small dark spots or flecks in *O. punctatissimus*. In *O. macconchiei* sp. nov. the lower preocular is substantially larger than the upper one, versus both being the same size in *O. punctatissimus*.

Both species (*O. punctatissimus* and *O. macconchiei* sp. nov.) are separated from all others within *Ophiomorus sensu lato* by the following suite of characters:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Ophiomorus* is separated from the other genera (defined immediately below), by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Starkeyscincus* gen. nov. is separated from the other genera by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus* gen. nov. is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

**Distribution:** Known only from a few localities in south-west Turkey generally near the type locality.

**Etymology:** Named in honour of Lachlan McConchie a practicing lawyer from Donvale, Victoria, Australia, for services to environmental law and fighting entrenched government corruption.

#### GENUS *STARKEYSCINCUS* GEN. NOV.

**Type species:** *Ophiomorus latastii* Günther, 1864.

**Diagnosis:** The genus *Ophiomorus* and all other species formerly included in the genus are defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided

transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Starkeyscincus* gen. nov. is separated from the other genera (all formerly treated as within *Ophiomorus*) by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Ophiomorus* is separated from the other genera by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus* gen. nov. is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

**Distribution:** Israel, South-west Syria, Lebanon and North-west Jordan.

**Etymology:** Named after Brian Starkey of Ravenshoe, north Queensland, Australia in recognition of many decades of work with Australian reptiles, often in very difficult circumstances.

**Content:** *Starkeyscincus latastii* (Günther, 1864) (monotypic).

#### GENUS *HEMIPODION* STEINDACHNER, 1867.

**Type species:** *Hemipodion persicum* Steindachner, 1867.

**Diagnosis:** The genus *Ophiomorus* and all other species formerly included in the genus are defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Ophiomorus* is separated from the other genera defined herein by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Starkeyscincus* gen. nov. is separated from the other genera by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout

obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus gen. nov.* is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

**Distribution:** Zagros Mountains in South-west Iran.

**Content:** *Hemipodion persicum* Steindachner, 1867 (monotypic).

#### GENUS ZYGNOPSIS BLANFORD, 1874.

**Type species:** *Zygnopsis brevipes* Blanford, 1874.

**Diagnosis:** The genus *Ophiomorus* and all other species formerly included in the genus are defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Ophiomorus* is separated from the other genera defined herein by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Starkeyscincus gen. nov.* is separated from the other genera by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus gen. nov.* is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

**Distribution:** Iran, Pakistan, Afghanistan, south Turkmenistan.

**Content:** *Zygnopsis brevipes* Blanford, 1874 (type species); *Z. chernovi* (Anderson and Leviton, 1966); *Z. blanfordi* (Blanford, 1879); *Z. nuchalis* (Nilson and Andren, 1978).

#### GENUS PELLEIUS GEN. NOV..

**Type species:** *Sphenocephalus tridactylus* Blyth, 1853.

**Diagnosis:** The genus *Ophiomorus* and all other species formerly included in the genus are defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The genus *Ophiomorus* is separated from the other genera defined herein by the following characters: praefrontals present, small, widely separated; frontonasal not half as long as the frontal and no limbs.

The genus *Starkeyscincus gen. nov.* is separated from the other genera by the following characters: No praefrontals; frontonasal nearly as long as the frontal and no limbs.

The genus *Hemipodion* Steindachner, 1867 is separated from the other genera by the following characters: Snout obtusely conical; Limbs present with three fingers and two toes.

The genus *Zygnopsis* Blanford, 1874 is separated from the other genera by the following: Limbs present with four fingers and three toes and the snout is either wedge-shaped, with angular labial edge, or alternatively the snout is obtusely conical.

The genus *Pelleyus gen. nov.* is separated from the other genera by the following:

Limbs present with three fingers and three toes; snout wedge-shaped, with angular labial edge.

The potential genus name for this group, *Sphenocephalus* Blyth, 1853 is pre-occupied by the name *Sphenocephalus* Agassiz 1838 for a group of fossil fishes and hence unavailable.

**Distribution:** Iran, Pakistan, South Afghanistan and north-west India (Gujarat, Rajasthan, Punjab).

**Etymology:** Named after Doreen, (Melbourne), Victoria, Australia snake catcher, Mark Pelley, who has spent time in Pakistan working with reptiles, in recognition for his work with Australian reptiles.

**Content:** *Pelleyus tridactylus* (Blyth, 1853) (type species); *P. streeti* (Anderson and Leviton, 1966); *P. raithmai* Anderson and Leviton, 1966; *P. maranjabensis* Kazemi, Qomi, Kami and Anderson, 2011.

#### SPECIES PELLEIUS PELLEI SP. NOV.

**Holotype:** Specimen number BM 1936.9.11.1 at the British Museum of Natural History, now the Museum of Natural History, London, UK, collected at Punjab (Pakistan/India).

The Museum of Natural History is a government-owned facility that allows scientists access to their holdings.

**Paratype:** Specimen number BM 68.4.3.71 at the British Museum of Natural History, now the Museum of Natural History, London, UK, collected at Punjab (Pakistan/India).

**Diagnosis:** Previously this taxon was regarded as a variant of *Pelleyus tridactylus* Blyth, 1853.

*Pelleyus pelleyi sp. nov.* differs from the nominate form of *Pelleyus tridactylus* Blyth, 1853 from Afghanistan and Iran in that they are noticeably heavier bodied by simple

physical comparison.

*Pelleyus pelleyi* sp. nov. is also defined by a complete lack color pattern on the body, limbs and tail. *Pelleyus pelleyi* sp. nov. is further characterised by a light brown line from the nostril through the eye to the temporal region and a few faint brown markings on the median head shields.

Both *Pelleyus tridactylus* Blyth, 1853 and *Pelleyus pelleyi* sp. nov. are separated from all other *Pelleyus* gen. nov. by the following suite of characters: Limbs present; 3 fingers, 3 toes, 20 or more mid-body scale rows; parietals not in contact; prefrontals in contact with upper labials; parietal in contact with anterior temporal; postocular scale about as large as posterior suboculars; usually 7 or 8 scales on the third (the longest) toe.

**Distribution:** Known only from the Punjab region of Pakistan and adjoining India.

**Etymology:** Named after Doreen, (Melbourne), Victoria, Australia snake catcher, Mark Pelley, who has spent time in Pakistan working with reptiles, in recognition for his work with Australian reptiles. Incidentally, his wife is from Pakistan.

**SUBSPECIES PELLEIUS RAIHMAI PUNJABENSIS SUBSP. NOV.**

**Holotype:** Specimen number 70.11.29.39 at the British Museum of Natural History (now the Natural History Museum), London, UK, collected by T. C. Jerdon from Punjab (Pakistan/India).

The Museum of Natural History is a government-owned facility that allows scientists access to their holdings.

**Paratypes:** Specimen numbers 70.11.29.39A, 70.11.29.39B and 70.11.29.39C at the British Museum of Natural History (now the Natural History Museum), London, UK, collected by T. C. Jerdon from Punjab (Pakistan/India).

**Diagnosis:** This subspecies is separated from the nominate form from south-west of the Indus River by having seven scales on the longest toe in lateral aspect (versus 4-5 in the nominate form).

*Pelleyus raihmai punjabensis* subsp. nov. is further defined by a dorsal pattern of dark spots linearly arranged that is very faint and much reduced, the spots being scattered on the eight dorsal scale rows (versus a well-defined pattern in the nominate form).

Anderson and Leviton (1966) said of these specimens that "These specimens may represent a distinct population in the sandy regions east of the Indus River." Noting that there is a sizeable zone where the species is absent and that the latter form is consistently different from the nominate one, it is appropriate that it is taxonomically recognized.

Molecular analysis of relevant specimens may necessitate the elevation of *Pelleyus raihmai punjabensis* subsp. nov. to full species status.

Both *Pelleyus raihmai punjabensis* subsp. nov. and the nominate form are separated from all other *Pelleyus* gen. nov., *Ophiomorus*, *Starkeyscincus* gen. nov., *Hemipodion* and *Zygnopsis* by the following suite of characters:

Limbs present, 20 or more midbody scale rows; 3 toes and 3 fingers; prefrontals in contact with upper labials; parietal not in contact with anterior temporal (posterior temporal intervenes); postocular scale much larger than posterior suboculars; 4-7 scales on the third (the longest toe).

**Distribution:** Known only from Punjab (Pakistan/India).

**Etymology:** Named in reflection of the region the taxon emanates from.

**TRIBE STARKEYSCINCIINI TRIBE NOV.**

**(Terminal taxon: *Ophiomorus latastii* Günther, 1864).**

**Diagnosis:** The tribe is diagnosed by one or other of the following:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent (subtribe *Starkeyscinciina subtribe nov.*), or:

27 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Dorsal surface of head somewhat depressed in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by three presubocular scales. Post-nasal scales present. Palpebral and superciliary scales not separated by a groove. Elevated numbers (4 or 5 pairs) of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules small and rounded, but conspicuous. Color pattern variable, but generally consists of irregular spots and longitudinal striping (subtribe *Culexlineatascinciina subtribe nov.*).

**Content:** *Starkeyscincus* gen. nov.; *Culexlineatascincus* gen. nov.; *Hemipodion* Steindachner, 1867; *Mesoscincus* Griffith et al., 2000; *Ophiomorus* Duméril and Bibron, 1839; *Pelleyus* gen. nov.; *Zygnopsis* Blanford, 1874.

**SUBTRIBE STARKEYSCINCIINA TRIBE NOV.**

**(Terminal taxon: *Ophiomorus latastii* Günther, 1864).**

**Diagnosis:** The subtribe is diagnosed by the following:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongate: limbs rudimentary or absent.

The other subtribe within the tribe, namely *Culexlineatascinciina subtribe nov.* is defined as follows: 27 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Dorsal surface of head somewhat depressed in lateral view, parietal bone with

clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by three presubocular scales. Post-nasal scales present. Palpebral and superciliary scales not separated by a groove. Elevated numbers (4 or 5 pairs) of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlies small lateral pair. Ear lobules small and rounded, but conspicuous. Color pattern variable, but generally consists of irregular spots and longitudinal striping.

**Content:** *Starkeyscincus gen. nov.*; *Hemipodion* Steindachner, 1867; *Ophiomorus* Duméril and Bibron, 1839; *Pelleyus gen. nov.*; *Zygnopsis* Blanford, 1874.

**SUBTRIBE CULEXLINEATASCINCIINA TRIBE NOV. (Terminal taxon: *Eumeces managuae* Dunn, 1933).**

**Diagnosis:** The subtribe is diagnosed by the following: 27 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Dorsal surface of head somewhat depressed in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by three presubocular scales. Post-nasal scales present. Palpebral and superciliary scales not separated by a groove. Elevated numbers (4 or 5 pairs) of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlies small lateral pair. Ear lobules small and rounded, but conspicuous. Color pattern variable, but generally consists of irregular spots and longitudinal striping.

The other subtribe in the tribe, namely *Starkeyscinciina subtribe nov.* is defined as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Eye small; lower eyelid with an undivided transparent disk. Ear hidden or hardly distinguishable. Nostril pierced in the suture between a nasal and a supranasal; praefrontals very small or absent; frontoparietals small, distinct from interparietal. Body much elongated: limbs rudimentary or absent.

**Content:** *Culexlineatascincus gen. nov.*; *Mesoscincus* Griffith *et al.*, 2000.

**GENUS BRACHYMELES DUMÉRIL AND BIBRON, 1839.**

**Type species:** *Brachymeles bonitae* Duméril and Bibron, 1839.

**Diagnosis:** The genus is defined as follows: Palatine bones not meeting on the median line of the palate, which is toothless. Lateral teeth conical. Eye small; upper eyelid not developed, lower is more or less transparent. Ear distinct or hidden. Nostril in a very small nasal, between the rostral, the first labial, the supranasal. and sometimes, a postnasal; praefrontals, frontoparietals, and interparietal present. Body very elongate; limbs short or rudimentary.

Further defined by the following: Five supraoculars, first and second in contact with the frontal, second broadest;

five or six supraciliaries; no nuchals; two loreals; first upper labial largest: a single labial entering the orbit; a single azygos postmental. Digits, if distinct, very short, feebly compressed, with feebly uncarinate lamellae inferiorly. Praeanal scales not or scarcely enlarged.

Specimens that fit the diagnosis above but with a complete absence of limbs, dark tail color and a small elongated temporal scale below the parietal are in the genus *Parabrachymeles gen. nov.*, which occurs on the island of Borneo, as opposed to the Philippines (most of *Brachymeles* excluding the subgenus *Davewakeum* Heyer, 1972).

**Distribution:** Philippines (mainly) and Thailand (subgenus *Davewakeum* Heyer, 1972).

**Content:** *Brachymeles bonitae* Duméril and Bibron, 1839 (type species); *B. bicolandia* Siler, Fuiten, Jones, Alcalá and Brown, 2011; *B. bicolor* (Gray, 1845); *B. boholensis* Brown and Rabor, 1967; *B. boulengeri* Taylor, 1922; *B. brevidactylus* Siler, Fuiten, Jones, Alcalá and Brown, 2011; *B. cebuensis* Brown and Rabor, 1967; *B. cobos* Siler, Fuiten, Jones, Alcalá and Brown, 2011; *B. elerae* Taylor, 1917; *B. gracilis* (Fischer, 1885); *B. hilong* (Brown and Rabor, 1967); *B. isangdaliri* Davis, Feller, Brown and Siler, 2014; *B. kadwa* Siler and Brown, 2010; *B. libayani* Siler, Fuiten, Jones, Alcalá and Brown, 2011; *B. lukbani* Siler, Balete, Diesmos and Brown, 2010; *B. makusog* Siler, Diesmos and Brown, 2010; *B. mapalanggaon* Davis, Feller, Brown and Siler, 2014; *B. mindorensis* Brown and Rabor, 1967; *B. minimus* Brown and Alcalá, 1995; *B. miriamae* (Heyer, 1972); *B. muntingkamay* Siler, Rico, Duya and Brown, 2009; *B. orientalis* Brown and Rabor, 1967; *B. paeforum* Siler, Fuiten, Jones, Alcalá and Brown, 2011; *B. pathfinderi* Taylor, 1925; *B. samad* Siler, Jones, Diesmos, Diesmos and Brown, 2012; *B. samarensis* Brown, 1956; *B. schadenbergi* (Fischer, 1885); *B. suluensis* Taylor, 1918; *B. talinis* Brown, 1956; *B. taylori* Brown, 1956; *B. tiboliorum* Siler, Jones, Diesmos, Diesmos and Brown, 2012; *B. tridactylus* Brown, 1956; *B. tungaoi* Siler and Brown, 2010; *B. vermis* Taylor, 1918; *B. vindumi* Siler and Brown, 2010; *B. vulcani* Siler, Jones, Diesmos, Diesmos and Brown, 2012; *B. wrighti* Taylor, 1925.

**GENUS PARABRACHYMELES GEN. NOV.**

**Type species:** *Brachymeles apus* Hikida, 1982.

**Diagnosis:** The genera *Brachymeles* Duméril and Bibron, 1839 and *Parabrachymeles gen. nov.* are defined as follows: Palatine bones not meeting on the median line of the palate, which is toothless. Lateral teeth conical. Eye small; upper eyelid not developed, lower is more or less transparent. Ear distinct or hidden. Nostril in a very small nasal, between the rostral, the first labial, the supranasal. and sometimes, a postnasal; praefrontals, frontoparietals, and interparietal present. Body very elongate; limbs short or rudimentary.

Further defined by the following: Five supraoculars, first and second in contact with the frontal, second broadest; five or six supraciliaries; no nuchals; two loreals; first upper labial largest: a single labial entering the orbit; a single azygos postmental. Digits, if distinct, very short, feebly compressed, with feebly uncarinate lamellae inferiorly. Praeanal scales not or scarcely enlarged.

*Parabrachymeles gen. nov.* are separated from *Brachymeles* by the following suite of characters: A complete absence of limbs, dark tail color and a small elongated temporal scale below the parietal.

*Parabrachymeles gen. nov.*, occurs on the island of Borneo, as opposed to the Philippines (or Thailand).

**Distribution:** Known only from the type locality, Bundu Tuhan (altitude about 1300 m, 6° 01' S, 116° 32' E), near the headquarters of the Kinabalu National Park, Mt. Kinabalu, Sabah, Malaysia.

**Etymology:** Named in reflection of the similarity to the genus the species within this genus was formerly placed, as in not quite one of them.

**Content:** *Parabrachymeles apus* (Hikida, 1982) (monotypic).

#### TRIBE PARABRACHYMELIINI TRIBE NOV.

(Terminal taxon: *Brachymeles apus* Hikida, 1982).

**Diagnosis:** The entire tribe consisting of the extant genera *Brachymeles* Duméril and Bibron, 1839 and *Parabrachymeles gen. nov.* are defined as follows: Palatine bones not meeting on the median line of the palate, which is toothless. Lateral teeth conical. Eye small; upper eyelid not developed, lower is more or less transparent. Ear distinct or hidden. Nostril in a very small nasal, between the rostral, the first labial, the supranasal. and sometimes, a postnasal; praefrontals, frontoparietals, and interparietal present. Body very elongate; limbs short or rudimentary.

Further defined by the following: Five supraoculars, first and second in contact with the frontal, second broadest; five or six supraciliaries; no nuchals; two loreals; first upper labial largest: a single labial entering the orbit; a single azygos postmental. Digits, if distinct, very short, feebly compressed, with feebly uncarinate lamellae inferiorly. Praeanal scales not or scarcely enlarged.

**Distribution:** Thailand, Philippines, Borneo and adjacent small islands.

**Content:** *Brachymeles* Duméril and Bibron, 1839; *Parabrachymeles gen. nov.*

#### GENUS PLESTIODON DUMÉRIL AND BIBRON, 1839.

**Type species:** *Lacerta fasciata* Linnaeus, 1758.

(*Plestiodon quinquelineatus* Duméril and Bibron, 1839 [= *P. fasciatus* (Linnaeus)], by subsequent designation (Fitzinger, 1843).

**Diagnosis:** The genus *Plestiodon sensu-lato* (as recognized until now) is defined as follows: 26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregious* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not

broadened, not fused. Lateral preanal scales overlies medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The above referred to group of lizards contains nearly 50 recognized species, but many subspecies forms within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused with *Plestiodon* and including species previously treated as congeneric (either within *Plestiodon* or *Eumeces* Wiegmann, 1834) are defined herein to remove any potential doubt as to which species should now be placed where. The following genera are previously defined and used by other authors, but redefined here to conform with the taxonomy presented herein.

The genus *Scincus* Laurenti, 1768, similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on a pale background.

The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa and is separated from *Plestiodon* and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus* subgen. nov. as formally named in this paper) is essentially similar to the subgenus *Scincopus*,

but readily separated from it by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk.

Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to north Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk.

Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

This is versus 30 or 32 scales round the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus* subgen. nov. as formally named in this paper).

*Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000 by the following unique suite of characters:

Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by a groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and a broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

The genus *Plestiodon sensu-lato* (as recognized until now) (defined above) has been split into 8 genera, with a further 10 subgenera split from these in order to provide nomenclature to match the taxonomy derived from the well-established morphological and molecular evidence, which also happens to match geographical distributions of the relevant taxa. Within this assemblage two available names are resurrected from synonymy, *Neoseps*, Stejneger, 1910 as a genus and *Pariocela* Fitzinger, 1843 as a subgenus within *Plestiodon*. All the other genera and subgenera are formally named for the first time according to the *International Code of Zoological Nomenclature* with the majority of names being derived from the geographical location the species tend to be found.

*Plestiodon* as defined herein is separated from all other species (and genera) formerly included within *Plestiodon* by one or other of the following four suites of characters:

1/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 26 or 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. No postnasal or if present extremely tiny; supranasal in contact with the praefrontal and/or anterior loreal forming a suture with the frontonasal (species *fasciatus*, *multilineatus*, *multivirgatus*, *tetragrammus* and *septentrionalis*) (subgenus *Plestiodon*), or:

2/ 30-32 mid-body rows, 5 labials anterior to the subocular, no enlarged postlabials (the scales immediately posterior to the final triangular-shaped supralabial), middle row of scales under the tail is either wider than the rest (species *laticeps*) or same width as the rest (species *inexpectatus*) (subgenus *Pariocela* Fitzinger, 1843), or:

3/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. postnasal; anterior loreal usually forming a suture with the frontonasal. Colouration either dorsally brown with a thick black stripe along the upper flanks and a pale Y on the top of the head (species *callicephalus*), or alternatively with a network of heavy dark brown or black spotting, with scale rows on the side appearing to be diagonal to the dorsal rows or if young blackish with white spots on the labials (species *obsoletus*) (subgenus *Mexicoscincus* subgen. nov.), or:

4/ No postnasal; anterior loreal reaching the frontonasal; five supraoculars. 24 scales round the body. Upper parts dark bronze, with four narrow longitudinal yellow lines on the body and on each side a well-defined broad band of anthracite-black; head red in the adult; lower surfaces yellowish white (species *anthracinus*) (subgenus *Mississippiscincus* subgen. nov.).

The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: one or other of:



1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus subgen. nov.*), or:

2/ Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

The genus *Californiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal; four supraoculars, the two or three anterior in contact with the frontal; parietals entirely separated by the interparietal; one or two pairs of nuchals; seventh or eighth upper labial largest; two or three obtuse lobules on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. 24 or 26 scales round the body, the dorsals much broader than the laterals and ventrals. Limbs overlapping (sometimes very slightly) when pressed against the body; the length of the hind limb is contained twice and a half to twice and two thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Colouration is one or other of:

1/ In adults olive above, with a dark brown lateral band extending from the loreal region to the tail; this band is bordered above and below by a light streak, which is again edged with dark brown; throat and lips yellowish; belly bluish grey, and in juveniles with a blue tail and the dark lateral stripe extends well out onto the tail (species: *skiltonianus* and *lagunensis*), or:

2/ In adults plain olive or brown above with varied amounts of dark spotting. Young with a blue or red tail; dark lateral stripe stops at the base of the tail (species *gilberti*).

The genus *Bermudascincus gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. The length of the hind limb is not more than twice and a half in the distance from snout to vent. A postnasal; 36 to 42 mid-body rows.

The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

*Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the

interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea* subgen. nov.), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus* subgen. nov. is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

Genus *Asiascincus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white,

the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus* subgen. nov.), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two

postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus.

The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus* subgen. nov.), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus* subgen. nov., *Japanscincus* subgen. nov., *Ryukyuscincus* subgen. nov.).

The subgenus *Japanscincus* subgen. nov. is separated from *Asiascincus* subgen. nov. by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus* subgen. nov. is separated from *Ryukyuscincus* subgen. nov. by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus* subgen. nov. is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus* gen. nov. by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus* subgen. nov. is separated from all other genera and subgenera formally placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

The genus *Adelynhoserscincea* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters,

being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** The centre of distribution for *Plestiodon* is the United States of America and immediately adjacent areas, although some species have been transported by humans to other locations where they appear to have become established.

**Content:** *Plestiodon fasciatus* (Linnaeus, 1758) (type species); *P. anthracinus* Baird, 1849; *P. callicephalus* (Bocourt, 1879); *P. inexpectatus* (Taylor, 1932); *P. laticeps* (Schneider, 1801); *P. multilineatus* (Tanner, 1957); *P. multivirgatus* Hallowell, 1857; *P. obsoletus* Baird and Girard, 1852; *P. septentrionalis* Baird, 1858; *P. tetragrammus* Baird, 1859.

#### **SUBGENUS PLESTIODON DUMÉRIL AND BIBRON, 1849.**

**Type species:** *Lacerta fasciata* Linnaeus, 1758.

(*Plestiodon quinquelineatum* Duméril and Bibron, 1839 [= *P. fasciatus* (Linnaeus)], by subsequent designation (Fitzinger, 1843).

**Diagnosis:** Specimens within the subgenus *Plestiodon* are separated from all other *Plestiodon* as defined already in this paper, by the following suite of characters:

Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 26 or 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. No postnasal or if present extremely tiny; supranasal in contact with the praefrontal and/or anterior loreal forming a suture with the frontonasal

**Distribution:** Generally the USA and nearby parts of Canada and Mexico.

**Content:** *Plestiodon fasciatus* (Linnaeus, 1758) (type species); *P. multilineatus* (Tanner, 1957); *P. multivirgatus* Hallowell, 1857; *P. septentrionalis* Baird, 1858; *P. tetragrammus* Baird, 1859.

#### **SUBGENUS PARIOCELA FITZINGER, 1843.**

**Type species:** *Scincus laticeps* Schneider, 1801.

**Diagnosis:** Specimens within the subgenus *Pariocela* are separated from all other *Plestiodon* as defined already in this paper, by the following suite of characters: 30-32 mid-body rows, 5 labials anterior to the subocular, no enlarged postlabials (the scales immediately posterior to the final triangular-shaped supralabial), middle row of scales under the tail is either wider than the rest (species *laticeps*) or same width as the rest (species *inexpectatus*).

**Distribution:** Central, eastern USA, including Florida.

**Content:** *P. (Pariocela) laticeps* (Schneider, 1801) (type species); *P. (Pariocela) inexpectatus* (Taylor, 1932).

#### **SUBGENUS MEXICOSCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon obsoletum* Baird and Girard, 1852.

**Diagnosis:** The subgenus *Mexicoscincus subgen. nov.* are separated from all other *Plestiodon* as defined already in this paper, by the following suite of characters, being one or other of:

1/ A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. A postnasal; anterior loreal usually forming a suture with the frontonasal. Colouration either dorsally brown with a thick black stripe along the upper flanks and a pale Y on the top of the head (species *callicephalus*), or:

2/ A network of heavy dark brown or black spotting, with scale rows on the side appearing to be diagonal to the dorsal rows or if young, blackish with white spots on the labials (species *obsoletus*).

**Distribution:** Southern USA and northern Mexico.

**Etymology:** Named with reference to the location the skinks are found and their lizard type.

**Content:** *Plestiodon (Mexicoscincus) obsoletus* Baird and Girard, 1852 (type species); *P. (Mexicoscincus) callicephalus* (Bocourt, 1879).

**SUBGENUS MISSISSIPPISCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon anthracinus* Baird, 1849.

**Diagnosis:** The subgenus *Mississippiscincus subgen. nov.* are separated from all other *Plestiodon* as defined already in this paper, by the following suite of characters:

No postnasal: anterior loreal reaching the frontonasal; five supraoculars. 24 scales round the body. Upper parts dark bronze, with four narrow longitudinal yellow lines on the body and on each side a well-defined broad band of anthracite-black; head red in the adult; lower surfaces yellowish white (species *anthracinus*).

**Distribution:** South-eastern states of the USA.

**Etymology:** Named with reference to the location the skinks are found and their lizard type.

**Content:** *Plestiodon (Mississippiscincus) anthracinus* Baird, 1849 (monotypic).

**GENUS NEOSEPS STEJNEGER, 1910.**

**Type species:** *Neoseps reynoldsi* Stejneger, 1910.

**Diagnosis:** The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus (defined within this paper already) and all other genera formally defined in this paper by the following suite of characters: one or other of:

1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus subgen. nov.*), or:

2/ Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

**Distribution:** Florida, Georgia and Alabama, USA.

**Content:** *Neoseps reynoldsi* Stejneger, 1910 (type species); *N. egregius* (Baird 1858).

**SUBGENUS NEOSEPS STEJNEGER, 1910.**

**Type species:** *Neoseps reynoldsi* Stejneger, 1910.

**Diagnosis:** The subgenus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus (defined within this paper already) and all other genera and subgenera formally defined in this paper by the following suite of characters:

Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk

into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*).

The other subgenus of *Neoseps*, namely *Floridascincus subgen. nov.* is separated from *Neoseps* and other species formerly treated as synonymous with *Plestiodon* by the following suite of characters:

A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*).

**Distribution:** Florida.

**Content:** *Neoseps (Neoseps) reynoldsi* Stejneger, 1910 (monotypic).

**SUBGENUS FLORIDASCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon egregius* Baird, 1858.

**Diagnosis:** The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus (defined within this paper already) and all other genera formally defined in this paper by the following suite of characters: one or other of:

1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus subgen. nov.*), being the subgenus formally defined herein, or:

2/ Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

**Distribution:** Florida, Georgia and Alabama, USA.

**Etymology:** Named with reference to the location the skinks are found and their lizard type.

**Content:** *Neoseps (Floridascincus) egregius* (Baird 1858).

**GENUS CALIFORNIASCINCUS GEN. NOV.**

**Type species:** *Plestiodon skiltonianus* Baird and Girard, 1852.

**Diagnosis:** The genus *Californiascincus gen. nov.* with species formerly placed within and synonymous to

*Plestiodon* (as defined already in this paper) is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal; four supraoculars, the two or three anterior in contact with the frontal; parietals entirely separated by the interparietal; one or two pairs of nuchals; seventh or eighth upper labial largest; two or three obtuse lobules on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. 24 or 26 scales round the body, the dorsals much broader than the laterals and ventrals.

Limbs overlapping (sometimes very slightly) when pressed against the body; the length of the hind limb is contained twice and a half to twice and two thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Colouration is one or other of:

1/ In adults olive above, with a dark brown lateral band extending from the loreal region to the tail; this band is bordered above and below by a light streak, which is again edged with dark brown; throat and lips yellowish; belly bluish grey, and in juveniles with a blue tail and the dark lateral stripe extends well out onto the tail (species: *skiltonianus* and *lagunensis*), or:

2/ In adults plain olive or brown above with varied amounts of dark spotting. Young with a blue or red tail; dark lateral stripe stops at the base of the tail (species *gilberti*).

**Distribution:** Western USA and adjacent areas.

**Etymology:** Named with reference to the approximate location the skinks are found and their lizard type.

**Content:** *Californiascincus skiltonianus* (Baird and Girard, 1852) (type species); *C. arizonensis* (Lowe and Shannon, 1954); *C. colimensis* (Taylor, 1935); *C. gilberti* (Van Denburgh, 1896); *C. interparietalis* (Tanner, 1957); *C. lagunensis* (Van Denburgh, 1895); *C. rubricaudatus* (Taylor, 1936); *C. utahensis* (Tanner, 1957).

#### GENUS *BERMUDASCINCUS* GEN. NOV.

**Type species:** *Plestiodon longirostris* Cope, 1861.

**Diagnosis:** The genus *Bermudascincus* gen. nov. formerly with a species formerly placed within and synonymous to *Plestiodon* (as defined already in this paper) is separated from that genus and all others formally defined in this paper by the following suite of characters:

A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal.

The length of the hind limb is not more than twice and a half in the distance from snout to vent. A postnasal; 36 to 42 mid-body scale rows.

**Distribution:** Bermuda Islands.

**Etymology:** Named with reference to the location the skinks are found and their lizard type.

**Content:** *Bermudascincus longirostris* (Cope, 1861) (monotypic).

#### GENUS *FUNKISKINKUS* GEN. NOV.

**Type species:** *Mabouia brevirostris* Günther, 1860.

**Diagnosis:** The genus *Funkiskinkus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus* gen. nov. is also divided into four subgenera.

*Funkiskinkus* subgen. nov. is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea* subgen. nov. is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest; ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus* subgen. nov. is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-

grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

**Distribution:** Mexico and nearby Middle America.

**Etymology:** Named in honour of Mesa, Arizona, USA, herpetologist and veterinary surgeon, Dr. Richard Funk, in recognition of a lifetime's work for the benefit of reptiles and other animals, as well as by reference to the fact the lizards are skinks.

**Content:** *Funkiskinkus brevirostris* (Günther, 1860) (type species); *F. bilineatus* (Tanner, 1958); *F. copei* (Taylor, 1933); *F. dicei* (Ruthven and Gaige, 1933); *F. dugesii* (Thomiot, 1883); *F. dixonii sp. nov.*; *F. funki sp. nov.*; *F. indubitus* (Taylor, 1933); *F. lynxe* (Wiegmann, 1834); *F. nietoi* (Feria-Oritz and García-Vázquez, 2012); *F. ochoterenae* (Taylor, 1933); *F. nietoi* (Feria-Oritz and García-Vázquez, 2012); *F. parviauriculatus* (Taylor, 1933); *F. parvulus* (Taylor, 1933); *F. sumichrasti* (Cope, 1867).

#### SUBGENUS FUNKISKINKUS SUBGEN. NOV.

**Type species:** *Mabouia brevirostris* Günther, 1860.

**Diagnosis:** The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

The subgenus *Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest; ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a

single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

**Distribution:** Mexico and nearby Middle America.

**Etymology:** Named in honour of Mesa, Arizona, USA, herpetologist and veterinary surgeon, Dr. Richard Funk, in recognition of a lifetime's work for the benefit of reptiles and other animals, as well as by reference to the fact the lizards are skinks.

**Content:** *Funkiskinkus (Funkiskinkus) brevirostris* (Günther, 1860) (type species); *F. (Funkiskinkus) bilineatus* (Tanner, 1958); *F. (Funkiskinkus) copei* (Taylor, 1933); *F. (Funkiskinkus) dixoni sp. nov.*; *F. (Funkiskinkus) dugesii* (Thomiot, 1883); *F. (Funkiskinkus) funki sp. nov.*; *F. (Funkiskinkus) indubitus* (Taylor, 1933); *F. (Funkiskinkus) ochoterena* (Taylor, 1933); *F. (Funkiskinkus) nietoi* (Feria-Oritz and García-Vázquez, 2012); *F. (Funkiskinkus) parviauriculatus* (Taylor, 1933); *F. (Funkiskinkus) parvulus* (Taylor, 1933).

#### **SUBGENUS FORESTAESCINCEA SUBGEN. NOV.**

**Type species:** *Euprepes lynxe* Wiegmann, 1834.

**Diagnosis:** The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal

series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

The subgenus *Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe*

subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

**Distribution:** Hidalgo, Veracruz, San Luis Potosí, Puebla, Aguascalientes, Quéretaro, all in Mexico.

**Etymology:** Named in reflection of the Latin word forest, with reference to the habitat in which the lizard is found, conjoined with the reference to the type of lizard it is (a skink), in the Latin feminine gender.

**Content:** *Funkiskinkus (Forestaescincea) lynxe* (Wiegmann, 1834) (monotypic).

#### **SUBGENUS VERACRUZSCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon sumichrasti* Cope, 1867.

**Diagnosis:** The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

The subgenus *Funkiskinkus subgen. nov.* is defined and

diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much



larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

**Distribution:** Veracruz, Oaxaca, Chiapas, Yucatan, Campeche in Mexico as well as Belize, Guatemala and northern Honduras.

**Etymology:** Named with reference to the location the skinks are found (as in their type locality) and their lizard type (skink).

**Content:** *Funkiskinkus (Veracruzscincus) sumichrasti* (Cope, 1867) (monotypic).

#### **SUBGENUS MARMOLEJOSCINCUS SUBGEN. NOV.**

**Type species:** *Eumeces dicei* Ruthven and Gaige, 1933.

**Diagnosis:** The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

The subgenus *Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale

rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

The species *Marmolejoscincus dicei* (Ruthven and Gaige, 1933) as recognized here is probably composite.

**Distribution:** Marmolejo, Tamaulipas, Mexico.

**Etymology:** Named with reference to the location the skinks are found (as in their type locality) and their lizard type (skink).

**Content:** *Funkiskinkus (Marmolejoscincus) dicei* (Ruthven and Gaige, 1933) (treated herein as monotypic for the genus).

**SPECIES *FUNKISKINKUS (FUNKISKINKUS) FUNKI* SP. NOV.**

**Holotype:** Specimen Catalog Number herps LACM 25806, Record Number herps 10436 at the Los Angeles County Museum, collected by James R. Dixon and R. H. Heyer. The specimen was collected on 16 July 1966 at 9 miles west of Atenquique, Jalisco, Mexico. Lat. 19.44, Long. 103.48.

The Los Angeles County Museum, USA, is a facility that allows public access to its specimen holdings.

**Paratypes:** Specimen Catalog Numbers LACM Herps 25804, LACM Herps 25807, LACM Herps 25809, LACM Herps 25813, LACM Herps 25814, LACM Herps 25815, LACM Herps 25816, consisting 7 of a series of 30 specimens (including the holotype) from the type locality collected by James R. Dixon and R. H. Heyer, held at the Los Angeles County Museum.

**Diagnosis:** Until now the species *Funkiskinkus funki* sp. nov. had been treated as a variant of *F. indubitus* (Taylor, 1933), previously known as "*Plestiodon indubitus* (Taylor 1933)".

*Funkiskinkus funki* sp. nov. and the morphologically similar *F. indubitus* (Taylor, 1933) are both defined and separated from all other *Funkiskinkus* gen. nov. by the following suite of characters:

They are medium-sized, robust species characterized by having; four supraoculars, the three anterior in contact with the frontal; the parietals enclosing a small interparietal; one postmental; no postnasal; the subcaudals distinctly widened; seven upper labials; seven superciliaries; the seventh upper labial broadly in contact with the upper secondary temporal; primary temporal small, widely separated from the small lower secondary; 24 midbody scale rows; 57 to 61 scales from occiput to above anus. Limbs moderately large, but failing to touch, even in young, when adpressed. Color above, olive to olivebrown, with a short dorsolateral light line from rostral, the line disappearing on the shoulder; a narrow labial light line terminating at the ear; no median light line or forking lines on the head; no lateral line beyond the ear.

*F. indubitus* differs from *F. funki* sp. nov. and *F. bilineatus* by the fixed presence of a light line on the sixth and seventh supralabials (absence of a light line on the sixth and seventh supralabials fixed in the latter taxa), and additionally from *F. bilineatus* by the nearly fixed presence of a modified lateral light line on the neck (versus the absence of a modified lateral light on the neck fixed in *F. bilineatus*) and the fixed presence of a primary temporal (versus primary temporal usually absent in *F. bilineatus*).

*F. funki* sp. nov. is similar to *F. indubitus* in most respects, but usually lacks the lateral light line on the supralabials seen in *F. indubitus*. The upper secondary dark line is longer in *F. funki* sp. nov., extending posteriorly to midbody in most specimens (not extending this far in *F. indubitus*).

The lateral light line is represented by light centered, dark scales on the seventh and eighth scale rows on the neck rather than the fifth, sixth, seventh, eighth, or ninth,

or any combination in sequence.

The presence of a light line on the sixth and seventh supralabials in *F. indubitus*, this not being the case in *F. funki* sp. nov. is an easy means by which to tell the two species apart.

There also appears to be a large geographical gap between the known populations of *F. indubitus* and *F. funki* sp. nov. indicating the species are allopatric.

The recently described taxon, *F. nietoi* (Feria-Ortiz and Garcia-Vázquez 2012) is most like *F. brevirostris*, *F. indubitus* and *F. funki* sp. nov. from which it differs by having the following combination of characters: large adult size, interparietal enclosed posteriorly by parietals, and a pale lateral line on the neck.

**Distribution:** *F. funki* sp. nov. is known only from the type locality and immediately adjacent parts of Jalisco and Colima, Mexico. By contrast *F. indubitus* is known from Morelos, Guerrero, and México, more than 100 km to the south-east.

**Etymology:** Named in honour of Mesa, Arizona, USA, herpetologist and veterinary surgeon, Dr. Richard Funk, in recognition of a lifetime's work for the benefit of reptiles and other animals.

**SPECIES *FUNKISKINKUS DIXONI* SP. NOV.**

**Holotype:** Specimen number 25331 at Universidad Nacional Autonoma de Mexico (MZFC), captured at about 3 km South of Atemajac de Brizuela, Jalisco, Mexico. Lat. 20.79 N, Long. 103.43 W, at an elevation of about 2,420 metres elevation.

The Universidad Nacional Autonoma de Mexico (MZFC) is a facility that allows inspection of its holdings.

**Paratypes:** Specimen numbers 25330, 25332 and 25333 at Universidad Nacional Autonoma de Mexico (MZFC), captured at about 3 km South of Atemajac de Brizuela, Jalisco, Mexico. Lat. 20.79 N, Long. 103.43 W, at an elevation of about 2,420 metres elevation.

**Diagnosis:** This species has long been regarded as a population of *F. dugesii* (Thomiot, 1883) from the Jalisco area of Mexico.

Both *F. dixonii* sp. nov. and *F. dugesii* are diagnosed and separated from all other species of *Funkiskinkus* gen. nov. by the following unique suite of characters: They are both medium-sized species characterized by

dorsolateral light lines, tending to become obsolete in adults, and the absence of a median line or bifurcating lines on the middle of head. Three supraocular scales, the two anterior broadly in contact with the frontal; the interparietal broad, with the parietals forming a broad suture behind it; two pairs of nuchals (normally), the anterior pair larger; a small primary temporal, separated from the lower secondary temporal by the greatly enlarged seventh labial, which forms a suture with the upper secondary temporal.

While both *F. dixonii* sp. nov. and *F. dugesii* are similar in most respects, *F. dixonii* sp. nov. is readily distinguished by the dark brown limbs with numerous prominent whitish flecks formed at the tip of each scale, which are either absent or indistinct in *F. dugesii* and on blackish coloured limbs.

In *F. dixonii* sp. nov. the blue of the tail starts an average

of 7 scales back from the back legs (measured from the top of the body in a posterior direction), versus an average of 13 scales back in *F. dugesii*.

**Distribution:** Known only from the immediate vicinity of the type locality, Atemajac de Brizuela, which is a small town in the southeast sierra of Jalisco, Mexico, 64 km southwest of Guadalajara, between Highways 80 and 401.

**Etymology:** Named in honour of Dr. James Ray Dixon (1928-2015), recently deceased, in recognition for his works on reptiles generally and including in terms of the genus *Funkiskinkus gen. nov.* on which he published valuable material extensively. A detailed eulogy accounting for Dixon's works in herpetology was published by McAllister and Forstner (2015).

I note that there are already seven other taxa with Dixon's name used as a patronym according to McAllister and Forstner (2015). I also note that my creation of yet another Dixon patronym will infuriate a group of truth-haters known as the Wüster gang.

They have the hypocritical view that they are allowed to create patronyms, including for known terrorists, thieves and law-breakers in direct breach of the ethics of the *International Code of Zoological Nomenclature*, while I am apparently to be condemned for daring to make patronyms after worthy zoologists and others who have made significant contributions to human or environmental welfare.

This Wüster gang group includes such thieves and criminals as Wolfgang Wüster himself, Mark O'Shea, Van Wallach and Wulf Schleip, all of whom masquerade as herpetologists, whose criminal activities have been well documented by Hoser (2001, 2009, 2012a, 2012c, 2013, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f). They will no doubt launch bitter tirades against this patronym on internet forums, Facebook and Twitter as well as any other place they can peddle their unique brand of hatred and lies as shown in examples given by Hoser (2001, 2009, 2012a, 2012c, 2013, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f).

They will then most likely seek to steal this work and step outside of the rules of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999), as they have already done (by illegally renaming more than 20 taxa with their own illegally coined names) as listed in Hoser (2015a) and seek to do more widely as promoted in their blog widely cited as Kaiser *et al.* (2013) and various later submissions directly to the ICZN itself in 2014 and 2015 (see Kaiser 2012a, 2012b, 2013, 2014a, 2014b and Kaiser *et al.* (2013) by way of examples.

In advance I reject their unscientific acts of theft and unscientific vandalism in their entirety as done via the following publications, namely Hoser (2001, 2009, 2012a, 2012c, 2013, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f) and the same views as quoted from many other herpetologists as cited within these publications.

#### GENUS ASIASCINCUS GEN. NOV.

**Type species:** *Plestiodon marginatus* Hallowell, 1861.

**Diagnosis:** The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to

*Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. A dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral

line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary temporal narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged

in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without

distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** Japan, Taiwan, China.

**Etymology:** Named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Asiascincus marginatus* (Hallowell, 1861) (type species); *A. barbouri* (Van Denburgh, 1912); *A. capito* (Bocourt, 1879); *A. elegans* (Boulenger, 1887); *A. finitimus* (Okamoto and Hikida, 2012); *A. japonicus* (Peters, 1864); *A. kuchinoshimensis* (Kurita and Hikida, 2014); *A. latiscutatus* (Hallowell, 1861); *A. liui* (Hikida and Zhao 1989); *A. oshimensis* (Thompson, 1912); *A. popei* (Hikida, 1989); *A. stimpsonii* (Thompson, 1912); *A. tunganus* (Stejneger, 1924).

#### **SUBGENUS ASIASCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon marginatus* Hallowell, 1861.

**Diagnosis:** The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower

secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Asiascincus subgen. nov.* is defined by a process of elimination of the subgenera *Japanscincus subgen. nov.* and *Ryukyuscincus subgen. nov.*.

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of

the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color

and become olive, with a blackish area on each scale, the areas sometimes arranged

in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** Japan, Taiwan, China.

**Etymology:** Like the genus, the subgenus is named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Asiascincus (Asiascincus) marginatus* (Hallowell, 1861) (type species); *A. (Asiascincus) elegans* (Boulenger, 1887); *A. (Asiascincus) kuchinoshimensis* (Kurita and Hikida, 2014); *A. (Asiascincus) liui* (Hikida and Zhao 1989); *A. (Asiascincus) oshimensis* (Thompson, 1912); *A. (Asiascincus) stimpsonii* (Thompson, 1912).

#### **SUBGENUS JAPANSCINCUS SUBGEN. NOV.**

**Type species:** *Plestiodon latiscutatus* Hallowell, 1861.

**Diagnosis:** The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from

first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to the tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary temporal narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Asiascincus subgen. nov.* is defined by a process of elimination of the subgenera *Japanscincus subgen. nov.* and *Ryukyuscincus subgen. nov.*

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus

*Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals.

Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** Japan, including minor southern islands.

**Etymology:** The subgenus *Japanscincus subgen. nov.* is named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Asiascincus (Japanscincus) laticutatus* Hallowell, 1861 (type species); *A. finitimus* (Okamoto and Hikida, 2012); *A. japonicus* (Peters, 1864).

**SUBGENUS RYUKYUSCINCUS SUBGEN. NOV.**

**Type species:** *Eumeces barbouri* Van Denburgh, 1912.

**Diagnosis:** The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon*, including subgenera of *Asiascincus subgen. nov.* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus.

The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46

paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** Okinawa and Amami, Ryu Kyu Islands, Japan.

**Etymology:** The subgenus *Ryukyuscincus subgen. nov.* is named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Asiascincus (Ryukyuscincus) barbouri* (Van Denburgh, 1912) (monotypic).

#### **SUBGENUS SICHUANSCINCUS SUBGEN. NOV.**

**Type species:** *Eumeces capito* Bocourt, 1879.

**Diagnosis:** The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters, the first two sets being diagnostic for each of the recognized species within the subgenus *Sichuanscincus gen. nov.*

These are as follows:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate

behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea gen. nov.* with species



formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** Northern China southward to Hubei and Sichuan.

**Etymology:** The subgenus *Sichuanscincus subgen. nov.* is named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Asiascincus (Sichuanscincus) capito* (Bocourt, 1879) (type species); *A. (Sichuanscincus) popei* (Hikida, 1989); *A. (Sichuanscincus) tunganus* (Stejneger, 1924).

#### GENUS ADELYNHOSERSCINCEA GEN. NOV.

**Type species:** *Eumeces tamdaoensis* Bourret, 1937.

**Diagnosis:** The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and

*popei*) (subgenus *Sichuanscincus subgen. nov.*), or:  
 2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary temporal narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running

below the level of top of hind limb and top of ear.

**Distribution:** China, (including Taiwan and Hainan) and Vietnam as well as the southern group of the Ryu Kyu chain of islands in southern Japan.

**Etymology:** The genus *Adelynhoserscincea gen. nov.* is named in honour of my daughter, Adelyn Hoser in recognition of her monumental contribution to herpetology, globally, public safety in Victoria by volunteering to demonstrate the total safety of venomoid snakes when taking bites from several, in order to shatter lies from animal hating business competitors seeking to divert Snakebusters clients to unsafe alternatives, and also with reference to the lizard type (skink).

**Content:** *Adelynhoserscincea tamdaoensis* (Bourret, 1937) (type species); *A. chinensis* (Gray, 1838); *A. coreensis* Doi and Kamita, 1937); *A. kishinouyei* (Stejneger, 1901).

#### SUBGENUS ADELYNHOSERSCINCEA SUBGEN. NOV.

**Type species:** *Eumeces tamdaoensis* Bourret, 1937.

**Diagnosis:** The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*), or:

2/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (species *chinensis* and *kishinouyei*) (subgenus *Sinoskinkus subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-

body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces*

including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

**Distribution:** Tam-dao, Tonking, Bak Kan, Cao Bang, Hai Duong, Hoa Binh, Vinh Phuc, Son La, Nghe An in Vietnam and Hong Kong, China.

**Etymology:** The subgenus *Adelynhoserscincea subgen. nov.* is named in honour of my eldest daughter, Adelyn Hoser (aged 16 in June 2015) in recognition of her monumental contribution to herpetology, globally and public safety in Victoria, Australia, and also with reference to the lizard type (skink).

**Content:** *Adelynhoserscincea (Adelynhoserscincea) tamdaoensis* (Bourret, 1937) (monotypic).

#### **SUBGENUS SINOSKINKUS SUBGEN. NOV.**

**Type species:** *Tiliqua chinensis* Gray, 1838.

**Diagnosis:** The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals

usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (species *chinensis* and *kishinouyei*) (subgenus *Sinoskinkus subgen. nov.*), or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs

overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus.

The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formally placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

**Distribution:** China, (including Taiwan and Hainan) and Vietnam as well as the southern group of the Ryu Kyu chain of islands in southern Japan.

**Etymology:** The subgenus *Sinoskinkus subgen. nov.* is named with reference to the regional location the skinks are found and their lizard type (skink).

**Content:** *Adelynhoserscincea (Sinoskinkus) chinensis* (Gray, 1838); *A. (Sinoskinkus) coreensis* Doi and Kamita, 1937); *A. (Sinoskinkus) kishinouyei* (Stejneger, 1901).

**GENUS JACKYHOSERSCINCEA GEN. NOV.**

**Type species:** *Plestiodon quadrilineatus* Blyth, 1853.

**Diagnosis:** The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

For the benefit of completeness, the means to separate a similar genus including component subgenera from the same region is given below:

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the

frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Asiascincus subgen. nov.* is defined by a process of elimination of the subgenera *Japanscincus subgen. nov.* and *Ryukyuscincus subgen. nov.*.

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate,

the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

**Distribution:** Guangxi, Guangdong, Hainan and Hong Kong in China, as well as Thailand, Cambodia and Vietnam.

**Etymology:** The genus *Jackyhoserscincea gen. nov.* is named in honour of my youngest daughter, Jacky Hoser (aged 14 in June 2015) in recognition of her monumental contribution to herpetology, globally and also with reference to the lizard type (skink).

**Content:** *Jackyhoserscincea quadrilineatus* (Blyth, 1853) (monotypic).

#### TRIBE ADELYNHOSERSCINCIINI TRIBE NOV.

(Terminal taxon: *Eumeces tamdaoensis* Bourret, 1937).

**Diagnosis:** The diagnosis for this tribe is as for the genus *Plestiodon sensu-lato* (as recognized until now) as already presented in this paper.

It is defined as follows: 26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregious* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not broadened, not fused. Lateral preanal scales overlie medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The above referred to group of lizards contains nearly 50 recognized species, but many subspecies forms within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused with *Plestiodon* and including species previously treated as congeneric (either within *Plestiodon* or *Eumeces* Wiegmann, 1834) are defined herein to remove any potential doubt as to which species should now be

placed where. The following genera are previously defined and used by other authors, but redefined here to conform with the taxonomy presented herein. The genera *Scincus* Laurenti, 1768, *Scincopus* Peters, 1864, *Eumeces* Wiegmann, 1834, *Eurylepis* Blyth, 1854, are within a separate tribe *Eumeciini tribe nov.* formally named and described below (in this paper).

However as species within each genus are commonly confused with those within the tribe *Adelynhoserscinciini tribe nov.* each of the relevant genera are defined below to separate from them this tribe.

The genus *Scincus* Laurenti, 1768, similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on pale background.

The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa and is separated from *Plestiodon* and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus subgen. nov.* as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals,

and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally. 30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single azygos postmental as seen in *Eumeces* species).

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to north Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

(versus 30 or 32 scales round the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus* subgen. nov. as formally named in this paper).

*Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000 (adopted herein) by the following unique suite of characters:

Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering the ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

The genus *Plestiodon sensu lato* (as recognized until now) (defined above) has been split into 8 genera, with a further 10 subgenera split from these in order to provide nomenclature to match the taxonomy derived from the well-established morphological and molecular evidence, which also happens to match geographical distributions of the relevant taxa. Within this assemblage two available names are resurrected from synonymy, *Neoseps*, Stejneger, 1910 as a genus and *Pariocela* Fitzinger, 1843 as a subgenus within

*Plestiodon*. All the other genera and subgenera are formally named for the first time according to the *International Code of Zoological Nomenclature* with the majority of names being derived from the geographical location the species tend to be found.

*Plestiodon* as defined herein is separated from all other species (and genera) formerly included within *Plestiodon* by one or other of the following four suites of characters:

1/ A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 26 or 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. No postnasal or if present extremely tiny; supranasal in contact with the praefrontal and/or anterior loreal forming a suture with the frontonasal (species *fasciatus*, *multilineatus*, *multivirgatus*, *tetragrammus* and *septentrionalis*) (subgenus *Plestiodon*), or:

2/ 30-32 mid-body rows, 5 labials anterior to the subocular, no enlarged postlabials (the scales immediately posterior to the final triangular-shaped supralabial), middle row of scales under the tail is either wider than the rest (species *laticeps*) or same width as the rest (species *inexpectatus*) (subgenus *Pariocela* Fitzinger, 1843), or:

3/ A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. postnasal; anterior loreal usually forming a suture with the frontonasal. Colouration either dorsally brown with a thick black stripe along the upper flanks and a pale Y on the top of the head (species *callicephalus*), or alternatively with a network of heavy dark brown or black spotting, with scale rows on the side appearing to be diagonal to the dorsal rows or if young blackish with white spots on the labials (species *obsoletus*) (subgenus *Mexicoscincus* subgen. nov.), or:

4/ No postnasal: anterior loreal reaching the frontonasal; five supraoculars. 24 scales round the body. Upper parts dark bronze, with four narrow longitudinal yellow lines on the body and on each side a well-defined broad band of anthracite-black; head red in the adult; lower surfaces yellowish white (species *anthracinus*) (subgenus *Mississippiscincus* subgen. nov.).

The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters being one or other of:

1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus* subgen. nov.), or:

2/ Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

The genus *Californiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal; four supraoculars, the two or three anterior in contact with the frontal; parietals entirely separated by the interparietal; one or two pairs of nuchals; seventh or eighth upper labial largest; two or three obtuse lobules on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. 24 or 26 scales round the body, the dorsals much broader than the laterals and ventrals. Limbs overlapping (sometimes very slightly) when pressed against the body; the length of the hind limb is contained twice and a half to twice and two thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Colouration is one or other of:

1/ In adults olive above, with a dark brown lateral band extending from the loreal region to the tail; this band is bordered above and below by a light streak, which is again edged with dark brown; throat and lips yellowish; belly bluish grey, and in juveniles with a blue tail and the dark lateral stripe extends well out onto the tail (species: *skiltonianus* and *lagunensis*), or:

2/ In adults plain olive or brown above with varied amounts of dark spotting. Young with a blue or red tail; dark lateral stripe stops at the base of the tail (species *gilberti*).

The genus *Bermudascincus gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. The length of the hind limb is not more than twice and a half in the distance from snout to vent. A postnasal; 36 to 42 mid-body scale rows.

The genus *Funkiskinkus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct

lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

*Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged



subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

Genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal. A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus

*Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygos postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars;

25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout. The tribe *Adelynhoserscinciini tribe nov.* is in turn divided into three subtribes, these broadly corresponding with the "species series", clades A, B, and C, as laid out on page 182 of Brandley *et al.* (2012).

**Distribution:** The centre of distribution for this tribe is north-east Asia and North America.

**Content:** *Adelynhoserscincea gen. nov.*; *Asiascincus gen. nov.*; *Bermudascincus gen. nov.*; *Californiascincus gen. nov.*; *Funkiskinkus gen. nov.*; *Jackyhoserscincea gen. nov.*; *Neoseps Stejneger 1910* and *Plestiodon Duméril and Bibron 1849*.

#### **SUBTRIBE ADELYNHOSERSCINCINIINA SUBTRIBE NOV.**

**(Terminal taxon: *Eumeces tamdaoensis* Bourret, 1937).**

**Diagnosis:** This subtribe includes the genera *Adelynhoserscincea gen. nov.* and *Jackyhoserscincea gen. nov.* and is best defined by defining the two relevant genera and then genera likely to be confused with them from other tribes.

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale,

the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

The genus *Plestiodon sensu lato* (as recognized until now and including the two genera above) is defined as follows (but noting the above described features differentiate the subtribe *Adelynhoseriina subtribe nov.* from the genus *Plestiodon* and other relevant genera): 26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregius* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not broadened, not fused. Lateral preanal scales overlies medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The above referred to group of lizards contains nearly 50 recognized species, but many subspecies forms

within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused with *Plestiodon* and including species previously treated as congeneric (either within *Plestiodon* or *Eumeces* Wiegmann, 1834) are defined herein to remove any potential doubt as to which species should now be placed where. The following genera are previously defined and used by other authors, but redefined here to conform with the taxonomy presented herein.

The genus *Scincus* Laurenti, 1768, similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by a groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on pale background.

The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus* subgen. nov. as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed,

pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally. 30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to north Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly.

Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

(versus 30 or 32 scales around the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864, subgenus *Moroccoscincus* subgen. nov. as formally named in this paper).

*Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000 (and adopted herein) by the following unique suite of characters:

Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

The genus *Plestiodon sensu-lato* (as recognized until now) (defined above) has been split into 8 genera, with a further 10 subgenera split from these in order to provide nomenclature to match the taxonomy derived from the well-established morphological and molecular evidence, which also happens to match geographical distributions of the relevant taxa. Within this assemblage two available names are resurrected from synonymy, *Neoseps*, Stejneger, 1910 as a genus and *Pariocela* Fitzinger, 1843 as a subgenus within *Plestiodon*. All the other genera and subgenera are

formally named for the first time according to the *International Code of Zoological Nomenclature* with the majority of names being derived from the geographical location the species tend to be found.

*Plestiodon* as defined herein is separated from all other species (and genera) formerly included within *Plestiodon* by one or other of the following four suites of characters:

1/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 26 or 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. No postnasal or if present extremely tiny; supranasal in contact with the praefrontal and/or anterior loreal forming a suture with the frontonasal (species *fasciatus*, *multilineatus*, *multivirgatus*, *tetragrammus* and *septentrionalis*) (subgenus *Plestiodon*), or:

2/ 30-32 mid-body rows, 5 labials anterior to the subocular, no enlarged postlabials (the scales immediately posterior to the final triangular-shaped supralabial), middle row of scales under the tail is either wider than the rest (species *laticeps*) or same width as the rest (species *inexpectatus*) (subgenus *Pariocela* Fitzinger, 1843), or:

3/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. postnasal; anterior loreal usually forming a suture with the frontonasal. Colouration either dorsally brown with a thick black stripe along the upper flanks and a pale Y on the top of the head (species *callicephalus*), or alternatively with a network of heavy dark brown or black spotting, with scale rows on the side appearing to be diagonal to the dorsal rows or if young blackish with white spots on the labials (species *obsoletus*) (subgenus *Mexicoscincus* subgen. nov.), or:

4/ No postnasal: anterior loreal reaching the frontonasal; five supraoculars. 24 scales round the body. Upper parts dark bronze, with four narrow longitudinal yellow lines on the body and on each side a well-defined broad band of anthracite-black; head red in the adult; lower surfaces yellowish white (species *anthracinus*) (subgenus *Mississippiscincus* subgen. nov.).

The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: one or other of:

1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus* subgen. nov.), or:

2/ Each foreleg fits into a groove on the lower side of the

body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

The genus *Californiascincus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal; four supraoculars, the two or three anterior in contact with the frontal; parietals entirely separated by the interparietal; one or two pairs of nuchals; seventh or eighth upper labial largest; two or three obtuse lobules on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. 24 or 26 scales round the body, the dorsals much broader than the laterals and ventrals. Limbs overlapping (sometimes very slightly) when pressed against the body; the length of the hind limb is contained twice and a half to twice and two thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Colouration is one or other of:

1/ In adults olive above, with a dark brown lateral band extending from the loreal region to the tail; this band is bordered above and below by a light streak, which is again edged with dark brown; throat and lips yellowish; belly bluish grey, and in juveniles with a blue tail and the dark lateral stripe extends well out onto the tail (species: *skiltonianus* and *lagunensis*), or:

2/ In adults plain olive or brown above with varied amounts of dark spotting. Young with a blue or red tail; dark lateral stripe stops at the base of the tail (species *gilberti*).

The genus *Bermudascincus* gen. nov. with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. The length of the hind limb is not more than twice and a half in the distance from snout to vent. A postnasal; 36 to 42 mid-body scale rows.

The genus *Funkiskinkus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the

body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus gen. nov.* is also divided into four subgenera.

*Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young)

bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars, three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

Genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

**Distribution:** East Asia.

**Content:** *Adelynhoserscincea gen. nov.*;  
*Jackyhoserscincea gen. nov.*

#### **SUBTRIBE ASIASCINCIINA SUBTRIBE NOV.**

**(Terminal Taxon *Plestiodon marginatus* Hallowell, 1861).**

**Diagnosis:** This subtribe includes only the genus *Asiascincus gen. nov.*, including subgenera and is best defined by defining the relevant genus and then genera likely to be confused with them from the same region (the tribe *Adelynhoserscinciini tribe nov.*).

The genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:  
2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from *Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young, specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal;

upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus* *subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

For the benefit of completeness, the means to separate similar genera from the same region is given below:

The genus *Adelynhoserscincea* *gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus* *subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus* *subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46 paravertebrals and a relatively short body as compared to *Sinoskinkus* *subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea* *subgen. nov.*).

The genus *Jackyhoserscincea* *gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is

contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** East Asia (Japan, Taiwan and China).

**Content:** *Asiascincus* *gen. nov.*

#### **SUBTRIBE FUNKISKINKIINA SUBTRIBE NOV.**

**(Terminal taxon: *Mabouia brevirostris* Günther, 1860).**

**Diagnosis:** The genus *Plestiodon sensu lato* (as recognized until now) and including this subtribe is defined as follows: 26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregious* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not broadened, not fused. Lateral preanal scales overlie medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The above referred to group of lizards contains nearly 50 recognized species, but many currently recognized subspecies forms within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused with *Plestiodon sensu lato* and including species within this subtribe and including species previously treated as congeneric (either within *Plestiodon* or *Eumeces* Wiegmann, 1834) are defined herein to remove any potential doubt as to which species should now be placed where. The following genera are previously defined and used by other authors, but redefined here to conform with the taxonomy presented herein.

These next four genera defined below are not within this subtribe.

The genus *Scincus* Laurenti, 1768, similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by

deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on pale background.

The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus subgen. nov.* as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk.

Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

30 or 32 scales round the body; two azygos postmentals, (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to north Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

(versus 30 or 32 scales round the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864, subgenus *Moroccoscincus subgen. nov.* as formally named in this paper).

*Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000 (and adopted herein) by the following unique suite of characters:

Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

The genus *Plestiodon sensu lato* (as recognized until now) (defined above) has been split into 8 genera, (one tribe and three subtribes including this one) with a further 10 subgenera split from these in order to provide nomenclature to match the taxonomy derived from the well-established morphological and molecular evidence, which also happens to match geographical distributions of the relevant taxa. Within this assemblage two available names are resurrected from synonymy, *Neoseps*, Stejneger, 1910 as a genus and *Pariocela* Fitzinger, 1843 as a subgenus within *Plestiodon*. All the other genera and subgenera are formally named for the first time according to the *International Code of Zoological Nomenclature* with the majority of names being derived from the geographical location the species tend to be found.

The subtribe *Funkiskinkiina subtribe nov.* is best defined by separating the relevant genera within the tribe as done below:

*Plestiodon* as defined herein is separated from all other species (and genera) formerly included within *Plestiodon* by one or other of the following four suites of characters:

1/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 26 or 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. No postnasal or if present extremely tiny; supranasal in contact with the praefrontal and/or anterior loreal forming a suture with the frontonasal (species *fasciatus*, *multilineatus*, *multivirgatus*, *tetragrammus* and



*septentrionalis*) (subgenus *Plestiodon*), or:

2/ 30-32 mid-body rows, 5 labials anterior to the subocular, no enlarged postlabials (the scales immediately posterior to the final triangular-shaped supralabial), middle row of scales under the tail is either wider than the rest (species *laticeps*) or same width as the rest (species *inexpectatus*) (subgenus *Pariocela* Fitzinger, 1843), or:

3/ Longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. 28 mid-body rows; the length of the hind limb more than twice and a half in the distance from snout to vent. Subcaudal scales not enlarged. postnasal; anterior loreal usually forming a suture with the frontonasal. Colouration either dorsally brown with a thick black stripe along the upper flanks and a pale Y on the top of the head (species *callicephalus*), or alternatively with a network of heavy dark brown or black spotting, with scale rows on the side appearing to be diagonal to the dorsal rows or if young blackish with white spots on the labials (species *obsoletus*) (subgenus *Mexicoscincus* subgen. nov.), or:

4/ No postnasal; anterior loreal reaching the frontonasal; five supraoculars. 24 scales round the body. Upper parts dark bronze, with four narrow longitudinal yellow lines on the body and on each side a well-defined broad band of anthracite-black; head red in the adult; lower surfaces yellowish white (species *anthracinus*) (subgenus *Mississippiscincus* subgen. nov.).

The genus *Neoseps* Stejneger, 1910 formerly treated as synonymous with *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: one or other of:

1/ A combination of a red, brownish-red, pinkish, orangeish or yellow tail (throughout life) plus light stripes that neither widen nor diverge to other scale rows, or occasionally the dorsolateral stripes may widen posteriorly, or diverge to involve another scale row or both. The lateral stripes usually continue to the groin but the dorsolateral stripes may terminate much farther forward. Ground colour varies from grey-brown to dark chocolate brown. 6-7 upper labials (species *egregius*) (subgenus *Floridascincus* subgen. nov.), or:

2/ Each foreleg fits into a groove on the lower side of the body; it has only a single toe and is so small that it can be easily overlooked. The hind legs are slightly larger than the front and each has two digits. There is a wedge-shaped snout, lower jaw partially countersunk into upper one, a flat or slightly concave belly that meets the side of the body at an angle, a tiny eye with built in "window" in lower lid, and no external ear opening. The colouration varies from dirty white to deep tan (species *reynoldsi*) (subgenus: *Neoseps*).

The genus *Californiascincus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Snout short, obtuse. Nasal small, followed by a postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal; four supraoculars, the two or three anterior in contact with

the frontal; parietals entirely separated by the interparietal; one or two pairs of nuchals; seventh or eighth upper labial largest; two or three obtuse lobules on the anterior border of the ear, which is smaller than a dorsal scale; two azygos postmentals. 24 or 26 scales round the body, the dorsals much broader than the laterals and ventrals. Limbs overlapping (sometimes very slightly) when pressed against the body; the length of the hind limb is contained twice and a half to twice and two thirds in the distance from snout to vent. A median series of transversely enlarged subcaudals. Colouration is one or other of:

1/ In adults olive above, with a dark brown lateral band extending from the loreal region to the tail; this band is bordered above and below by a light streak, which is again edged with dark brown; throat and lips yellowish; belly bluish grey, and in juveniles with a blue tail and the dark lateral stripe extends well out onto the tail (species: *skiltonianus* and *lagunensis*), or:

2/ In adults plain olive or brown above with varied amounts of dark spotting. Young with a blue or red tail; dark lateral stripe stops at the base of the tail (species *gilberti*).

The genus *Bermudascincus* gen. nov. with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: A longitudinal series of dorsal scales in even number; first upper labial forming a suture with the nasal and the postnasal or the anterior loreal. The length of the hind limb is not more than twice and a half in the distance from snout to vent. A postnasal; 36 to 42 mid-body scale rows.

The genus *Funkiskinkus* gen. nov. with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters: Head small; snout short, obtuse. Nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, the two or three anterior in contact with the frontal; two pairs of nuchals; seventh upper labial largest; ear opening smaller than a dorsal scale, with one or two indistinct lobules; a single postmental. 22 or 24 scales round the middle of the body; the scales of the two median longitudinal dorsal series a little broader than the others; lateral scales considerably smaller.

The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals.

Dark olive-brown above, with a black lateral band, which is edged above and/or below with a yellowish streak; this light streak well marked on the head and nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; becoming less distinct on the body; throat and lips yellowish, belly greyish or bluish grey; tail may be bluish.

The genus *Funkiskinkus* gen. nov. is also divided into four subgenera.

*Funkiskinkus subgen. nov.* is defined and diagnosed by the exclusion of the other three subgenera. These are defined and diagnosed as follows in order to exclude each from all other species formerly placed within *Eumeces* and *Plestiodon*.

The subgenus *Forestaescincea subgen. nov.* is defined by the following suite of characters:

Head small; snout short, obtuse. nasal small; no postnasal; anterior loreal in contact with the first labial and the frontonasal four supraoculars, second and third in contact with the frontal, first very small, sometimes united with the first supraciliary; parietals entirely separated by the interparietal; two pairs of nuchals; seventh upper labial largest: ear-opening smaller than a dorsal scale, with one or two more or less indistinct lobules; a single postmental. 22 or 24 midbody scale rows; the scales of the two median longitudinal dorsal series a little broader than the others. The length of the hind limb is contained thrice to thrice and one third in the length from snout to vent; the limbs do not meet when pressed against the body. A series of transversely enlarged subcaudals. Colour is brown above, with a black lateral band, edged above and below with a yellowish line; a yellow line on the nape, bifurcating on the frontal and joining the lateral lines on the canthus rostralis; throat and lips yellowish, belly bluish grey; tail bluish (species *lynxe*).

The subgenus *Veracruzscincus subgen. nov.* is defined by the following suite of characters:

Snout short and obtuse; cheeks strongly swollen in full-grown specimens. Nasal small, not followed by a postnasal; anterior loreal forming a suture with the frontonasal; four supraoculars, the three anterior in contact with the frontal; posterior border of the interparietal in contact with the nuchals, of which there are one or two pairs; seventh or eighth upper labial the largest; ear-opening about as large as a dorsal scale, with two or three more or less distinct obtuse lobules; a single postmental. 28 midbody scale rows, subequal, the laterals but little smaller than the dorsals and ventrals. The length of the hind limb is contained twice and one fourth to twice and a half in the distance from snout to vent; when pressed against the body, the limbs overlap. A median series of transversely enlarged subcaudals. A light vertebral line (in the young) bifurcating on the frontal, (as in the species *lynxe* subgenus *Forestaescincea subgen. nov.*), enclosing a dark rhomboidal spot on the forehead. Tail bluish. In the adult these markings become more indistinct or entirely disappear, the body turns to brown, and the head is often red. Lower surfaces yellowish white, belly sometimes greyish (species *sumichrasti*).

The subgenus *Marmolejoscincus subgen. nov.* is defined by the following suite of characters:

A narrow dorsolateral light line, but lacking a lateral line and a median line bifurcating on the head; dorsolateral line to tail; lateral line to ear; adpressed legs very widely separated; no primary temporal; no lower secondary temporal; tertiary temporal present; sixth and seventh upper labials much enlarged, forming sutures with the large, upper secondary temporal; four supraoculars,

three broadly in contact with the frontal; first labial much larger than the three succeeding labials; no postnasal; one postmental; eleven scales about ear opening; scales in 22-24 midbody rows; parietals not enclosing the interparietal. A relatively small species (species *dicei*).

The genera below are not within the subtribe Funkiskinkiina *subtribe nov.*, but are diagnosed within this description in order to remove doubts as to what is and is not included in the subtribe.

Genus *Asiascincus gen. nov.* with species formerly placed within and synonymous to *Plestiodon* (and the entirety of the subtribe *Asiascinciina subtribe nov.* is separated from that genus and all others formally defined in this paper by one or other of the following three suites of characters:

1/ Snout short, obtuse; cheeks swollen. Nasal small, followed by a small postnasal, which forms a suture with the first labial; anterior loreal forming a suture with the frontonasal, which is largely in contact with the frontal; four supraoculars, the two anterior in contact with the frontal; parietals meeting on a small point behind the interparietal, followed by two pairs of nuchals; seventh upper labial the largest; no projecting auricular lobules; two azygos postmentals. 24 scales round the body, subequal. The length of the hind limb is contained about twice and two fifths in the distance from snout to vent. A median series of transversely enlarged subcaudals. Greenish grey above, the dorsal scales finely edged with black; head reddish yellow; a rather narrow black lateral band, edged with lighter; lower surfaces yellowish white, the belly tinged with bluish (species *capito* and *popei*) (subgenus *Sichuanscincus subgen. nov.*), or:

2/ Subcaudals strongly widened. No strongly keeled lateral postanal scale. A well-developed patch of enlarged scales on posterior border of femur; upper secondary temporal more or less triangular, emarginate behind, notched below; lower, nearly parallel-sided; two postmentals; one postnasal.

A typical five-lined species with the median light line bifurcating at the nuchal and later reuniting on the snout; a patch of irregular, enlarged scales on the posterior surface of the thigh; a keeled, lateral postanal scale is absent. A postnasal present; two postmentals; limbs overlapping when adpressed; 26-28 scale rows about the body; 64 scales from parietals to above the anus. The upper secondary temporal large, the posterior border greatly elongate, notched below by the small, nearly parallel sided lower secondary temporal (species *tunganus*) (subgenus *Sichuanscincus subgen. nov.*), or:

3/ The presence of a fan-shaped upper secondary temporal scale with emarginated posterior margin, a pair of keeled postanal scales and a single postmental (subgenera *Asiascincus subgen. nov.*, *Japanscincus subgen. nov.*, *Ryukyuscincus subgen. nov.*).

The subgenus *Japanscincus subgen. nov.* is separated from *Asiascincus subgen. nov.* by having a postnasal and vivid orange coloring on the ventral surface of the head (and sometimes trunk) of adult males in the breeding season (late March to May). The subgenus *Japanscincus subgen. nov.* is separated from

*Ryukyuscincus subgen. nov.* by having 24-29 midbody scale rows (versus 22).

The subgenus *Japanscincus subgen. nov.* is separated from all other species formerly placed within *Eumeces* including others within *Asiascincus gen. nov.* by the following unique suite of characters:

In the young specimens have a typical black ground color with a narrow median white line extending from the proximal half of the tail to the interparietal, where it bifurcates, the branches running forward and reuniting on the frontonasal or supranasals. Dorsolateral line from first supraocular to midway of the tail, following the middle of the third scale row; labials spotted; a lateral line from the middle of the ear to tail, along the sixth scale row. Tail is blue. Adult males become olive, losing stripes. Normally a single postmental; a postnasal; upper secondary temporal largest, wedge-shaped, emarginate behind; lower secondary narrow, elongate, the sides often nearly parallel. 24-29 midbody scale rows.

The subgenus *Ryukyuscincus subgen. nov.* is separated from all other genera and subgenera formerly placed within and synonymous to *Plestiodon* by the following suite of characters:

One azygous postmental; no patch of enlarged scales on back of thigh; postnasal present; posterior loreal short, normally touching two labials; fifteen or sixteen plates under fourth toe; 22 mid-body scale rows; young with one median and two lateral light lines; latter narrow, and separated by not less than width of two scales; lower lateral line separated from fore limb by less than the distance between the lateral lines, and running below the level of top of hind limb and top of ear.

The genera *Adelynhoserscincea gen. nov.* and *Jackyhoserscincea gen. nov.* form the entirety of the third subtribe *Adelynhoserscinciina subtribe nov.* and are formally defined below.

The genus *Adelynhoserscincea gen. nov.* with species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters, being one or other of:

1/ A deep black coloration of the young, with light body lines, or lacking all body lines and with a series of white or cream spots on the scales of the head. Tail a brilliant azure blue. Adults lose the uniform black and blue color and become olive, with a blackish area on each scale, the areas sometimes arranged in rows, forming indistinct lines. Scales on sides of body are parallel (versus diagonal in the subgenus *Mexicoscincus subgen. nov.* within *Plestiodon*); postnasal present or absent; seven or eight upper labials; four supraoculars; 25-30 mid-body scale rows; legs long, overlapping, usually, in adults. Two postmentals (rarely single); parietals not enclosing interparietal; one pair of nuchals usually; postmental large, bordered by a scale longer than wide; two or three supraoculars touch frontal (subgenus *Sinoskinkus subgen. nov.*) or:

2/ A five-lined pattern on dorsum, three loreals, 24 mid-body scale rows, two postmentals, one postnasal, and one lower secondary temporal in triangle shape, 39-46

paravertebrals and a relatively short body as compared to *Sinoskinkus subgen. nov.* (defined above) (species *tamdaoensis*) (subgenus *Adelynhoserscincea subgen. nov.*).

The genus *Jackyhoserscincea gen. nov.* formerly with a species formerly placed within and synonymous to *Plestiodon* is separated from that genus and all others formally defined in this paper by the following suite of characters:

Snout short, obtuse. Nasal small, followed by a small postnasal; two loreals, the anterior loreal in contact with the frontonasal; four supraoculars; parietals meeting behind the interparietal; three pairs of nuchals; seventh upper labial largest; ear-opening rather small, without distinct lobules; two azygos postmentals. 20-22 mid-body scale rows, those of the two vertebral series much broader than the others. The length of the hind limb is contained twice and a half in the length from snout to vent; the limbs overlap when pressed against the body. A median series of transversely enlarged subcaudals. Black above, with two yellowish longitudinal lines on each side, the upper beginning on the tip of the snout.

**Distribution:** North and Middle America.

**Content:** *Funkiskinkus gen. nov.*; *Bermudascincus gen. nov.*; *Californiascincus gen. nov.*; *Neoseps Stejneger* 1910 and *Plestiodon* Duméril and Bibron 1849.

**GENUS EUMECES WIEGMANN, 1834.**

**Type species:** *Scincus schneideri* Daudin, 1802.

**Diagnosis:** The genera *Eumeces* and *Plestiodon* have both been used by herpetologists for many years to lump numerous morphologically similar species.

Both genera are defined as follows:

26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregious* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not broadened, not fused. Lateral preanal scales overlies medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to North Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the

nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

This is versus 30 or 32 scales round the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864, subgenus *Moroccoscincus subgen. nov.* as formally named in this paper.

The above referred to groups of lizards contains nearly 50 recognized species, but many subspecies forms within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused with *Eumeces* or *Plestiodon* and including species previously treated as congeneric (either within *Plestiodon* or *Eumeces*) are defined in the description of the genus *Plestiodon* within this paper already to remove any potential doubt as to which species should now be placed where. The other genera were previously defined and used by other authors, but were redefined here to conform with the taxonomy presented herein.

**Distribution:** From the drier parts of the Indian Subcontinent across the Middle-East to North-west Africa.

**Content:** *Eumeces schneideri* (Daudin, 1802) (type species); *E. blythianus* (Anderson, 1871); *E. cholistanensis* Masroor, 2009; *E. indothalensis* Khan and Khan, 1997.

#### GENUS *EURYLEPIS* BLYTH, 1854.

**Type species:** *Eurylepis taeniolatus* Blyth, 1854.

**Diagnosis:** *Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000 (and adopted herein) by the following unique suite of characters: Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

**Distribution:** Drier parts of the Indian subcontinent and the Middle-east.

**Content:** *Eurylepis taeniolatus* Blyth, 1854 (type species); *E. arabica* (Szczerback, 1990); *E. poonaensis* (Sharma, 1970); *E. parthianica* (Szczerback, 1990).

#### GENUS *SCINCOPUS* PETERS, 1864.

**Type species:** *Scincus (Scincopus) fasciatus* Peters, 1864.

**Diagnosis:** The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa and is separated from *Plestiodon* and all other similar genera and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus subgen. nov.* as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it and all other similar species and genera by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk.

Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

**Distribution:** Drier parts of North Africa.

**Content:** *Scincopus fasciatus* (Peters, 1864); *S. algeriensis* (Peters, 1864).

#### SUBGENUS *SCINCOPUS* PETERS, 1864.

**Type species:** *Scincus (Scincopus) fasciatus* Peters, 1864.

**Diagnosis:** The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and all other similar genera and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and

interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus* subgen. nov. as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it and all other similar species and genera by the following suite of characters: Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally. 30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

**Distribution:** Drier parts of North Africa.

**Content:** *Scincopus (Scincopus) fasciatus* (Peters, 1864) (monotypic).

#### **SUBGENUS MOROCCOSCINCUS SUBGEN. NOV.**

**Type species:** *Eumeces algeriensis* Peters, 1864.

**Diagnosis:** The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and all other similar genera and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864, subgenus *Moroccoscincus* subgen. nov. as formally named herein, is essentially similar to the subgenus *Scincopus*, but readily separated from it and all other similar species and genera by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits subcylindrical or compressed, with

transverse lamella, inferiorly, not serrated laterally. 30 or 32 midbody rows; two azygos postmentals.

This is versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species.

*Moroccoscincus* subgen. nov. monotypic for the species *Scincopus (Moroccoscincus) algeriensis* (Peters, 1864) is further defined as follows:

Head large; cheeks swollen in the adult; snout short, obtuse. Nasal usually divided, in contact with the first upper labial only; no postnasal; five supraoculars, the three anterior ones in contact with the frontal; parietals entirely separated by the interparietal; four or five pairs of nuchals; ear-opening rather large, with three or four obtuse lobules anteriorly; two azygos postmentals. 31 or 32 midbody rows, the dorsals distinctly striated; the two median longitudinal dorsal series of scales much broader than the others. The length of the hind limb is contained about thrice in the length from snout to vent; when pressed against the body the limbs just meet or fail to meet. A series of transversely enlarged subcaudals. Brown above, with orange-red spots, the largest of which sometimes form irregular transverse bands on the body; lower surfaces yellowish white.

**Distribution:** Drier parts of North Africa.

**Content:** *Scincopus (Moroccoscincus) algeriensis* (Peters, 1864) (monotypic).

#### **GENUS SCINCUS LAURENTI, 1768.**

**Type species:** *Lacerta stincus* [sic] Linnaeus, 1758.

**Diagnosis:** The genus *Scincus* Laurenti, 1768, is similar in many respects to *Plestiodon* and the other genera described within this paper but is only found in the Middle-East and North Africa.

It is separated from *Plestiodon* and other similar genera and defined by the following suite of characters: Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on pale background.

**Distribution:** North Africa and the Middle-East.

**Content:** *Scincus scincus* (Linnaeus, 1758) (type species); *S. albifasciatus* Boulenger, 1890; *S. hemprichii* Wiegmann, 1837; *S. mitranus* Anderson, 1871.

**TRIBE EUMECIINI TRIBE NOV.****(Terminal taxon: *Scincus schneideri* Daudin, 1802).****Diagnosis:** The tribe Eumeciini *tribe nov.* is defined as follows:

In common with the tribe Adelynhoserscinciini *tribe nov.* species share the following unique suite of characters: 26-34 presacral vertebrae. Limbs relatively slender, lamellae not expanded. Head somewhat depressed in lateral view. Skull with unindented parietal bones and near-complete or full closure of supratemporal fontanelle. Conspicuous sexual dimorphism (except in *P. egregious* and *P. longirostris*, now *Bermudascincus longirostris*); males with proportionally larger, broader heads, due to expansion of quadrate bones and adductor mandibularis muscles. Scales of the head smooth and shiny, not separated by deep sutures. Two loreals, followed by two presuboculars. Postnasal present or absent. Palpebral and superciliary scales not separated by groove. One to two pairs of nuchal scales. Mid-dorsal scales not broadened, not fused. Lateral preanal scales overlies medial preanal scales (convergent with some sphenomorphine lygosomines). Ear lobules inconspicuous. Juveniles dark, usually strongly striped, tails brilliantly colored, adults show reduction or loss of striping and tail coloration.

The above referred to group of lizards contains nearly 50 recognized species, but many subspecies forms within these taxa are in fact species in their own right, meaning the number will become larger.

Genera including species potentially confused within these tribes and including species previously treated as congeneric (either within *Plestiodon*, *Eumeces* or other genera) are defined herein to remove any potential doubt as to which species should now be placed where. The following genera are previously defined and used by other authors, but redefined here to conform with the taxonomy presented herein.

In light of the general description above the species and genera within this tribe Eumeciini *tribe nov.* are diagnosed below in their component genera.

The genus *Scincus* Laurenti, 1768, similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters: Heavy limbs with robust pes, expanded lamellae on digits and phalanges, short-tailed. Conical head, convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Spatulate rostrum supported by extended fused premaxillae. Strong ventrolateral keels running from upper labial scales to sacral region (convergent with other genera of sand-swimming lizards). Scales thick, separated by deep sutures. Two loreals, second fused with first of two presuboculars. Postnasal present. Palpebral and superciliary scales separated by groove. Usually four or five pairs of nuchal scales. Broadened mid-dorsal scales, mid-dorsal rows not fused. Medial preanal scales enlarged, lateral edges coincide with ventrolateral keels. Small, ventrally directed ear opening

covered by several overlapping lobules. Color pattern variable, but generally consisting of transverse stripes or bars on pale background.

The genus *Scincopus* Peters, 1864 (subgenus *Scincopus*) is similar in many respects to *Plestiodon* but found in the Middle-East and North Africa is separated from *Plestiodon* and itself defined by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with obtuse tubercular crowns. Eyelids well developed, scaly. Ear hidden or partly concealed under an opercle. Nostril pierced between an opercle and a lower nasal; supranasals present; praefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle; digits flattened, serrated laterally, with transverse lamellae inferiorly. Snout subconical, obtusely truncate; digits feebly depressed, feebly toothed laterally; ear-opening large, covered by two large scales.

The genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus subgen. nov.* as formally named in this paper) is essentially similar to the subgenus *Scincopus*, but readily separated from it by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

30 or 32 scales round the body; two azygos postmentals (versus one or other of:

1/ 24 to 28 scales round the body; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental as seen in *Eumeces* species).

The genus *Eumeces* Wiegmann, 1834 from the drier parts of the Indian subcontinent to north Africa treated until recently as being of the same genus as *Plestiodon* is separated from *Plestiodon* by the following suite of characters:

Palatine bones not meeting on the median line of the palate; pterygoids toothed. Lateral teeth conical or with spheroid crowns. Eyelids well developed, scaly. Tympanum distinct, deeply sunk. Nostril pierced in the nasal; supranasals present; prefrontals, frontoparietals, and interparietal distinct. Limbs well developed, pentadactyle: digits subcylindrical or compressed, with transverse lamella, inferiorly, not serrated laterally.

Furthermore, one or other of:

1/ 24 to 28 midbody rows; two azygos postmentals, or:

2/ 30 scales round the body; a single postmental.

This is versus 30 or 32 scales round the body and two azygos postmentals as seen in the genus *Scincopus* Peters, 1864 (subgenus *Moroccoscincus subgen. nov.* as formally named in this paper).

*Eurylepis* Blyth, 1854 is defined by Griffith *et al.* 2000,

and adopted for this paper, by the following unique suite of characters:

Elongate, 35 or more presacral vertebrae (convergent with many other scincid groups). Limbs relatively slender, lamellae not expanded. Head somewhat conical, dorsal surface convex in lateral view, parietal bone with clear lateral indentations and supratemporal fontanelle open. Sexual dimorphism in head proportions not distinct. Scales shiny, separated by shallow sutures. Two loreals, followed by two presuboculars. Post-nasal scales present. Palpebral scales and superciliaries not separated by groove. Four or five pairs of nuchal scales, followed by several pairs of broadened mid-dorsal scales and broad row of fused mid-dorsal scales. Large medial preanal scales overlie small lateral pair. Ear lobules conspicuous, but not covering ear opening. Color pattern consists of gray-brown background, with pale, broad dorsolateral stripes, more distinct anteriorly, brown rectangular spots dominating posteriorly.

**Distribution:** North Africa and the Middle-east to the drier parts of the Indian subcontinent.

**Content:** *Eumeces* Wiegmann, 1834; *Eurylepis* Blyth, 1854; *Scincopus* Peters, 1864; *Scincus* Laurenti, 1768.

**GENUS PAMELAESCINCUS GREER, 1970.**

**Type species:** *Scelotes gardineri* Boulenger, 1909.

**Diagnosis:** The genus *Pamelaescincus* Greer, 1970 is herein defined as follows:

The palatines and palatal rami of the pterygoids meeting medially to form a broad secondary palate, and in having 11, instead of 10 or fewer, premaxillary teeth. Among the Seychelles and Mauritius scincines, which appear to be the genus' closest relatives, *Pamelaescincus* is most similar in palatal characters to *Gongylomorphus* Fitzinger, 1843, but differs from this monotypic Mauritius genus in lacking both the frontoparietal scales and the clear spectacle in the lower eyelid. *Pamelaescincus* is similar to other Seychelles scincines in lacking frontoparietals (which all other subsaharan Africa and Madagascar scincines have) and in having scaly eyelids; but differs from these species in lacking the posterior emargination of the palatal rami of the pterygoids, in having 5 instead of only 4 fingers, and in having a high midbody scale count (30 to 34 instead of 22 to 24) (adapted from Greer, 1970).

**Distribution:** Seychelles Islands.

**Content:** *Pamelaescincus gardineri* (Boulenger, 1909) (monotypic).

**GENUS JANETAESCINCUS GREER, 1970.**

**Type species:** *Scelotes braueri* Boettger, 1896.

**Diagnosis:** The genus *Janetaescincus* Greer, 1970 is similar to *Gongylomorphus* Fitzinger, 1843, and *Pamelaescincus* Greer, 1970 and differing from all other scincines in having the palatines and palatal rami of the pterygoids meeting medially to form a broad secondary palate, and in possessing 11, instead of 10 or fewer, premaxillary teeth. In skull morphology *Janetaescincus* differs from *Gongylomorphus* and *Pamelaescincus* in having the palatal rami of the pterygoids emarginated posteriorly. On the basis of external characters this genus is easily distinguished from *Gongylomorphus* and

*Pamelaescincus* by means of its lower midbody scale count (22 to 24 instead of 30 to 38), and by the possession of only 4 fingers instead of 5.

*Janetaescincus* also lacks the frontoparietals and clear spectacle in the lower eyelid of *Gongylomorphus*. The circular external ear opening is relatively smaller in *Janetaescincus* than in *Pamelaescincus* and, of course, is easily distinguishable from the horizontal slit in *Gongylomorphus* (adapted from Greer, 1970).

**Distribution:** Seychelles Islands.

**Content:** *Janetaescincus braueri* Boettger, 1896 (type species); *J. veseffitgeraldi* (Parker, 1947).

**TRIBE JANETAESCINCIINI TRIBE NOV.**

**(Terminal taxon: *Scelotes braueri* Boettger, 1896).**

**Diagnosis:** The tribe as defined herein is best diagnosed by the diagnosis of each of the two component genera.

The genus *Pamelaescincus* Greer, 1970 is herein defined as follows:

The palatines and palatal rami of the pterygoids meeting medially to form a broad secondary palate, and in having 11, instead of 10 or fewer, premaxillary teeth. Among the Seychelles and Mauritius scincines, which appear to be the genus' closest relatives, *Pamelaescincus* is most similar in palatal characters to *Gongylomorphus* Fitzinger, 1843, but differs from this monotypic Mauritius genus in lacking both the frontoparietal scales and the clear spectacle in the lower eyelid. *Pamelaescincus* is similar to other Seychelles scincines in lacking frontoparietals (which all other subsaharan Africa and Madagascar scincines have) and in having scaly eyelids; but differs from these species in lacking the posterior emargination of the palatal rami of the pterygoids, in having 5 instead of only 4 fingers, and in having a high midbody scale count (30 to 34 instead of 22 to 24) (adapted from Greer, 1970).

The genus *Janetaescincus* Greer, 1970 is defined as follows:

It is similar to *Gongylomorphus* Fitzinger, 1843, and *Pamelaescincus* Greer, 1970 and differing from all other scincines in having the palatines and palatal rami of the pterygoids meeting medially to form a broad secondary palate, and in possessing 11, instead of 10 or fewer, premaxillary teeth. In skull morphology *Janetaescincus* differs from *Gongylomorphus* and *Pamelaescincus* in having the palatal rami of the pterygoids emarginated posteriorly. On the basis of external characters this genus is easily distinguished from *Gongylomorphus* and *Pamelaescincus* by means of its lower midbody scale count (22 to 24 instead of 30 to 38), and by the possession of only 4 fingers instead of 5.

*Janetaescincus* also lacks the frontoparietals and clear spectacle in the lower eyelid of *Gongylomorphus*. The circular external ear opening is relatively smaller in *Janetaescincus* than in *Pamelaescincus* and, of course, is easily distinguishable from the horizontal slit in *Gongylomorphus* (adapted from Greer, 1970).

**Distribution:** Seychelles Islands.

**Content:** *Janetaescincus* Greer, 1970; *Pamelaescincus* Greer, 1970.

**GENUS GONGYLOMORPHUS FITZINGER, 1843.**

**Type species:** *Scincus bojerii* Desjardin, 1831.

**Diagnosis:** The genus is best defined by the skull characters: These are as follows: Palatine bones and palatal rami of pterygoids meeting medially; palatal rami of pterygoids "squared-off," not emarginated posteriorly as in the two genera (*Janetaescincus* Greer, 1970 and *Pamelaescincus* Greer, 1970); pterygoid teeth absent. Postorbital bone distinct, well developed; supratemporal arch well developed; 16 teeth on maxilla and 11 teeth on premaxillae.

In terms of external characters the genus is defined as follows: Interparietal small, not touching supraoculars; frontoparietals present (absent in all other subsaharan Africa, Madagascar, or west Indian Ocean island scincines); ear opening a horizontal slit; 38 longitudinal scale rows at midbody; digits 5-5.

**Distribution:** Mascarenes, Mauritius (Round Island, Gunner's Quoin [Coin de Mire] and possibly Reunion.

**Content:** *Gongylomorphus bojerii* (Desjardin, 1831) (monotypic).

**GENUS CHALCIDES LAURENTI, 1768.**

**Type species:** *Lacerta chalcides* Linnaeus, 1758.

**Diagnosis:** The genus *sensu lato* was broken up into four genera by Hoser (2012b). Molecular data obtained since that paper was published (e.g. Pyron *et al.* 2013) suggests that the division may be best retained with the groups treated as subgenera as defined in that paper rather than as full genera, although it was a borderline case as to which way one should treat the well-defined phylogenetic groups.

As a result of this uncertainty, and in order to main genus level consistency with the other groups within the Scincinae, the groups within *Chalcides sensu lato* are treated within this paper as subgenera, noting that the total of subgenera may ultimately exceed the four identified by Hoser (2012b).

That view is supported by the depth (timeline) of divergence of the relevant groups.

Significant in all this however is that the subgenus first proposed by Hoser in 2012, namely *Elfakhariscincus* Hoser, 2012 appears to be perhaps the best defined monophyletic group within *Chalcides sensu lato* based on available molecular data (e.g. Pyron *et al.* 2013).

The genus *Chalcides* Laurenti, 1768 including the four subgenera are defined and diagnosed by the following unique suite of characters:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Lower eyelid with an undivided transparent disk. Ear more or less distinct.

Nostril pierced between the rostral and a very small nasal in an emargination of the former shield; supranasals present; praefrontals and frontoparietals absent, body is very elongated; limbs short or rudimentary.

The subgenus *Chalcides* Laurenti, 1768 is defined and separated from the following subgenera within *Chalcides sensu lato* (or genera if one prefers to treat

them that way), by the following suite of characters: being one or other of the following three:

1/ Snout conical. End of snout scarcely projecting beyond the mouth; ear opening much larger than the nostril. Limbs reduced to a minute undivided rudiment, or:

2/ Snout conical. End of snout scarcely projecting beyond the mouth; ear opening much larger than the nostril. Limbs tridactyle. Hind limb at least as long as the distance between the ear and the fore limb; second and third toes of equal length, or:

3/ Snout conical. End of snout projecting beyond the mouth; ear opening not or scarcely larger than the nostril. Fore limb didactyle, hind limb tridactyle; ten midbody scale rows.

The subgenus *Elfakhariscincus* Hoser, 2012, is separated from all other species within *Chalcides* by the following suite of characters:

End of snout scarcely projecting beyond the mouth; ear opening much larger than the nostril.

Limbs pentadactyle. Nostril pierced just above the suture between the rostral and the first labial; usually, fifth labial entering the orbit; 28 to 38 scales round the body.

The subgenus *Sphenops* Wagler, 1830 is separated from all other species within *Chalcides* by the following suite of characters, this being one or other of:

1/ Snout conical. End of snout scarcely projecting beyond the mouth; ear opening much larger than the nostril. Limbs pentadactyle. Nostril pierced in advance of the suture between the rostral and the first labial; usually it is the fourth labial entering the orbit; 22 to 28 midbody rows; hind limb shorter than the distance between the end of the snout and the fore limb, or:

2/ Snout wedge-shaped, sides of belly angular. Both pairs of limbs pentadactyle or tetradactyle.

The subgenus *Allodactylus* Lataste, 1876 is separated from all other species within *Chalcides* by the following suite of characters, this being one or other of the following three:

1/ Snout conical. End of snout scarcely projecting beyond the mouth; ear opening much larger than the nostril. Limbs pentadactyle. Nostril pierced in advance of the suture between the rostral and the first labial; fifth labial entering the orbit; 28 or 30 midbody scale rows; hind limb as long as the distance between the end of the snout and the fore limb, or:

2/ Snout wedge-shaped, sides of belly angular. Fore limb didactyle or tridactyle, hind limb tetradactyle, or:

3/ Snout conical. End of snout projecting beyond the mouth; ear-opening not or scarcely larger than the nostril. Limbs tetradactyle; 14 midbody scale rows.

**Distribution:** Primarily Africa but also the Middle-east and southern Asia, including and as far east as India and Sri Lanka.

**Content:** *Chalcides (Chalcides) chalcides* (Linnaeus, 1758) (type species); *C. guentheri* Boulenger, 1887; *C. mertensi* Klausewitz, 1954; *C. minutus* Caputo, 1993; *C. pseudostratus* Caputo, 1993; *C. striatus* (Cuvier, 1829);



*C. mauritanicus* (Duméril and Bibron, 1839); *C. (Elfakhariscincus) ocellatus* (Forsk., 1775) (type species for the subgenus); *C. (Elfakhariscincus) bottegi* Boulenger, 1898; *C. (Elfakhariscincus) ragazzii* Boulenger, 1890; *C. (Elfakhariscincus) ebneri* Werner, 1931; *C. (Elfakhariscincus) levitoni* Pasteur, 1978; *C. (Elfakhariscincus) pentadactylus* (Beddome, 1870); *C. (Elfakhariscincus) pulchellus* Mocquard, 1906; *C. (Elfakhariscincus) thierryi* Tornier, 1901; *C. (Allodactylus) delislei* Lataste, 1876 (type species for subgenus); *C. (Allodactylus) armitagei* Boulenger, 1920; *C. (Allodactylus) coeruleopunctatus* Salvador, 1975; *C. (Allodactylus) manueli* Hediger, 1935; *C. (Allodactylus) mionecton* (Böttger, 1874); *C. (Allodactylus) montanus* Werner, 1931; *C. (Allodactylus) polylepis* Boulenger, 1890; *C. (Allodactylus) sexlineatus* Steindachner, 1891; *C. (Allodactylus) sphenopsiformis* (Duméril, 1856); *C. (Allodactylus) viridanus* (Gravenhorst, 1851); *C. (Sphenops) sepsoides* (Audouin, 1829) (type species for subgenus); *C. (Sphenops) bedriagai* (Bosca, 1880); *C. (Sphenops) boulengeri* Anderson, 1892; *C. (Sphenops) colosii* Lanza, 1957; *C. (Sphenops) lanzai* Pasteur, 1967; *C. (Sphenops) parallelus* Doumergue, 1901.

#### GENUS SEPSINA BOCAGE, 1866.

**Type species:** *Sepsina angolensis* Bocage, 1866.

**Diagnosis:** The genus *Sepsina* Bocage, 1866 is defined as follows:

Skull details: Palatine bones widely separated along the midline; palatal rami of pterygoids expanded medially with a tendency toward emargination posteriorly; pterygoid teeth present. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 12 to 15 maxillary teeth. External characters: Interparietal small, not touching supraocular scales; a pair of supranasals meeting behind rostral; external ear opening present; digits 4-4 or fewer (adapted from Greer 1970).

**Distribution:** Drier parts of southern Africa.

**Content:** *Sepsina angolensis* Bocage, 1866 (type species); *Sepsina alberti* Hewitt, 1929; *Sepsina bayoni* (Bocage, 1866); *Sepsina copei* Bocage, 1873; *Sepsina tetradactyla* Peters, 1874.

#### GENUS TYPHLACONTIAS BOCAGE, 1873.

**Type species:** *Typhlacontias punctatissimus* Bocage, 1873.

**Diagnosis:** The genus *Typhlacontias* Bocage, 1873 is defined as follows:

Skull characters: Palatine bones only slightly longer than wide, separated medially; palatal rami of pterygoids expanded laterally, but not meeting medially, and emarginated posteriorly (*gracilis*, *rohani* and *kataviensis*) or not (the rest of the genus); pterygoid teeth absent. Postorbital and jugal bones lacking; supratemporal arch weak and fenestra obliterated by the apposition of the bones in the supratemporal arch with the parietal; five to six maxillary teeth. External characters: Interparietal large, touching supraoculars; three median, transversely enlarged head scales between the rostral and interparietal instead of a pair of supranasals and two median, transversely enlarged

head scales; no external ear opening; limbless except for *T. brevipes*, which has a rudimentary hind leg (adapted from Greer 1970).

Haacke (1990) provides a more detailed diagnosis of the genus.

The subgenus *Efossokalahari* subgen. nov. is diagnosed by one or other of the following identifying characters:

1/ No enlarged lower labials, third upper labial enters the eye (*gracilis* and *kataviensis*), or:

2/ No enlarged lower labials, second labial enters the eye and the loreal is in contact with the second upper labial (*rohani*).

**Distribution:** The arid corridor of southern and south-west Africa (Namib and Kalahari sands).

**Content:** *Typhlacontias punctatissimus* Bocage, 1873 (type species); *T. brevipes* FitzSimmons, 1938; *T. gracilis* Roux, 1907; *T. johnsonii* Andersson, 1916; *T. kataviensis* Broadley, 2006; *T. rohani* Angel, 1923; *T. rudebecki* Haacke, 1997.

#### SUBGENUS TYPHLACONTIAS BOCAGE, 1873.

**Type species:** *Typhlacontias punctatissimus* Bocage, 1873.

**Diagnosis:** The genus *Typhlacontias* Bocage, 1873 is defined as follows:

Skull characters: Palatine bones only slightly longer than wide, separated medially; palatal rami of pterygoids expanded laterally, but not meeting medially, and emarginated posteriorly (*gracilis*, *rohani* and *kataviensis*) or not (the rest of the genus); pterygoid teeth absent. Postorbital and jugal bones lacking; supratemporal arch weak and fenestra obliterated by the apposition of the bones in the supratemporal arch with the parietal; five to six maxillary teeth. External characters: Interparietal large, touching supraoculars; three median, transversely enlarged head scales between the rostral and interparietal instead of a pair of supranasals and two median, transversely enlarged head scales; no external ear opening; limbless except for *T. brevipes*, which has a rudimentary hind leg (adapted from Greer 1970).

Haacke (1990) provides a more detailed diagnosis of the genus.

The subgenus *Typhlacontias* is best identified by elimination of specimens within the subgenus *Efossokalahari* subgen. nov..

That subgenus is diagnosed by one or other of the following identifying characters:

1/ No enlarged lower labials, third upper labial enters the eye (*gracilis* and *kataviensis*), or:

2/ No enlarged lower labials, second labial enters the eye and the loreal is in contact with the second upper labial (*rohani*).

**Distribution:** The drier area centred on the Namib desert, south-west Africa and nearby areas to the north and south.

**Content:** *Typhlacontias (Typhlacontias) punctatissimus* Bocage, 1873 (type species); *T. (Typhlacontias) brevipes* FitzSimmons, 1938; *T. (Typhlacontias)*

*johnsonii* Andersson, 1916; *T. (Typhlacontias) rudebecki* Haacke, 1997.

**SUBGENUS EFFOSOKALAHARI SUBGEN. NOV.**

**Type species:** *Typhlacontias gracilis* Roux, 1907.

**Diagnosis:** Lizards within the subgenus *Efossokalahari subgen. nov.* are separated from the nominate subgenus and diagnosed by one or other of the following identifying characters:

1/ No enlarged lower labials, third upper labial enters the eye (*gracilis* and *kataviensis*), or:

2/ No enlarged lower labials, second labial enters the eye and the loreal is in contact with the second upper labial (*rohani*).

The genus *Typhlacontias* Bocage, 1873 (both subgenera) is defined as follows:

Skull characters: Palatine bones only slightly longer than wide, separated medially; palatal rami of pterygoids expanded laterally, but not meeting medially, and emarginated posteriorly (*gracilis*, *rohani* and *kataviensis*) or not (the rest of the genus); pterygoid teeth absent. Postorbital and jugal bones lacking; supratemporal arch weak and fenestra obliterated by the apposition of the bones in the supratemporal arch with the parietal; five to six maxillary teeth. External characters: Interparietal large, touching supraoculars; three median, transversely enlarged head scales between the rostral and interparietal instead of a pair of supranasals and two median, transversely enlarged head scales; no external ear opening; limbless except for *T. brevipes*, which has a rudimentary hind leg (adapted from Greer 1970).

Haacke (1990) provides a more detailed diagnosis of the genus.

**Distribution:** The arid corridor centred on the Kalahari sands of south-west Africa.

**Etymology:** Named in reflection of the fact that the lizards are routinely burrowing in the Kalahari sands.

**Content:** *Typhlacontias (Efossokalahari) gracilis* Roux, 1907; *T. (Efossokalahari) kataviensis* Broadley, 2006; *T. (Efossokalahari) rohani* Angel, 1923.

**GENUS FEYLINIA GRAY, 1845.**

**Type species:** *Feylinia currori* Gray, 1845.

**Diagnosis:** The genus *Feylinia* Gray, 1845 is defined and diagnosed as follows:

Nostril pierced in the large rostral shield, which caps the tip of the snout, connected with the posterior border of that shield by a short curved suture. Scales subequal, the longitudinal series in odd number. Several small scales border the anal cleft.

**Distribution:** Wetter parts of sub-saharan Africa (mainly central Africa).

**Content:** *Feylinia currori* Gray, 1845 (type species); *F. boulengeri* (Chabanaud, 1917); *F. elegans* (Hallowell, 1854); *F. grandisquamis* Müller, 1910; *F. macrolepis* Boettger, 1887; *F. polylepis* Bocage, 1887.

**GENUS MELANOSEPS BOULENGER 1887.**

**Type species:** *Herpetosaura atra* Günther, 1873.

**Diagnosis:** The genus *Melanoseps* Boulenger, 1887 is

defined and diagnosed as follows:

Skull characters: Palatine bones separated medially; palatal rami of pterygoids expanded medially and emarginated posteriorly; pterygoid teeth absent. Postorbital bone absent; supratemporal arch weak and fenestra obliterated by apposition of bones of the arch with the parietal bone; 10 to 13 maxillary teeth. External characters: Interparietal large, touching supraoculars; a pair of supranasals meeting behind rostral; no external ear opening; limbless (adapted from Greer 1970).

**Distribution:** Mainly East Africa (sub-Sahara), with one or two species in central/west Africa.

**Content:** *Melanoseps ater* (Günther, 1873) (type species); *M. emmrichi* Broadley, 2006; *M. longicauda* Tornier, 1900; *M. loveridgei* Brygoo and Roux-Esteve, 1982; *M. occidentalis* (Peters, 1877); *M. poensis* (Bocage, 1895); *M. pygmaeus* Broadley, 2006; *M. rondoensis* Loveridge, 1942; *M. uzungwensis* Loveridge, 1942; *M. zairensis* (Brygoo and Roux-Esteve, 1982).

**SUBGENUS EBOLASEPS SUBGEN. NOV.**

**Type species:** *Herpetosaura occidentalis* Peters, 1877.

**Diagnosis:** The subgenus *Ebolaseps subgen. nov.* is readily distinguished from all *Melanoseps* by having 22 midbody rows as opposed to 24 or more for all in the subgenus *Melanoseps* except some specimens of *M. atra* from north-east Tanzania, these also being distinguished from *Ebolaseps subgen. nov.* by a whitish venter with distinct blackish-brown lines resulting from the fusion of a blackish brown spot on the centre of each scale.

All *Ebolaseps subgen. nov.* are readily separated from all in the subgenus *Melanoseps* and all other similar lizards by the following suite of characters:

Snout rounded, rostral moderately large forming a large semicircle, but phased out backward in a blunt tip. Eye small, but very distinct; supranasal behind the rostral in contact, a short suture forming, as well as with the first supraocular. Frontal as long as the fronto-nasal, which is as wide as long; no praefrontals.

Three supraoculars, the first largest and third smallest, the first and second in contact with the frontal. Four supraciliaries, about the size as the third supraocular. Frontoparietal and interparietal merged, this being the biggest scale plate of the head, slightly longer and wider than the frontal (forming together to make a rhombic figure), its front edge being weakly concave. Parietals elongated. The third supralabial touches the orbit. 22 midbody rows. Extremities are completely absent. Ear hole hidden. Colour is bluey-dark grey, on top. On the flanks and near underside each scale has alternating dark and whitish colour, so that there is an appearance of dotted stripes (not being spots and not fusing as seen in some *M. atra*).

The genus *Melanoseps* Boulenger, 1887 including both subgenera is defined and diagnosed as follows:

Skull characters: Palatine bones separated medially; palatal rami of pterygoids expanded medially and emarginated posteriorly; pterygoid teeth absent. Postorbital bone absent; supratemporal arch weak and fenestra obliterated by apposition of bones of the arch

with the parietal bone; 10 to 13 maxillary teeth. External characters: Interparietal large, touching supraoculars; a pair of supranasals meeting behind rostral; no external ear opening; limbless (adapted from Greer 1970).

**Distribution:** West Africa, including, Cameroon, Equatorial Guinea, Gabon, Democratic Republic of the Congo (Zaire), Angola and the Central African Republic.

**Etymology:** Named in reflection of the general type of lizard (seps) and a well-known river at the centre of the distribution of the subgenus.

**Content:** *Melanoseps (Ebolaseps) occidentalis* (Peters, 1877) (type species); *M. (Ebolaseps) poensis* (Bocage, 1895); *M. (Ebolaseps) zairensis* (Brygoo and Roux-Esteve, 1982).

#### SUBGENUS MELANOSEPS BOULENGER 1887.

**Type species:** *Herpetosaura atra* Günther, 1873.

**Diagnosis:** The genus *Melanoseps* Boulenger, 1887 including both subgenera is defined and diagnosed as follows:

Skull characters: Palatine bones separated medially; palatal rami of pterygoids expanded medially and emarginated posteriorly; pterygoid teeth absent. Postorbital bone absent; supratemporal arch weak and fenestra obliterated by apposition of bones of the arch with the parietal bone; 10 to 13 maxillary teeth. External characters: Interparietal large, touching supraoculars; a pair of supranasals meeting behind rostral; no external ear opening; limbless (adapted from Greer 1970).

The subgenus *Ebolaseps subgen. nov.* is readily distinguished from all *Melanoseps* by having 22 midbody rows as opposed to 24 or more for all in the subgenus *Melanoseps* except some specimens of *M. atra* from north-east Tanzania, these also being distinguished from *Ebolaseps subgen. nov.* by a whitish venter with blackish-brown lines resulting from the fusion of a blackish brown spot on the centre of each scale.

All *Ebolaseps subgen. nov.* are readily separated from all in the subgenus *Melanoseps* and all other similar lizards by the following suite of characters:

Snout rounded, rostral moderately large forming a large semicircle, but phased out backward in a blunt tip. Eye small, but very distinct; supranasal behind the rostral in contact, a short suture forming, as well as with the first supraocular. Frontal as long as the fronto-nasal, which is as wide as long; no praefrontals.

Three supraoculars, the first largest and third smallest, the first and second in contact with the frontal. Four supraciliaries, about the size as the third supraocular. Frontoparietal and interparietal merged, this being the biggest scale plate of the head, slightly longer and wider than the frontal (forming together to make a rhombic figure), its front edge being weakly concave. Parietals elongated. The third supralabial touches the orbit. 22 midbody rows. Extremities are completely absent. Ear hole hidden. Colour is bluey-dark grey, on top. On the flanks and near underside each scale has alternating dark and whitish colour, so that there is an appearance of dotted stripes (not being spots and not fusing as seen in some *M. atra*).

**Distribution:** Mainly east Africa.

**Content:** *Melanoseps (Melanoseps) ater* (Günther, 1873) (type species); *M. (Melanoseps) emmrichi* Broadley, 2006; *M. (Melanoseps) longicauda* Tornier, 1900; *M. (Melanoseps) loveridgei* Brygoo and Roux-Esteve, 1982; *M. (Melanoseps) pygmaeus* Broadley, 2006; *M. (Melanoseps) rondoensis* Loveridge, 1942; *M. (Melanoseps) uzungwensis* Loveridge, 1942;

#### GENUS HAKARIA STEINDACHNER, 1899.

**Type species:** *Sepsina (Hakaria) simonyi* Steindachner, 1899.

**Diagnosis:** The monotypic genus *Hakaria* Steindachner, 1899 is morphologically similar to *Chalcides* Laurenti, 1768 *sensu lato* and *Sepsina* Bocage. 1866.

However the genus *Hakaria* is separated from these genera and all other lizard taxa by the following unique suite of characters:

Palatine bones not meeting on the middle line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct. Nostril pierced in the rostral, bordered by a supranasal and the first labial; praefrontals and frontoparietals absent. Body much elongated; limbs short.

*Hakaria* is further defined, diagnosed and separated from all other lizards by the following unique suite of characters:

Snout short, obtuse, not projecting beyond the labial margin; eye moderate; lower eyelid with a transparent disk; ear-opening small. Frontal more than twice as long as the frontonasal, longer than broad, broadest behind, angularly notched on each side by the first supraocular; interparietal nearly as long as the frontonasal; five supraoculars, second largest; no postnasal; first upper labial nearly as deep as the rostral; fourth upper labial entering the orbit. 24 smooth midbody scale rows that are subequal in size. Limbs short, pentadactyle; the fore limb, stretched forwards, does not quite reach the ear; hind limb a little longer than the head; third finger longest; fourth toe a little longer than third. Tail thick, cylindrical. Colouration is reddish brown above, each scale with a black spot; sides blackish, or closely spotted and dotted with black; yellowish-white beneath, uniform or dotted with black.

**Distribution:** Socotra Island, Arabia.

**Content:** *Hakaria simonyi* (Steindachner, 1899) (monotypic).

#### GENUS PROSCLOTES DE WITTE AND LAURENT, 1943.

**Type species:** *Scelotes eggeli* Tornier, 1902.

**Diagnosis:** The genus *Proscelotes* De Witte and Laurent, 1943 is diagnosed as follows:

Skull characters: Palatine bones closely apposed or meeting along midline; palatal rami of pterygoids separated and diverging posteriorly; pterygoid teeth absent. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 17 to 22 maxillary teeth.

External characters: Interparietal small (except in

*eggeli*), not touching supraocular scales; a pair of supranasals meeting behind rostral; external ear opening present; 5 fingers and toes (i.e. digital formula, 5-5) (adapted from Greer 1970).

**Distribution:** Usambara Mountains, Tanzania for *Proscelotes eggeli* (Tornier, 1902); East Zimbabwe and Mozambique for *Proscelotes arnoldi* (Hewitt, 1932) and Malawi for *Proscelotes aenea* (Barbour and Loveridge, 1928).

**Content:** *Proscelotes eggeli* (Tornier, 1902) (type species); *Proscelotes aenea* (Barbour and Loveridge, 1928); *Proscelotes arnoldi* (Hewitt, 1932).

#### SUBGENUS PROSCÉLOTES DE WITTE AND LAURENT, 1943.

**Type species:** *Scelotes eggeli* Tornier, 1902.

**Diagnosis:** The subgenus *Proscelotes* is identified by the presence of a large interparietal, versus small in the other subgenus *Parascelotes subgen. nov.*

The genus *Proscelotes* De Witte and Laurent, 1943 (including both subgenera) is diagnosed as follows:

Skull characters: Palatine bones closely apposed or meeting along midline; palatal rami of pterygoids separated and diverging posteriorly; pterygoid teeth absent. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 17 to 22 maxillary teeth.

External characters: Interparietal small (except in *eggeli*), not touching supraocular scales; a pair of supranasals meeting behind the rostral; external ear opening present; 5 fingers and toes (i.e. digital formula, 5-5) (adapted from Greer 1970).

**Distribution:** Usambara Mountains, Tanzania.

**Content:** *Proscelotes (Proscelotes) eggeli* (Tornier, 1902) (monotypic).

#### SUBGENUS PARASCELOTES SUBGEN. NOV.

**Type species:** *Sepsina arnoldi* Hewitt, 1932.

**Diagnosis:** The subgenus *Parascelotes subgen. nov.* is identified by the presence of a small interparietal, versus large in the other subgenus *Proscelotes*.

The genus *Proscelotes* De Witte and Laurent, 1943 (including both subgenera) is diagnosed as follows:

Skull characters: Palatine bones closely apposed or meeting along midline; palatal rami of pterygoids separated and diverging posteriorly; pterygoid teeth absent. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 17 to 22 maxillary teeth.

External characters: Interparietal small (except in *eggeli*), not touching supraocular scales; a pair of supranasals meeting behind the rostral; external ear opening present; 5 fingers and toes (i.e. digital formula, 5-5) (adapted from Greer 1970).

**Distribution:** East Zimbabwe, Mozambique and Malawi.

**Etymology:** *Para* as in not quite and *Scelotes* in terms of the type subgenus it is nearly like.

**Content:** *Proscelotes (Parascelotes) arnoldi* (Hewitt, 1932) (type species); *P. (Parascelotes) aenea* (Barbour and Loveridge, 1928).

#### GENUS NOTASCELOTES GEN. NOV.

**Type species:** *Scelotes uluguruensis* Barbour and Loveridge, 1928.

**Diagnosis:** Together with skinks in the genus *Proscelotes* De Witte and Laurent, 1943 the skink genus *Notascelotes gen. nov.* is readily distinguishable from all members of the genus *Scelotes* Fitzinger, 1826 by the presence of five instead of four or less digits on both fore and hind limbs and 22-23 maxillary teeth, versus 11-19 in *Scelotes*. The interparietal in this genus is in contact with the third and fourth supraoculars and this at once distinguishes it from the genus *Proscelotes*.

In detail this genus is separated from all other similar and related skink genera in Africa, Madagascar and nearby areas by the following suite of characters:

Rostral very broad with lunulate upper edge, seven or eight upper labials, fifth, which is largest, below the eye (occasionally 4th and 5th below eye); nostril pierced between rostral, supranasal, nasal and first labial; a large postnasal broadly in contact with the frontonasal; two praecoculars present, a large upper and a very small lower; frontonasal separated from the rostral by the supranasals, which are in contact; four supraoculars, the first three in contact with the frontal, the third and fourth in contact with the interparietal; six supraciliaries, of which the first is in contact with the postnasal and the frontonasal; scales on lower eyelid plainly visible; a pair of parietals in contact behind the interparietal; two (sometimes a third indicated) pairs of enlarged nuchals; ear-opening distinct; 24 mid-body scale-rows; limbs pentadactyle, 22-23 maxillary teeth.

Colour in life (both sexes): Above, snout to end of body transparent reddish-brown, plates on head edged with darker, a black spot on the apex of each scale; these spots coalesce on fore arm so that the latter is largely black; the black spots on the hind limbs are so large that they give the latter the appearance of being black; tail deep plumbeous black; first four upper labials black, rest dusky; sides of body and anterior aspects of limbs creamy-white, each with a black spot.

Below, translucent white on throat, body and limbs; the blood vessels of the throat, and internal organs of the body may be seen through the scales, to which they impart red and orange tints; the under side of the tail is opaque white with double rows of dusky spots laterally. Some specimens show pinkish beneath the tail.

**Distribution:** The sole species within *Notascelotes gen. nov.* includes the only species placed until now in *Scelotes* from East Africa. The rest of the genus *Scelotes sensu lato*, that being *Scelotes* and *Herpetosaura* Peters, 1854 as recognized within this paper (as separate genera) are confined to southern Africa.

The centre of distribution for *Scelotes* is the Western Cape and *Herpetosaura* is the eastern Cape.

*Notascelotes gen. nov.* is effectively confined to the immediate vicinity of the type locality, the Uluguru Mountains as well as the nearby Usambara Mountains in Tanzania, these being very biodiverse areas with a high degree of endemism. Preserved specimens from

both localities are at the MCZ Harvard University, USA.

**Etymology:** Named in reference to the fact that it is best treated as not being a *Scelotes*, (not-a-*Scelotes*) this being the genus in which the type species was originally placed.

**Content:** *Notascelotes uluguruensis* Barbour and Loveridge, 1928) (monotypic).

**GENUS SCELOTES FITZINGER, 1826.**

**Type species:** *Bipes anguineus* Merrem, 1820.

**Diagnosis:** Skull characters: Palatine bones meeting or closely apposed on midline; palatal rami of pterygoids separated medially and diverging posteriorly; pterygoid teeth absent. Postorbital bone present, but small to minute, or absent; supratemporal arch weak, fenestra obliterated by apposition of bones of arch with parietal bone; 11 to 19 maxillary teeth, (versus 22 to 23 maxillary teeth in *Notascelotes uluguruensis* Barbour and Loveridge, 1928).

External characters: Interparietal large, touching supraocular scales; external ear opening present or absent; a pair of supranasals meeting behind rostral (fused only in some *Scelotes bipes* Merrem, 1877); digital formula 5-5 to 0-0, (adapted from Greer 1970).

The genus *Herpetosaura* Peters 1854, is diagnosed and defined as separate from *Scelotes* by a noticeably wider than long frontal, versus one that either is not, or only marginally so.

**Distribution:** Centered in South Africa in the region of the Western Cape.

**Content:** *Scelotes bipes* (Linnaeus, 1766) (type species); *S. bicolor* (Smith, 1849); *S. kasneri* FitzSimons, 1939); *S. gronovii* (Daudin, 1802); *S. montispectus* Bauer, Whiting and Sadlier, 2003; *S. sexlineatus* (Harlan, 1824).

**GENUS HERPETOSAURA PETERS, 1854.**

**Type species:** *Herpetosaura arenicola* Peters, 1854.

**Diagnosis:** The genus *Herpetosaura* Peters 1854, is diagnosed and defined as separate from *Scelotes* by a noticeably wider than long frontal, versus one that either is not, or only marginally so.

Both the genera *Herpetosaura* and *Scelotes* Günther, 1877 (treated by most recent authors as being of a single genus) are diagnosed and defined by the following suite of characters:

Skull characters: Palatine bones meeting or closely apposed on midline; palatal rami of pterygoids separated medially and diverging posteriorly; pterygoid teeth absent. Postorbital bone present, but small to minute, or absent; supratemporal arch weak, fenestra obliterated by apposition of bones of arch with parietal bone; 11 to 19 maxillary teeth, (versus 22 to 23 maxillary teeth in *Notascelotes uluguruensis* Barbour and Loveridge, 1928).

External characters: Interparietal large, touching supraocular scales; external ear opening present or absent; a pair of supranasals meeting behind rostral (fused only in some *Scelotes bipes* Merrem, 1877); digital formula 5-5 to 0-0, (adapted from Greer 1970).

**Distribution:** Centered in South Africa in the region of

the Eastern Cape.

**Content:** *Herpetosaura arenicola* Peters, 1854 (type species); *H. bidigitatus* (FitzSimons, 1930); *H. bourquini* (Broadley, 1994); *H. caffer* (Peters, 1861); *H. capensis* (Smith, 1849); *H. duttoni* (Broadley, 1990); *H. fitzsimonsi* (Broadley, 1994); *H. guentheri* (Boulenger, 1887); *H. inornatus* (Smith, 1849); *H. insularis* (Broadley, 1990); *H. limpopoensis* (FitzSimons, 1930); *H. mirus* Roux, 1907; *H. mossambicus* Peters, 1882; *H. vestigifer* (Broadley, 1994).

**GENUS PARACONTIAS MOCQUARD, 1894.**

**Type species:** *Paracontias brocchii* Mocquard, 1894.

**Diagnosis:** The genus *Paracontias* Mocquard, 1894, is diagnosed by the following derived character states: supranasals absent; prefrontals absent; pretemporal single; nasal greatly reduced; loreal single (the most divergent *P. holomelas* may occasionally have two); preocular single; presubocular single; supralabials five, third subocular; postsupralabial single; infralabials contacted by postmental is one; external ear opening absent; limbs absent without external trace of their former position; presacral vertebrae equal to or less than 46; sternal ribs equal to or less than 2; mesosternum absent; complete inscriptional chevrons equal to or less than 19.

**Distribution:** Mainly Madagascar and nearby islands.

**Content:** *Paracontias brocchii* Mocquard, 1894; *P. fasika* Köhler, Vences, Erbacher and Glaw, 2010; *P. hafa* Andreone and Greer, 2002; *P. hildebrandti* (Peters, 1880); *P. holomelas* (Günther, 1877)

*P. kankana* Köhler, Vietes, Glaw, Kaffenberger and Vences, 2009; *P. manify* Andreone and Greer, 2002

*P. milloti* Angel, 1949; *P. minimus* (Mocquard, 1906); *P. rothschildi* Mocquard, 1905; *P. tsararano* Andreone and Greer, 2002; *P. vermisaurus* Miralles, Köhler, Vietes, Glaw and Vences, 2011.

**GENUS AMPHIGLOSSUS DUMÉRIL AND BIBRON, 1839.**

**Type species:** *Amphiglossus astrolabe* Duméril and Bibron, 1839.

**Diagnosis:** *Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo,

1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters, being one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus

*Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters:

More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein.

The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters:

Having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all

other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottycincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottycincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottycincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral

vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

*Sirenosincus* Sakata and Hikida, 2003, as defined by Sakata and Hikida in 2003, is easily distinguished from all other genera of skinks worldwide by the combination of:

1/ The presence of two forelimbs and the absence of hindlimbs, noting that all other genera except *Jarujinia* Chan-Ard, Makchai and Cota, 2011 are either quadrupedal, completely legless, or having two hindlimbs only; and:

2/ The regressed eyes sunken below scales; and:

3/ The completely depigmented skin.

Due to these obvious traits, *Sirenosincus* is not easily confused with others within *Amphiglossus sensu lato*.

**Distribution:** Madagascar and immediately adjacent islands.

**Content:** *Amphiglossus astrolabi* Duméril and Bibron, 1839 (type species); *A. andranovahensis* (Angel, 1933); *A. ardouini* (Mocquard, 1897); *A. mandady* Andreone and Greer, 2002; *A. meva* Mitalles, Raselimanana, Rakotomalala, Vences and Vieites, 2011; *A. reticulatus* (Kaudern, 1922); *A. spilostichus* Andreone and Greer, 2002; *A. tsaratananensis* (Brygoo, 1981).

This paper continues in Issue 29 of *Australasian Journal of Herpetology* (pp. 65-128) which has been published at the same time as this issue, being treated as one paper published in two volumes.

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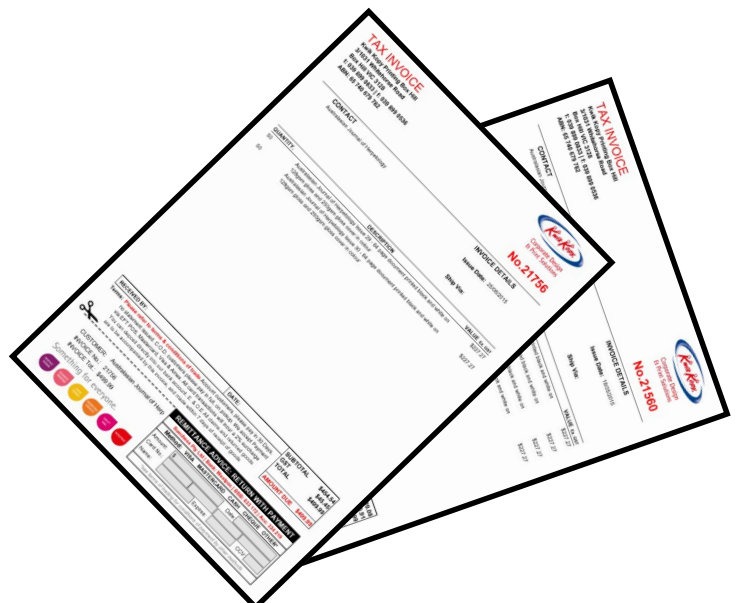
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# ***Australasian Journal of Herpetology***

**A revision of the genus level taxonomy of the Acontinae and Scincinae,  
with the creation of new genera, subgenera, tribes and subtribes.  
Raymond T. Hoser (Issue 28:1-64 and Issue 29:65-128).**

**Cover photo: Raymond Hoser.**

## A revision of the genus level taxonomy of the Acontinae and Scincinae, with the creation of new genera, subgenera, tribes and subtribes.

Raymond T. Hoser.

### CONTINUED...

#### SUBGENUS *BRYGOOSCINCUS* SUBGEN. NOV.

**Type species:** *Scelotes tsaratananensis* Brygoo, 1981.

**Diagnosis:** The subgenus of *Amphiglossus*, *Brygooscincus* subgen. nov. (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea* gen. nov., *Rubercaudata* gen. nov. and *Gracilescincus* gen. nov. all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliiform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus* gen. nov. is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea* gen. nov. is separated from the other similar genera by the following suite of characters: one or other of the following three:

- 1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea* subgen. nov.), or:
- 2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead

of 5 (subgenus *Gracilescincus subgen. nov.*), or:  
 3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*). The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail

frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Known only from near the type locality, massif du Tsaratanana in far northern Madagascar.

**Etymology:** Named in honour of Édouard-Raoul Brygoo of Germany for his work on the skinks of Madagascar and in reflection of the kind of lizard this taxon is, that being a skink.

**Content:** *Amphiglossus (Brygooscincus) tsaratananensis* (Brygoo, 1981) (monotypic).

**SUBGENUS AMPHIGLOSSUS DUMÉRIAL AND BIBRON, 1839.**

**Type species:** *Amphiglossus astrolabe* Duméril and Bibron, 1839.

**Diagnosis:** The other subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes*

*tsaratananensis* Brygoo, 1981 and monotypic for that taxon) is separated from all other similar species (this subgenus) by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by

the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the

snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar and immediately adjacent islands.

**Content:** *Amphiglossus (Amphiglossus) astrolabi* Duméril and Bibron, 1839 (type species); A.

(*Amphiglossus andranovahensis* (Angel, 1933); A. (*Amphiglossus ardouini* (Mocquard, 1897);

A. (*Amphiglossus mandady* Andreone and Greer, 2002;

A. (*Amphiglossus meva* Mitalles, Raselimanana, Rakotomalala, Vences and Vieites, 2011; A.

(*Amphiglossus reticulatus* (Kaudern, 1922); A.

(*Amphiglossus spilostichus* Andreone and Greer, 2002.

**GENUS MADASCINCUS BRYGOO, 1981.**

**Type species:** *Gongylus melanopleura* Günther, 1877.

**Diagnosis:** The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilesincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk.

24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilesincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually

fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of

characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus* *subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus* *subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus* *subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus* *subgen. nov.*).

**Distribution:** Madagascar; mainly in the north.

**Content:** *Madascincus melanopleura* (Günther, 1877) (type species); *M. ankodabensis* (Angel, 1930); *M. minutus* (Raxworthy and Nussbaum, 1993); *M. nosymangabeensis* *sp. nov.*

**SPECIES MADASCINCUS NOSYMANGABEENSIS SP. NOV.**

**Holotype:** Specimen number ZSM 398/2005 at Zoologische Staatssammlung München, Germany. This is a facility that allows access to its holdings by scientists. The specimen was collected at Nosy Mangabe, Madagascar Lat. 15°30'S, Long. 49°46'E at an elevation of between 50-100 metres above sea level.

**Paratypes:** Specimen numbers ZSM 399/2005, ZSM 400/2005 and ZSM 401/2005 also from the same location as the holotype and held at the same facility in Germany.

**Diagnosis:** These specimens are described as included within *Madascincus melanopleura*-N by Miralles and Vences (2013). They also included in this group specimens from elsewhere on the mainland of Madagascar which they tentatively assigned to the taxon

*M. minutus* (Raxworthy and Nussbaum, 1993), which all would ordinarily be identified as.

However inspection of live (as opposed to preserved) specimens of relevant specimens from relevant locations shows quite clearly that two species are involved (confirming the molecular results) and that the specimens from Nosy Mangabee are of the until now undescribed species.

Both *M. minutus* and *M. nosymangabeensis* *sp. nov.* are separated from other similar species by the following suite of characters: 20-22 midbody rows, 48-54 scales between the mental and anal, 29-30 presacral vertebrae, 10-11 lamellae under the fourth toe of the hind foot (versus 12-16 in both *M. melanopleura* and *M. ankodabensis*). The head scales are pitted.

No other species of *Madascincus sensu lato* outside of the four species within *Madascincus* as defined herein has such a low number of scales between the mental and anal scales, the closest seen in a former congener being *Cummingscincea macrolepis* with 60 or more.

Both *M. minutus* and *M. nosymangabeensis* *sp. nov.* are separated from one another by colouration.

*M. minutus* is dark brown, being almost black dorsally, including on the tail, with lighter brown flanks spotted with small dark spots. There is a dark dorsolateral line running from behind the head along the body and onto the tail, which has a well-defined upper border. This line is separated from the front leg by several scales. By contrast *M. nosymangabeensis* *sp. nov.* is medium brown dorsally (not blackish brown) and the dark dorsolateral line running from behind the head along the body and onto the tail loses its well-defined upper border midway along the body. Furthermore this line is considerably wider at the front end of the body effectively reaching the top of the forelimb.

*M. nosymangabeensis* *sp. nov.* also has a lightening in colour on the anterior of the snout which is not seen in *M. minutus*.

**Distribution:** Known only from Nosy Mangabee, Madagascar.

**Etymology:** Named in reflection of the location where the type specimen was caught.

**GENUS PSEUDOACONTIAS BOCAGE, 1889.**

**Type species:** *Pseudoacontias madagascariensis* Bocage, 1889.

**Diagnosis:** The genus *Pseudoacontias* Bocage, 1889 is characterised and diagnosed by being limbless, with small eye, angular snout and with no ear openings visible.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein (including the genus *Pseudoacontias* Bocage, 1889) is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera these genera have the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* (as defined in this paper) is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudatus gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk.

24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in



combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar.

**Content:** *Pseudoacantias madagascariensis* Bocage, 1889 (type species); *P. angelorum* Nussbaum and Raxworthy, 1995; *P. menamainty* Andreone and Greer, 2002; *P. unicolor* Sakata and Hikida, 2003.

**GENUS PYGOMELES GRANDIDIER, 1867.**

**Type species:** *Pygomeles braconnieri* Grandidier, 1867.

**Diagnosis:** The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of having of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercadatus* *gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea* *gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes  $6\pm 9$  instead of 5 (subgenus *Gracilesincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen

in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus

*Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar, mainly in the south, but also found in the north-east.

**Content:** *Pygomeles braconneri* Grandidier, 1867 (type species); *P. petteri* Pasteur and Paulian, 1962;

*P. trivittatus* Boulenger, 1896.

#### SUBGENUS ANDRONGO BRYGOO, 1982.

**Type species:** *Pygomeles trivittatus* Boulenger, 1896.

**Diagnosis:** The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

Elsewhere (including in the accounts elsewhere in this paper) that species is treated as monotypic for *Androngo*, and containing two subspecies, however they are almost certainly in fact full species, these being *Pygomeles (Androngo) trivittatus* Boulenger, 1896 and *P. (Androngo) trilineatus* (Angel, 1942).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk.

24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*). The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Southern Madagascar.

**Content:** *Pygomeles (Androngo) trivittatus* Boulenger, 1896 (monotypic).

#### GENUS *VOELTZKOWIA* BOETTGER, 1893.

**Type species:** *Voeltzkowia mira* Boettger, 1893.

**Diagnosis:** *Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

Neither subgenus is formally defined within this paper as they are outlined herein and been defined on the same basis by Brygoo in 1981.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the

supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus*

*subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae

under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar, mainly in the south-west.

**Content:** *Voeltzkowia mira* Boettger, 1893 (type species); *V. fierinensis* (Grandidier, 1869); *V. lineata* (Mocquard, 1901); *V. petiti* (Angel, 1924); *V. rubrocaudata* (Grandidier, 1869).

#### GENUS SLOPPYSCINCUS GEN. NOV.

**Type species:** *Amphiglossus mandokava* Raxworthy and Nussbaum, 1993.

**Diagnosis:** Species within the genus *Sloppyscincus gen. nov.* have until now been treated as being within the genus *Amphiglossus* Duméril and Bibron, 1839.

The genus *Sloppyscincus gen. nov.* is however separated from all other similar species including *Amphiglossus* by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androgo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or

frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Clarascincus gen. nov.* is separated from all similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar.

**Etymology:** Named in honour of our family's still alive as of 2015 Great Dane dog for services to wildlife education when attending educational reptile displays with Snakebusters, Australia's best reptiles shows, as well as his faultless efforts in guarding our facility against thefts. The second part of the genus name reflects that the lizards are skinks.

**Content:** *Sloppyscincus mandokava* (Raxworthy and Nussbaum, 1993) (type species); *S. tanysoma* (Andreone and Greer, 2002); *S. elongatus* (Angel, 1933); *S. alluaudi* (Brygoo, 1981); *S. crenni* (Mocquard, 1906); *S. stylus* (Andreone and Greer, 2002).

#### **SUBGENUS SLOPPYSCINCUS SUBGEN. NOV.**

**Type species:** *Amphiglossus mandokava* Raxworthy and Nussbaum, 1993.

**Diagnosis:** Species within the genus *Sloppyscincus gen. nov.* are best defined by the removal of the other two subgenera as done here and furthermore by removal of species within closely related genera as done below.

Species within the genus *Sloppyscincus gen. nov.* have until now been treated as being within the genus *Amphiglossus* Duméril and Bibron, 1839.

The genus *Sloppyscincus gen. nov.* is however separated from all other similar species including *Amphiglossus* by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting

frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androgo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters:

More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated



from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

- 1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:
- 2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:
- 3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first

labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leuocolabialis subgen. nov.*).

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

- 1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:
- 2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:
- 3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:
- 4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part

of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar.

**Etymology:** See for genus.

**Content:** *Sloppyscincus (Sloppyscincus) mandokava* (Raxworthy and Nussbaum, 1993) (type species); *S. (Sloppyscincus) tanysoma* (Andreone and Greer, 2002).

**SUBGENUS COMMENDATSCINCUS SUBGEN. NOV.**

**Type species:** *Scelotes elongatus* Angel, 1933.

**Diagnosis:** Species within the genus *Sloppyscincus gen. nov.* have until now been treated as being within the genus *Amphiglossus* Duméril and Bibron, 1839.

The genus *Sloppyscincus gen. nov.* is however separated from all other similar species including *Amphiglossus* by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided

transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes  $6\pm 9$  instead of 5 (subgenus *Gracilesцинcus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.* The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincinus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus

*Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar.

**Etymology:** Named in reflection of the moderate size of the relevant skinks as compared to similar species within the tribe. The second part of the genus name reflects that the lizards are skinks.

**Content:** *Sloppyscincus (Commendatscincus) elongatus* (Angel, 1933) (type species); *S. (Commendatscincus) alluaudi* (Brygoo, 1981); *S. (Commendatscincus) crenni* (Mocquard, 1906).

#### **SUBGENUS DEGENERESCINCUS GEN. NOV.**

**Type species:** *Amphiglossus stylus* Andreone and Greer, 2002.

**Diagnosis:** The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting

frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

Elsewhere (including in the accounts elsewhere in this paper) that species is treated as monotypic for *Androngo*, and containing two subspecies, however they are almost certainly in fact full species, these being *Pygomeles (Androngo) trivittatus* Boulenger, 1896 and *P. (Androngo) trilineatus* (Angel, 1942).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo,

1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:  
2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes  $6 \pm 9$  instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Clarascincus gen. nov.* is separated from all

other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** North-east Madagascar.

**Etymology:** Named in reflection of the fact that the taxon is somewhat degenerate (including the absence

an external ear opening and both the front and rear limbs reduced to small clawless stubs) and that it is a skink.

**Content:** *Sloppyscincus (Degenerescincus) stylus* (Andreone and Greer, 2002) (monotypic).

**GENUS CLARASCINCUS GEN. NOV.**

**Type species:** *Sepsina ornaticeps* Boulenger, 1896.

**Diagnosis:** The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen.*

*nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilesincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; praefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the

body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar and nearby island groups to the north-west and north-east of Madagascar, these being the Comoros Islands (North-west) and Glorioso Island (north-east).

**Etymology:** Named in reflection of the bright colour of the lizard and the fact that it is a skink.

**Content:** *Clarascincus ornateiceps* (Boulenger, 1896) (type species); *C. johannae* (Günther, 1880); *C. melanurus* (Günther, 1877); *C. valhallae* (Boulenger, 1909).

#### **SUBGENUS COMOROSCINCUS SUBGEN. NOV.**

**Type species:** *Gongylus johannae* Günther, 1880.

**Diagnosis:** The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.* The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that

lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular

snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes  $6\pm 9$  instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leuocolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the

supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Comoros Islands (North-west of Madagascar).

**Etymology:** Named in reflection of the location the taxon comes from and the fact that it is a skink.

**Content:** *Clarascincus (Comorosincus) johannae* (Günther, 1880) (monotypic).

#### **SUBGENUS CLARASCINCUS SUBGEN. NOV.**

**Type species:** *Sepsina ornaticeps* Boulenger, 1896.

**Diagnosis:** The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably



further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The other subgenus in this genus, subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliiform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus

*Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar and nearby island groups to the north-east of Madagascar, this including Glorioso Island (north-east).

**Etymology:** Named in reflection of the bright colour of the lizard and the fact that it is a skink.

**Content:** *Clarascincus (Clarascincus) ornaticeps* (Boulenger, 1896) (type species); *C. (Clarascincus) melanurus* (Günther, 1877); *C. (Clarascincus) valhallae* (Boulenger, 1909).

#### GENUS *CROTTYSCINCUS GEN. NOV.*

**Type species:** *Gongylus splendidus* Grandidier, 1872.

**Diagnosis:** The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* within *Clarascincus gen. nov.* is separated from the nominate subgenus by having 30-32 midbody scale rows, versus 22-28.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea* *gen. nov.*, *Rubercaudata* *gen. nov.* and *Gracilescincus* *gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus* *subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus* *gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea* *gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower

eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea* *subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus* *subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis* *subgen. nov.*).

The genus *Sloppyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; praefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus* *subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus* *subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus* *gen. nov.* defined herein. The subgenus *Degenerescincus* *subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Oxyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** South-east Madagascar.

**Etymology:** Named in honour of a Great Dane cross Rottweiler, named "Crotalus" (Crotty), who was born in May 1989 and lived for nearly 13 years and guarded the Hoser property in that period. *Crotalus* Linnaeus, 1758 is a genus of American Rattlesnake (pitviper). The latter part of the genus name reflects that the lizard is a skink.

**Content:** *Crottyscincus splendidus* (Grandidier, 1872) (monotypic).

#### GENUS OXYSCINCUS GEN. NOV.

**Type species:** *Sepsina frontoparietalis* Boulenger, 1889.

**Diagnosis:** The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each

scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very

rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus* *gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea* *gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea* *subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilesincus* *subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis* *subgen. nov.*).

The genus *Sloppyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial

edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus* *subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus* *subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus* *gen. nov.* defined herein. The subgenus *Degenerescincus* *subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus* *gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus* *gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus* *gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus* *gen. nov.*. The limb's length in *Clarascincus* *gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus* *subgen. nov.* is separated from the nominate subgenus *Clarascincus* *subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus* *gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

**Distribution:** Eastern Madagascar and nearby areas.

**Etymology:** Named in honour of a pure-bred Great Dane, named "Oxyuranus" (named Oxy as a shortened version), who died in 2012 at age 8 from heart failure,

who loyally guarded the Hoser residence for the previous 8 years and worked with Snakebusters, Australia's best reptiles shows in animal education for school-aged children.

*Oxyuranus* Kinghorn, 1923 is a genus of Australian elapid snake. The latter part of the genus name reflects that the lizard is a skink.

**Content:** *Oxyscincus frontoparietalis* (Boulenger, 1889) (type species); *O. anosyensis* (Raxworthy and Nussbaum, 1993); *O. decaryi* (Angel, 1930); *O. gastrostictus* (O'Shaughnessy, 1879); *O. macrocercus* (Günther, 1882); *O. punctatus* (Raxworthy and Nussbaum, 1993).

#### SUBGENUS *OXYSCINCUS* SUBGEN. NOV.

**Type species:** *Sepsina frontoparietalis* Boulenger, 1889.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the

following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or

frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilesцинcus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leuocolabialis subgen. nov.*).

The genus *Sloppysцинcus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatsцинcus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatsцинcus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppysцинcus gen. nov.* defined herein. The subgenus *Degenerescинcus*

*subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascинcus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscинcus gen. nov.*, from which it differs in having shorter limbs. In *Clarascинcus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscинcus gen. nov.*. The limb's length in *Clarascинcus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosцинcus subgen. nov.* is separated from the nominate subgenus *Clarascинcus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscинcus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

**Distribution:** Eastern Madagascar and nearby areas.

**Etymology:** Named in honour of a pure-bred Great Dane, named "Oxyuranus" (called "Oxy" for short), who died in 2012 at age 8 from heart failure, who loyally guarded the Hoser residence for the previous 8 years and worked with Snakebusters, Australia's best reptiles shows in animal education for school-aged children.

*Oxyuranus* Kinghorn, 1923 is a genus of Australian elapid snake. The latter part of the genus name reflects that the lizard is a skink.

**Content:** *Oxysцинcus (Oxysцинcus) frontoparietalis* (Boulenger, 1889) (type species); *O. (Oxysцинcus) decaryi* (Angel, 1930); *O. (Oxysцинcus) punctatus* (Raxworthy and Nussbaum, 1993).

**SUBGENUS RUBERCOLLUMUS SUBGEN. NOV.**

**Type species:** *Gongylus macrocercus* Günther, 1882.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genus *Oxysцинcus gen. nov.* is separated from all other similar species by the following suite of characters being one or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (this being diagnostic for the subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched

forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus* subgen. nov.); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus* subgen. nov.); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus* subgen. nov.).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea* gen. nov., *Rubercaudata* gen. nov. and *Gracilescincus* gen. nov. all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus* subgen. nov. (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind

limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus* gen. nov. is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea* gen. nov. is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea* subgen. nov.), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus* subgen. nov.), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on



the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leuocolabialis subgen. nov.*). The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comorosincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb,

stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

**Distribution:** Eastern Madagascar and nearby areas.

**Etymology:** Named in reflection of the reddish colouration or markings on the neck region.

**Content:** *Oxyscincus (Rubercollumus) macrocercus* (Günther, 1882) (type species); *O. (Rubercollumus) gastrostictus* (O'Shaughnessy, 1879).

#### **SUBGENUS ROSEACAUDATUS SUBGEN. NOV.**

**Type species:** *Amphiglossus anosyensis* Raxworthy and Nussbaum, 1993.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 26 to 28 scales round the body of equal size (this being diagnostic for the subgenus *Rubercollumus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids

developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals 2/2 ± 2/3. The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in

combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

**Distribution:** Southern Madagascar.

**Etymology:** Named in reflection of the pink on the tail.

**Content:** *Oxyscincus (Roseacaudatus) anosyensis* (Raxworthy and Nussbaum, 1993) (monotypic).

**GENUS RUBERCAUDATUS GEN. NOV.**

**Type species:** *Gongylus igneocaudatus* Grandidier, 1867.

**Diagnosis:** The genera *Rubercaudatus gen. nov.* and *Cummingscincea gen. nov.* included species that were until now placed in the genus *Madascincus* Brygoo, 1982. In the absence of the diagnostic material that follows, they would have remained in that genus.

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead

of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira*

and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus has species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Madagascar and immediately adjacent islands.

**Etymology:** Named in reflection of the red on the tail.

**Content:** *Rubercaudatus igneocaudatus* (Grandidier, 1867) (type species); *Rubercaudatus edwardsi sp. nov.*

**SPECIES RUBERCAUDATUS EDWARDSI SP. NOV.**

**Holotype:** Specimen number ZSM 521/2001 collected at Itremo, Madagascar, Lat. 20°36'08" Long. 46°34'16", altitude 1648 metres, collected by M. Vences, D. Vieites, L. Raharivololoniaina and D. Rakotomalala in March 2001, held at Zoologische Staatssammlung München, Germany. This is a facility that allows access to its holdings by scientists.

**Paratypes:** Specimen numbers ZSM 518/2001, ZSM 519/2001 and ZSM 520/2001 collected from Mont Ibity, Madagascar, collected by M. Vences, D. Vieites, L. Raharivololoniaina and D. Rakotomalala in March 2001, held at Zoologische Staatssammlung München, Germany.

**Diagnosis:** The species *Rubercaudatus edwardsi sp. nov.* is readily separated from its congener *R. igneocaudatus* (Grandidier, 1867) by oviparous as opposed to viviparous means of birth and the fact that *Rubercaudatus edwardsi sp. nov.* inhabits the central highlands of Madagascar and *R. igneocaudatus* the far south-west.

The two species can also be differentiated on the basis of morphological characters and colouration. The dorsal surfaces of the hind legs of *R. igneocaudatus* are generally darkish in appearance, although close inspection reveals small light spotting. By contrast in *R. edwardsi sp. nov.* the dorsal surfaces of the hind legs are heavily speckled with whitish spots to such an extent that they either dominate, or alternatively the upper legs show a pattern of distinct whitish stripes (one, two or three) running along the median line of each hind leg.

While the unregenerated tail in both species is distinctly reddish in colour, in *R. igneocaudatus* this is typically a bright reddish-orange pink around the entire tail, versus a russet brown that predominates on the dorsal surfaces.

In terms of other characters, differences between the two species are as follows: 22-24 mid-body rows in *R. edwardsi sp. nov.* versus 24-26 in *R. igneocaudatus*; the average snout-vent length in *R. edwardsi sp. nov.* is 54.2 mm versus 73.0 mm in *R. igneocaudatus*. *R. igneocaudatus* occurs only at altitudes below 500 metres, whereas *R. edwardsi sp. nov.* is only known from altitudes in excess of 1500 metres.

The genus *Rubercaudatus gen. nov.* (the species formerly included in the genus *Madascincus* Brygoo, 1981) including the two component species is defined elsewhere in this paper.

**Distribution:** Known only from near the type locality in central Madagascar in the central mountains.

**Etymology:** Named in honour of Australian herpetologist, Euan Edwards of the Gold Coast, Queensland, in recognition of his many contributions to herpetology. This includes many years of active fieldwork and research in Madagascar where he also lived at the time and met his wife.

**GENUS CUMMINGSCINCEA GEN. NOV.**

**Type species:** *Gongylus polleni* Grandidier, 1869.

**Diagnosis:** The genera *Cummingscincea gen. nov.* and

*Rubercaudatus gen. nov.* included species that were until now placed in the genus *Madascincus* Brygoo, 1982. In the absence of the diagnostic material that follows, they would have remained in that genus.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilesincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g.

Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilecincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*,

Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral

vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar and nearby areas.

**Etymology:** Named in honour of Fia Cumming, now of Lyons in the ACT, Australia, formerly of Chatswood, NSW, Australia in recognition of her excellent work as an investigative journalist over several decades, including through publicly exposing corruption in Australian government wildlife departments and her pivotal role in causing laws to be changed in Australia that allowed private people to keep reptiles as pets after a 20 year ban, which in turn led to a resurgence of the science of herpetology in this country. For details see Hoser (1993) and Hoser (1996). Her role in promoting animal welfare, including for horses is also recognized. The latter part of the genus name reflects that the lizard is a skink.

**Content:** *Cummingscincea polleni* (Grandidier, 1869) (type species); *C. arenicola* (Miralles, Köhler, Glaw and Vences, 2011); *C. cummingae sp. nov.*; *C. demiperkinsae sp. nov.*; *C. macrolepis* (Boulenger, 1888); *C. mouroundavae* (Grandidier, 1872); *C. nanus* (Andreone and Greer, 2002); *C. stumpffi* (Boettger, 1882).

#### **SUBGENUS CUMMINGSCINCEA SUBGEN. NOV.**

**Type species:** *Gongylus polleni* Grandidier, 1869.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genera *Cummingscincea gen. nov.* and *Rubercaudatus gen. nov.* included species that were until now placed in the genus *Madascincus* Brygoo, 1982. In the absence of the diagnostic material that follows, they would have remained in that genus.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales

between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacantias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in

combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly



whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar and nearby areas.

**Etymology:** See for genus.

**Content:** *Cummingcincea (Cummingcincea) polleni* (Grandidier, 1869) (type species); *C. (Cummingcincea) arenicola* (Miralles, Köhler, Glaw and Vences, 2011); *C. (Cummingcincea) cummingae sp. nov.*; *C. (Cummingcincea) demiperkinsae sp. nov.*, *C. (Cummingcincea) stumpffii* (Boettger, 1882).

**SPECIES CUMMINGSCINCEA (CUMMINGSCINCEA) CUMMINGAE SP. NOV.**

**Holotype:** Specimen number ZSM 242/2004 at Zoologische Staatssammlung München, Germany. This is a facility that allows access to its holdings by scientists. The specimen was collected at Montagne des Francais, Madagascar, Lat. 12°19'34"S, Long. 49°20'09"E at an altitude of 334 metres.

**Paratype:** Specimen number ZSM 245/2004 at Zoologische Staatssammlung München, Germany. The specimen was collected at Montagne des Francais, Madagascar, Lat. 12°19'34"S, Long. 49°20'09"E at an altitude of 334 metres.

**Diagnosis:** *Cummingcincea (Cummingcincea) cummingae sp. nov.* is readily separated from *C. (Cummingcincea) polleni* (Grandidier, 1869) by having 65-73 ventral scale rows, versus 74-78 ventral scale rows in *C. (Cummingcincea) polleni*.

The two species are further distinguished by the following: 7-8 lamellae under the fourth finger in *C. (Cummingcincea) cummingae sp. nov.* versus 6-9 in *C. (Cummingcincea) polleni*; 18-23 lamellae under the fourth toe in *C. (Cummingcincea) cummingae sp. nov.* versus 16-22 in *C. (Cummingcincea) polleni*; 65-79 paraventral rows in *C. (Cummingcincea) cummingae sp. nov.* versus 75-81 in *C. (Cummingcincea) polleni*; 92.3% of *C. (Cummingcincea) cummingae sp. nov.* lack enlarged nuchal rows, versus 56.3% in *C. (Cummingcincea) polleni*; *C. (Cummingcincea) cummingae sp. nov.* have an average snout-vent length of 61 mm, versus 75 mm in *C. (Cummingcincea) polleni*.

Both *C. (Cummingcincea) cummingae sp. nov.* and *C. (Cummingcincea) polleni* (Grandidier, 1869) are separated from all other species in the genus and other scincinae by the following suite of characters: Snout obtuse, scarcely projecting beyond the labial margin; eye moderate; lower eyelid scaly; ear opening roundish; supranasals forming a median suture; a postnasal between the supranasal and the first labial; frontal a little longer than the frontonasal, longer than broad; no praefrontals; four supraoculars, second largest; seven supraciliaries; no frontoparietals; interparietal a little longer than broad, shorter and narrower than the frontal, narrower than the parietals, its convex anterior border fitting in an emargination of the posterior border of the frontal; fourth upper labial entering the orbit, 30 midbody rows; 65-78 ventral scale rows. Limbs pentadactyle, short, widely separated when adpressed; the fore limb, stretched forwards, reaches the ear. Tail shorter than head and body, rufous-brown above, with dark brown

longitudinal lines following the series of dorsal scales; a dark brown lateral band, beginning from the eye; lower surfaces uniform pale brownish.

**Distribution:** Known only from areas generally near the type locality and further north in the wetter parts of Madagascar at generally lower elevations (below 500 metres).

**Etymology:** Named in honour of Fia Cumming, now of Lyons in the ACT, Australia, formerly of Chatswood, NSW, Australia in recognition of her excellent work as an investigative journalist over several decades, including through publicly exposing corruption in Australian government wildlife departments and her pivotal role in causing laws to be changed in Australia that allowed private people to keep reptiles as pets after a 20 year ban. For details see Hoser (1993) and Hoser (1996). Her role in promoting animal welfare, including for horses is also recognized.

**SPECIES CUMMINGSCINCEA (CUMMINGSCINCEA) DEMIPERKINSAE SP. NOV.**

**Holotype:** Specimen number ZSM 206/2003 at Zoologische Staatssammlung München, Germany. This is a facility that allows access to its holdings by scientists. The specimen was collected about 5 km from Antanambao (Maevatanana, on the way to Manongarivo), close to the main road, in Madagascar, Lat. 16.95° S, Long. 46.83° E, on 31 January 2003 by Glaw, Randrianiaina, and Vences.

**Diagnosis:** *Cummingcincea (Cummingcincea) demiperkinsae sp. nov.* is distinguished from the similar *C. (Cummingcincea) stumpffii* by colouration. *C. (Cummingcincea) stumpffii* are uniform brown above, greyish white inferiorly, while *C. (Cummingcincea) demiperkinsae sp. nov.* are similar in colour but characterised by a semi-distinct dark line running along the upper flank on each side commencing at the eye. Both *C. (Cummingcincea) demiperkinsae sp. nov.* and *C. (Cummingcincea) stumpffii* are readily separated from all other species in this genus by the following suite of characters: Snout obtuse; eye moderate; lower eyelid scaly; ear-opening transversely oval; supranasals forming a median suture; a postnasal between the supranasal and the first labial; frontal longer than broad; no praefrontals; four supraoculars, first largest; no frontoparietals; interparietal shorter and narrower than the frontal, narrower than the parietals; fourth upper labial entering the orbit. 32-34 midbody rows (no other species in the genus or subtribe exceeds 30). Limbs pentadactyle, very short, widely separated when adpressed; the fore limb, stretched forwards, reaches the ear. Tail a little longer than the head and body. *C. (Cummingcincea) stumpffii* are uniform brown above, greyish white inferiorly, while *C. (Cummingcincea) demiperkinsae sp. nov.* are characterised by a semi-distinct dark line running along the upper flank on each side commencing at the eye.

These are the two largest species in the genus and subtribe with an average snout-vent length of 114 mm and a relatively stocky build.

**Distribution:** Northern Madagascar and immediate offshore islands.

**Etymology:** Named in honour of Demi Perkins of Wandin, Victoria, Australia in recognition of her valuable work in reptile conservation through Snakebusters, Australia's best reptiles educational displays.

**SUBGENUS GRACILESCINCUS SUBGEN. NOV.**

**Type species:** *Amphiglossus nanus* Andreone and Greer, 2002.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genera *Cummingscincea gen. nov.* and *Rubercaudatus gen. nov.* included species that were until now placed in the genus *Madascincus* Brygoo, 1982. In the absence of the diagnostic material that follows, they would have remained in that genus.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes 6±9 instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the

palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact;

frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all other similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollumus subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** Northern Madagascar and nearby areas.

**Etymology:** Named in reflection of the gracile nature of the lizards and the fact that they are skinks.

**Content:** *Cummingscincea (Gracilescincus) nanus* (Andreone and Greer, 2002) (type species); *C. (Gracilescincus) macrolepis* (Boulenger, 1888).

#### **SUBGENUS LEUCOLABIALUS SUBGEN. NOV.**

**Type species:** *Gongylus mouroundavae* Grandidier, 1872.

**Diagnosis:** The subgenus is defined within a wider generic description below.

The genera *Cummingscincea gen. nov.* and *Rubercollumus gen. nov.* included species that were until now placed in the genus *Madascincus* Brygoo, 1982. In the absence of the diagnostic material that follows, they would have remained in that genus.

The genus *Cummingscincea gen. nov.* is separated from the other similar genera by the following suite of characters: one or other of the following three:

1/ Both pairs of limbs present; a postnasal shield between the supranasal and the first labial. Limbs pentadactyle. No praefrontals nor frontoparietals. Lower eyelid scaly. 30 midbody scale rows (subgenus *Cummingscincea subgen. nov.*), or:

2/ Loreal not extending ventrally to supralabial row; separation of loreal from supralabial row by contact between postnasal and enlarged presubocular instead of by contact between postnasal and preocular; scales between lower secondary temporal and ear opening two instead three; longitudinal scale rows at mid-body 20 and subdigital lamellae on fourth digit of pes  $6 \pm 9$  instead of 5 (subgenus *Gracilescincus subgen. nov.*), or:

3/ Both pairs of limbs are pentadactyle with 8-11 lamellae under the fourth finger; 16-20 lamellae under the fourth toe; 63-66 ventral scale rows; 60-65 paraventral rows; 28-30 longitudinal rows at the mid body; one row (only) of enlarged nuchal scales; postnasal present between the supranasal and the first labial. The praefrontals and frontoparietals are usually fused. Lower eyelid scaly; Colouration is all brown on the top with a slightly darker band on the flanks, framed by two small lighter stripes and mainly creamish white upper labials (subgenus *Leucolabialis subgen. nov.*).

The genus *Rubercaudatus gen. nov.* is separated from the other similar genera by the following suite of characters: Both pairs of limbs present and all pentadactyle; a postnasal shield between the supranasal and the first labial; no praefrontals or frontoparietals. Lower eyelid with an undivided transparent disk. 24 midbody scale rows; interparietal narrower than the frontal.

*Amphiglossus sensu lato* and *Amphiglossus* as defined herein is defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera this genus has the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Amphiglossus* is separated from *Madascincus* Brygoo, 1981 by having 4-7 teeth on each side versus 8-11 in *Madascincus* (as commonly defined to date, e.g. Miralles and Vences 2013, Pyron *et al.* 2013), including the genera formally defined herein, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013.

The subgenus of *Amphiglossus*, *Brygooscincus subgen. nov.* (type species *Scelotes tsaratananensis* Brygoo, 1981) is separated from all other similar species by the combination of having 36 presacral vertebrae, 26 midbody rows and 72-82 scales along the belly.

The genus *Pygomeles* Grandidier, 1867 is separated from *Amphiglossus* by the lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head.

One of these species, which has 48 or more presacral vertebrae, namely *Pygomeles trivittatus* Boulenger, 1896 is the type species of the genus *Androngo* Brygoo, 1982, and this is herein treated as a subgenus within *Pygomeles*.

*Voeltzkowia* Boettger, 1893 is currently composed of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species.

The genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows.

The genus *Pseudoacontias* Bocage, 1889 is characterised by being limbless, with small eye, angular snout and with no ear openings visible.

The genus *Sloppyscincus gen. nov.* is separated from all other similar species by the following suite of characters:

Pentadactyle limbs, 24-28 or 38 midbody rows, 44-52 presacral vertebrae; snout bluntly rounded in both lateral and medial aspect; rostral band-like with dorsomedial edge gently posteriorly concave; supranasals in contact; frontonasal wider than long; prefrontals absent; frontal constricted anteriorly by first supraocular, that is, frontal hourglass-shaped; supraoculars four, first constricting frontal, all contacting frontal; frontoparietals absent; interparietal present, well separated from supraoculars; parietal eyespot present; parietals in contact posterior to interparietal; nuchals  $2/2 \pm 2/3$ . The nostril is not positioned centrally above the first upper labial as seen in members of the genus *Amphiglossus*.

The subgenus *Commendatscincus subgen. nov.* includes three species included in the genus *Androngo*, Brygoo, 1982 until removed by Andreone and Greer in 2002, when they placed them back into *Amphiglossus*. They are within a newly named subgenus *Commendatscincus subgen. nov.* defined and diagnosed and separated from other similar species by the following suite of characters: More than 48 presacral vertebrae, the presence of a postnasal and the supranasal does not contact the supralabials.

The species described as *Amphiglossus stylus* Andreone and Greer, 2002 is herein placed in a new monotypic subgenus within *Sloppyscincus gen. nov.* defined herein. The subgenus *Degenerescincus subgen. nov.* is diagnosed and separated from all similar species by the following set of characters: having the front and rear limbs reduced to a minute, clawless nub and style, respectively. It is also the only skink to have in combination: the absence an external ear opening and both the front and rear limbs reduced to small clawless stubs.

The genus *Clarascincus gen. nov.* is separated from all similar species by the following suite of characters:

Very similar in many respects to members of the genus *Crottyscincus gen. nov.*, from which it differs in having shorter limbs. In *Clarascincus gen. nov.* the fore limb reaches the ear, or not quite as far, versus noticeably further than the ear in *Crottyscincus gen. nov.*. The limb's length in *Clarascincus gen. nov.* is slightly less than that of the head. Colouration is usually brown above, scales edged with darker; sides sometimes brown-dotted; belly brownish white, lower surface of tail frequently dark brown. Limbs pentadactyle. 22-32 midbody rows.

The subgenus *Comoroscincus subgen. nov.* is separated from the nominate subgenus *Clarascincus subgen. nov.* by having 30-32 midbody scale rows, versus 22-28.

The genus *Crottyscincus gen. nov.* is separated from all other similar species by the following suite of characters: All limbs pentadactyle. The fore-limb, stretched forwards, reaches beyond the ear. 28 to 30 midbody rows, those of the two vertebral series much broader than the others and being the only genus with 8 nuchals.

The genus *Oxyscincus gen. nov.* is separated from all other similar species by the following suite of characters: One or other of the following four:

1/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear.

26 to 28 scales round the body of equal size (subgenus *Rubercollum subgen. nov.*); or:

2/ All limbs pentadactyle, the fore limb, stretched forwards, reaches beyond the ear. 28-30 midbody rows round the body of equal size. Colouration dorsally is dark brown with small circular yellow spots on the head, body and tail which are largest on the anterior half of the body. The tail on the underside is pink and unspotted (subgenus *Roseacaudatus subgen. nov.*); or:

3/ 22 midbody rows, all of the same size; 64-69 scales along the belly (mental to anal); 30-31 presacral vertebrae; 17-20 lamellae under the fourth toe of the hind foot; dorsal colouration is pale brown with each scale on the body, limbs and tail marked with a single brown spot; the head is longitudinally striped with stripes running down to the shoulders or full length of the body; a central pair of dark brown stripes which diverge at the snout tip run back through the supraoculars and onto the shoulders and may continue down the lower back; a second lateral stripe runs along the upper labials, through the eye and onto the neck; before fading (subgenus *Oxyscincus subgen. nov.*); or:

4/ 28-32 midbody rows, all of the same size; 62-72 scales along the belly (mental to anal); 17-20 lamellae under the fourth toe of the hind foot; brown dorsally, each scale with the edges darker; nape and anterior part of back with interrupted dark brown cross bands; belly whitish (subgenus *Oxyscincus subgen. nov.*).

**Distribution:** West and north Madagascar.

**Etymology:** Named in reflection of the whitish markings on the labials.

**Content:** *Cummingscincea (Leucolabialis) mouroundavae* (Grandidier, 1872) (monotypic).

#### GENUS *SIRENOSCINCUS* SAKATA AND HIKIDA 2003.

**Type species:** *Sirenosincus yamagishii* Sakata and Hikida, 2003.

**Diagnosis:** *Sirenosincus* as defined by Sakata and Hikida in 2003, is easily distinguished from all other genera of skinks worldwide by the combination of:

1/ The presence of two forelimbs and the absence of hindlimbs, noting that all other genera except *Jarujinia* Chan-Ard, Makchai and Cota, 2011 are either quadrupedal, completely legless, or having two hindlimbs only; and:

2/ The regressed eyes sunken below scales; and:

3/ Completely depigmented skin.

**Distribution:** Northern Madagascar in the eastern region.

**Content:** *Sirenosincus yamagishii* Sakata and Hikida, 2003 (type species); *S. moby dick* Miralles, Anjeriniaina, Hipsley, Müller, Glaw and Vences, 2012.

#### GENUS *NESSIA* GRAY, 1839.

**Type species:** *Nessia burtonii* Gray, 1839.

**Diagnosis:** The genus *Nessia* Gray, 1839 is diagnosed as follows:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical. Eye small, with transparent lower eyelid; upper eyelid not developed. Ear hidden or just distinguishable. Nostril pierced in the large rostral shield, with the posterior border of which it is connected by a long straight horizontal suture; no supranasals; no praefrontals or frontoparietals. Body elongated; limbs rudimentary or absent. Several scales border the anal cleft anteriorly; posterior border of the mental shield not reaching to below the anterior border of the orbit. Interparietal broader than the frontal.

Subgeneric names are available for species groups with different numbers of limb digits or limbs, but are not used here pending a more detailed assessment of the genus by others.

**Distribution:** Sri Lanka.

**Content:** *Nessia burtonii* Gray, 1839 (type species); *N. bipes* (Smith, 1935); *N. deraniyagalai* Taylor, 1950; *N. didactyla* (Deraniyagala, 1934); *N. hickanala* Deraniyagala, 1940; *N. layardi* (Kelaart, 1853); *N. monodactyla* (Gray, 1839); *N. sarasinorum* (Müller, 1889).

#### TRIBE GONGYLOMORPHIINI TRIBE NOV.

(Terminal taxon: *Scincus bojerii* Desjardin, 1831).

**Diagnosis:** The tribe Gongylomorphiini *tribe nov.* is best defined by diagnosis of the two subtribes.

Subtribe Gongylomorphiina *subtribe nov.* is defined as follows:

Skull characters: These are as follows: Palatine bones and palatal rami of pterygoids meeting medially; palatal rami of pterygoids "squared-off," not emarginated posteriorly as in the two genera (*Janetaescincus* Greer, 1970 and *Pamelaescincus* Greer, 1970); pterygoid teeth absent. Postorbital bone distinct, well developed; supratemporal arch well developed; 16 teeth on maxilla and 11 teeth on premaxillae.

In terms of external characters the genus is defined as follows: Interparietal small, not touching supraoculars; frontoparietals present (absent in all other subsaharan Africa, Madagascar, or west Indian Ocean island scincines); ear opening a horizontal slit; 38 longitudinal scale rows at midbody; digits 5-5.

The subtribe *Chalcidiina subtribe nov.* presently treated as monotypic for the genus *Chalcides* Laurenti, 1768 including the four subgenera, are defined and diagnosed by the following unique suite of characters: Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Lower eyelid with an undivided transparent disk. Ear more or less distinct. Nostril pierced between the rostral and a very small nasal in an emargination of the former shield; supranasals present; praefrontals and frontoparietals absent, body is very elongated; limbs short or rudimentary.

**Distribution:** Primarily Africa but also the Middle-east and southern Asia, including and as far east as India and Sri Lanka (*Chalcides* Laurenti, 1768) and Mascarenes, Mauritius (Round Island, Gunner's Quoin [Coin de Mire] and possibly Reunion (*Gongylomorphus* Fitzinger, 1843).

**Content:** *Gongylomorphus* Fitzinger, 1843; *Chalcides* Laurenti, 1768.

#### SUBTRIBE CHALCIDIINA SUBTRIBE NOV.

(Terminal taxon: *Chalcides tridactylus* Laurenti, 1768).

**Diagnosis:** The subtribe *Chalcidiina subtribe nov.* presently treated as monotypic for the genus *Chalcides* Laurenti, 1768 including the four subgenera, is defined and diagnosed by the following unique suite of characters:

Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical or with obtuse crowns. Lower eyelid with an undivided transparent disk. Ear more or less distinct. Nostril pierced between the rostral and a very small nasal in an emargination of the former shield; supranasals present; praefrontals and frontoparietals absent, body is very elongated; limbs short or rudimentary.

**Distribution:** Primarily Africa but also the Middle-east and southern Asia, including and as far east as India and Sri Lanka.

**Content:** *Chalcides* Laurenti, 1768.

#### SUBTRIBE GONGYLOMORPHIINI SUBTRIBE NOV.

(Terminal taxon: *Scincus bojerii* Desjardin, 1831).

**Diagnosis:** The subtribe *Gongylomorphiina subtribe nov.* is defined as follows:

Skull characters: These are as follows: Palatine bones and palatal rami of pterygoids meeting medially; palatal rami of pterygoids "squared-off," not emarginated posteriorly as seen in the two genera *Janetaescincus* Greer, 1970 and *Pamelaescincus* Greer, 1970; pterygoid teeth absent. Postorbital bone distinct, well developed; supratemporal arch well developed; 16 teeth on maxilla and 11 teeth on premaxillae.

In terms of external characters the genus is defined as follows: Interparietal small, not touching supraoculars;

frontoparietals present (absent in all other subsaharan Africa, Madagascar, or west Indian Ocean island scincines); ear opening a horizontal slit; 38 longitudinal scale rows at midbody; digits 5-5.

**Distribution:** Mascarenes, Mauritius (Round Island, Gunner's Quoin [Coin de Mire] and possibly Reunion.

**Content:** *Gongylomorphus* Fitzinger, 1843.

#### TRIBE SLOPPYSCINCIINI TRIBE NOV.

(Terminal taxon: *Amphiglossus mandokava* Raxworthy and Nussbaum, 1993).

**Diagnosis:** The tribe *Sloppyscinciini tribe nov.* is best defined by diagnosis of the six relevant subtribes.

Both the subtribes *Sloppyscinciina subtribe nov.* and *Paracontiina subtribe nov.* defined herein are defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera the subtribes *Sloppyscinciina subtribe nov.* and *Paracontiina subtribe nov.* have the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Sloppyscinciina subtribe nov.* is separated from *Paracontiina subtribe nov.* by one or other of the following three:

1/ Having 4-7 teeth on each side versus 8-11 in *Sloppyscinciina subtribe nov.*, including the relevant genera formally defined within this paper for the first time, being, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013, or:

2/ The lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head (*Pygomeles* Grandidier, 1867), or:

3/ A group of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species (*Voeltzkowia* Boettger, 1893).

*Paracontiina subtribe nov.*, including the genera *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.*, *Gracilescincus gen. nov.*, *Pseudoacantias* Bocage,

1889, *Paracontias* Mocquard, 1894 and the genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by one or other of the following three:

1/ Their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows (all other genera in the subtribe except *Paracontias* and *Pseudocontias*), or:

2/ The genus *Paracontias* Mocquard, 1894, is diagnosed by the following derived character states: supranasals absent; prefrontals absent; pretemporal single; nasal greatly reduced; loreal single (the most divergent *P. holomelas* may occasionally have two); preocular single; presubocular single; supralabials five, third subocular; postsupralabial single; infralabials contacted by postmental is one; external ear opening absent; limbs absent without external trace of their former position; presacral vertebrae equal to or less than 46; sternal ribs equal to or less than 2; mesosternum absent; complete inscriptional chevrons equal to or less than 19, or:

3/ By being limbless, with small eye, angular snout and with no ear openings visible (*Pseudocontias* Bocage, 1889).

The subtribe Hakariina *subtribe nov.* is defined as follows:

Palatine bones not meeting on the middle line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct. Nostril pierced in the rostral, bordered by a supranasal and the first labial; praefrontals and frontoparietals absent. Body much elongated; limbs short.

Hakariina *subtribe nov.* monotypic for the genus *Hakaria* Steindachner, 1899 is further defined, diagnosed and separated from all other lizards by the following unique suite of characters:

Snout short, obtuse, not projecting beyond the labial margin; eye moderate; lower eyelid with a transparent disk; ear-opening small. Frontal more than twice as long as the frontonasal, longer than broad, broadest behind, angularly notched on each side by the first supraocular; interparietal nearly as long as the frontonasal; five supraoculars, second largest; no postnasal; first upper labial nearly as deep as the rostral; fourth upper labial entering the orbit. 24 smooth midbody scale rows that are subequal in size. Limbs short, pentadactyle; the fore limb, stretched forwards, does not quite reach the ear; hind limb a little longer than the head; third finger longest; fourth toe a little longer than third. Tail thick, cylindrical. Colouration is reddish brown above, each scale with a black spot; sides blackish, or closely spotted and dotted with black; yellowish-white beneath, uniform or dotted with black.

The subtribe Scelotiina *subtribe nov.* is defined as being one or other of the following three:

1/ Skull characters: Palatine bones meeting or closely apposed on midline; palatal rami of pterygoids separated medially and diverging posteriorly; pterygoid

teeth absent. Postorbital bone present, but small to minute, or absent; supratemporal arch weak, fenestra obliterated by apposition of bones of arch with parietal bone; 11 to 19 maxillary teeth, (versus 22 to 23 maxillary teeth in *Notascelotes uluguruensis* Barbour and Loveridge, 1928). External characters: Interparietal large, touching supraocular scales; external ear opening present or absent; a pair of supranasals meeting behind rostral (fused only in some *Scelotes bipes* Merrem, 1877); digital formula 5-5 to 0-0, (*Scelotes* Fitzinger, 1826).

2/ The genus *Herpetosaura* Peters 1854, is diagnosed and defined as separate from *Scelotes* (defined above) by a noticeably wider than long frontal, versus one that either is not, or only marginally so.

3/ *Proscalotes* De Witte and Laurent, 1943 and the skink genus *Notascelotes gen. nov.* are readily distinguishable from all members of the genus *Scelotes* Fitzinger, 1826 by the presence of five instead of four or less digits on both fore and hind limbs and 22-23 maxillary teeth, versus 11-19 in *Scelotes*. The interparietal in *Notascelotes gen. nov.* is in contact with the third and fourth supraoculars and this at once distinguishes it from the genus *Proscalotes*.

The subtribe Sirenosciniina *subtribe nov.* is easily distinguished from all other genera of skinks worldwide by the combination of:

1/ The presence of two forelimbs and the absence of hindlimbs, noting that all other genera except *Jarujinia* Chan-Ard, Makchai and Cota, 2011 are either quadrupedal, completely legless, or having two hindlimbs only; and: 2/ The regressed eyes sunken below scales; and: 3/ Completely de-pigmented skin. Due to these obvious traits, *Sirenosciniina subtribe nov.* is not easily confused with others within this tribe.

The subtribe Feyliniina *subtribe nov.* is defined best by defining the four component genera, these being one or other of the following four:

1/ The genus *Sepsina* Bocage, 1866 is defined as follows:

Skull details: Palatine bones widely separated along the midline; palatal rami of pterygoids expanded medially with a tendency toward emargination posteriorly; pterygoid teeth present. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 12 to 15 maxillary teeth. External characters: Interparietal small, not touching supraocular scales; a pair of supranasals meeting behind rostral; external ear opening present; digits 4-4 or fewer, or:

2/ The genus *Typhlacontias* Bocage, 1873 is defined as follows:

Skull characters: Palatine bones only slightly longer than wide, separated medially; palatal rami of pterygoids expanded laterally, but not meeting medially, and emarginated posteriorly (*gracilis*, *rohani* and *kataviensis*) or not (the rest of the genus); pterygoid teeth absent. Postorbital and jugal bones lacking; supratemporal arch weak and fenestra obliterated by the apposition of the bones in the supratemporal arch with the parietal; five to six maxillary teeth. External

characters: Interparietal large, touching supraoculars; three median, transversely enlarged head scales between the rostral and interparietal instead of a pair of supranasals and two median, transversely enlarged head scales; no external ear opening; limbless except for *T. brevipes*, which has a rudimentary hind leg (adapted from Greer 1970). Haacke (1990) provides a more detailed diagnosis of the genus, or:

3/ The genus *Feylinia* Gray, 1845 is defined and diagnosed as follows:

Nostril pierced in the large rostral shield, which caps the tip of the snout, connected with the posterior border of that shield by a short curved suture. Scales subequal, the longitudinal series in odd number. Several small scales border the anal cleft, or:

4/ The genus *Melanoseps* Boulenger, 1887 is defined and diagnosed as follows:

Skull characters: Palatine bones separated medially; palatal rami of pterygoids expanded medially and emarginated posteriorly; pterygoid teeth absent. Postorbital bone absent; supratemporal arch weak and fenestra obliterated by apposition of bones of the arch with the parietal bone; 10 to 13 maxillary teeth. External characters: Interparietal large, touching supraoculars; a pair of supranasals meeting behind rostral; no external ear opening; limbless.

**Distribution:** Africa, Southern Asia, Madagascar and Indian Ocean islands.

**Content:** *Sloppyscincus gen. nov.*; *Amphiglossus* Duméril and Bibron, 1839; *Clarasincus gen. nov.*; *Crottyscincus gen. nov.*; *Cummingscincea gen. nov.*; *Feylinia* Gray, 1845; *Hakaria* Steindachner, 1899; *Herpetosaura* Peters, 1854; *Madascincus* Brygoo, 1981; *Melanoseps* Boulenger 1887; *Notascelotes gen. nov.*; *Oxyscincus gen. nov.*; *Paracontias* Mocquard, 1894; *Proscelotes* De Witte and Laurent, 1943; *Pseudoacontias* Bocage, 1899; *Pygomeles* Grandidier, 1867; *Rubercaudatus gen. nov.*; *Scelotes* Fitzinger, 1826; *Sepsina* Bocage 1866; *Sirenosincus* Sakata and Hikida, 2003; *Typhlacontias* Bocage, 1873; *Voeltzkowia* Boettger, 1893.

#### SUBTRIBE SLOPPYSCINCIINA SUBTRIBE NOV.

(Terminal taxon: *Amphiglossus mandokava* Raxworthy and Nussbaum, 1993).

**Diagnosis:** Both the subtribes *Sloppyscinciina subtribe nov.* and *Paracontia subtribe nov.* defined herein are defined as Malagasy scincinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera the subtribes *Sloppyscinciina subtribe nov.* and *Paracontia subtribe nov.* have the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body

more or less elongate; limbs more or less developed or absent.

*Sloppyscinciina subtribe nov.* is separated from *Paracontia subtribe nov.* by one or other of the following three:

1/ Having 4-7 teeth on each side versus 8-11 in *Sloppyscinciina subtribe nov.*, including the relevant genera formally defined within this paper for the first time, being, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013, or:

2/ The lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head (*Pygomeles* Grandidier, 1867), or:

3/ A group of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species (*Voeltzkowia* Boettger, 1893).

*Paracontia subtribe nov.*, including the genera *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.*, *Gracilescincus gen. nov.*, *Pseudoacontias* Bocage, 1889, *Paracontias* Mocquard, 1894 and the genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by one or other of the following three:

1/ Their small adult size of less than 80 mm snout-vent length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows (all other genera in the subtribe except *Paracontias* and *Pseudoacontias*), or:

2/ The genus *Paracontias* Mocquard, 1894, is diagnosed by the following derived character states: supranasals absent; prefrontals absent; pretemporal single; nasal greatly reduced; loreal single (the most divergent *P. holomelas* may occasionally have two); preocular single; presubocular single; supralabials five, third subocular; postsupralabial single; infralabials contacted by postmental is one; external ear opening absent; limbs absent without external trace of their former position; presacral vertebrae equal to or less than 46; sternal ribs equal to or less than 2; mesosternum absent; complete inscripational chevrons equal to or less than 19.

3/ By being limbless, with small eye, angular snout and with no ear openings visible (*Pseudoacontias* Bocage, 1889).

**Distribution:** Madagascar and some nearby islands.

**Content:** *Sloppyscincus gen. nov.*; *Amphiglossus*



Duméril and Bibron, 1839; *Clarascincus gen. nov.*; *Crottyscincus gen. nov.*; *Oxyscincus gen. nov.*; *Pygomeles* Grandidier, 1867; *Voeltzkowia* Boettger, 1893.

**SUBTRIBE PARACONTIINA SUBTRIBE NOV.**

(Terminal taxon: *Paracontias brocchii* Mocquard, 1894).

**Diagnosis:** Both the subtribes *Paracontiina subtribe nov.* and *Sloppyscinciina subtribe nov.* defined herein are defined as Malagasy scinciinae species that lack the reduction of the head scales, the loss of an external ear opening, increased number of presacral vertebrae, and the strong reduction of the limbs and attenuation of the body that characterize to various degrees all the other non-lygosomine genera of Malagasy skinks.

In common with other skink genera the subtribes *Sloppyscinciina subtribe nov.* and *Paracontiina subtribe nov.* have the following suite of characters:

Palatine bones in contact on the median line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct or hidden. Nostril pierced between the rostral and a very small nasal, which may be reduced to a narrow ring; supranasals present; praefrontals and frontoparietals small or absent. Body more or less elongate; limbs more or less developed or absent.

*Sloppyscinciina subtribe nov.* is separated from *Paracontiina subtribe nov.* by one or other of the following three:

1/ Having 4-7 teeth on each side versus 8-11 in *Sloppyscinciina subtribe nov.*, including the relevant genera formally defined within this paper for the first time, being, *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.* and *Gracilescincus gen. nov.* all of which have until now been treated as within *Madascincus* by authors including Miralles and Vences (2013) and Pyron *et al.* 2013, or:

2/ The lack of a postnasal and as a probable consequence, the supranasal contacts the supralabials, as well as no forelimbs and reduced hind limb, a small eye and a shovel-shaped head (*Pygomeles* Grandidier, 1867), or:

3/ A group of three completely limbless species (*V. lineata*, *V. mira* and *V. rubrocaudata*), and two species with very rudimentary hindlimbs (*V. petiti* and *V. fierinensis*), the latter two herein placed in a subgenus *Grandidierina* Brygoo, 1981 on the basis of the presence of rudimentary hindlimbs. This subgenus have species that are eyeless and earless with no forelimbs but small, reduced, styliform hindlimbs that have 2 digits. The nominate subgenus has eyeless, limbless, earless species (*Voeltzkowia* Boettger, 1893).

*Paracontiina subtribe nov.*, including the genera *Cummingscincea gen. nov.*, *Rubercaudata gen. nov.*, *Gracilescincus gen. nov.*, *Pseudoacontias* Bocage, 1889, *Paracontias* Mocquard, 1894 and the genus *Madascincus* Brygoo, 1981, as defined within this paper is separated from other similar genera by one or other of the following three:

1/ Their small adult size of less than 80 mm snout-vent

length, 29-30 presacral vertebrae (a relatively low number), both pairs of limbs are pentadactyle; there is a postnasal shield between the supranasal and the first labial. No praefrontals or frontoparietals. Lower eyelid scaly. 24 midbody scale rows (all other genera in the subtribe except *Paracontias* and *Pseudoacontias*), or:

2/ The genus *Paracontias* Mocquard, 1894, is diagnosed by the following derived character states: supranasals absent; prefrontals absent; pretemporal single; nasal greatly reduced; loreal single (the most divergent *P. holomelas* may occasionally have two); preocular single; presubocular single; supralabials five, third subocular; postsupralabial single; infralabials contacted by postmental is one; external ear opening absent; limbs absent without external trace of their former position; presacral vertebrae equal to or less than 46; sternal ribs equal to or less than 2; mesosternum absent; complete inscripational chevrons equal to or less than 19.

3/ By being limbless, with small eye, angular snout and with no ear openings visible (*Pseudoacontias* Bocage, 1889).

**Distribution:** Madagascar and some nearby islands.

**Content:** *Paracontias* Mocquard, 1894; *Cummingscincea gen. nov.*; *Madascincus* Brygoo, 1981; *Pseudoacontias* Bocage, 1899; *Rubercaudatus gen. nov.*

**SUBTRIBE SIRENOSCINCIINA SUBTRIBE NOV.**

(Terminal taxon: *Sirenoscincus yamagishii* Sakata and Hikida, 2003).

**Diagnosis:** The subtribe *Sirenoscinciina subtribe nov.*, monotypic for the genus *Sirenoscincus* Sakata and Hikida, 2003, as defined by Sakata and Hikida in 2003, is easily distinguished from all other genera of skinks worldwide by the combination of: 1/ The presence of two forelimbs and the absence of hindlimbs, noting that all other genera except *Jarujinia* Chan-Ard, Makchai and Cota, 2011 are either quadrupedal, completely legless, or having two hindlimbs only; 2/ The regressed eyes sunken below scales; and 3/ Completely depigmented skin.

Due to these obvious traits, *Sirenoscincus* is not easily confused with others within *Amphiglossus sensu lato* or other genera within the tribe *Sloppyscinciini tribe nov.*

**Distribution:** Northern Madagascar in the west.

**Content:** *Sirenoscincus* Sakata and Hikida, 2003.

**SUBTRIBE HAKARIINA SUBTRIBE NOV.**

(Terminal taxon: *Sepsina (Hakaria) simonyi* Steindachner, 1899).

**Diagnosis:** The subtribe *Hakariina subtribe nov.* is defined as follows: Palatine bones not meeting on the middle line of the palate, which is toothless. Teeth conical. Eyelids developed. Ear distinct. Nostril pierced in the rostral, bordered by a supranasal and the first labial; praefrontals and frontoparietals absent. Body much elongated; limbs short.

*Hakariina subtribe nov.* monotypic for the genus *Hakaria* Steindachner, 1899 is further defined, diagnosed and separated from all other lizards by the following unique suite of characters:

Snout short, obtuse, not projecting beyond the labial margin; eye moderate; lower eyelid with a transparent disk; ear-opening small. Frontal more than twice as long as the frontonasal, longer than broad, broadest behind, angularly notched on each side by the first supraocular; interparietal nearly as long as the frontonasal; five supraoculars, second largest; no postnasal; first upper labial nearly as deep as the rostral; fourth upper labial entering the orbit. 24 smooth midbody scale rows that are subequal in size. Limbs short, pentadactyle; the fore limb, stretched forwards, does not quite reach the ear; hind limb a little longer than the head; third finger longest; fourth toe a little longer than third. Tail thick, cylindrical. Colouration is reddish brown above, each scale with a black spot; sides blackish, or closely spotted and dotted with black; yellowish-white beneath, uniform or dotted with black.

**Distribution:** Socotra Island; Arabia.

**Content:** *Hakaria* Steindachner, 1899.

#### **SUBTRIBE SCELOTIINA SUBTRIBE NOV.**

**(Terminal taxon: *Bipes anguineus* Merrem, 1820).**

**Diagnosis:** The subtribe Scelotiina *subtribe nov.* is defined as being one or other of the following three:

1/ Skull characters: Palatine bones meeting or closely apposed on midline; palatal rami of pterygoids separated medially and diverging posteriorly; pterygoid teeth absent. Postorbital bone present, but small to minute, or absent; supratemporal arch weak, fenestra obliterated by apposition of bones of arch with parietal bone; 11 to 19 maxillary teeth, (versus 22 to 23 maxillary teeth in *Notascelotes uluguruensis* Barbour and Loveridge, 1928). External characters: Interparietal large, touching supraocular scales; external ear opening present or absent; a pair of supranasals meeting behind rostral (fused only in some *Scelotes bipes* Merrem, 1877); digital formula 5-5 to 0-0, (*Scelotes* Fitzinger, 1826), or:

2/ The genus *Herpetosaura* Peters 1854, is diagnosed and defined as separate from *Scelotes* (defined above) by a noticeably wider than long frontal, versus one that either is not, or only marginally so, or:

3/ *Proscelotes* De Witte and Laurent, 1943 and the skink genus *Notascelotes gen. nov.* are readily distinguishable from all members of the genus *Scelotes* Fitzinger, 1826 by the presence of five instead of four or less digits on both fore and hind limbs and 22-23 maxillary teeth, versus 11-19 in *Scelotes*. The interparietal in *Notascelotes gen. nov.* is in contact with the third and fourth supraoculars and this at once distinguishes it from the genus *Proscelotes*.

**Distribution:** Africa.

**Content:** *Scelotes* Fitzinger, 1826; *Notascelotes gen. nov.*; *Proscelotes* De Witte and Laurent, 1943; *Pseudoacontias* Bocage, 1899.

#### **SUBTRIBE FEYLINIINI SUBTRIBE NOV.**

**(Terminal taxon: *Feylinia currori* Gray, 1845).**

**Diagnosis:** The subtribe Feyliniina *subtribe nov.* is defined best by defining the four component genera, these being one or other of the following four:

1/ The genus *Sepsina* Bocage, 1866 is defined as follows:

Skull details: Palatine bones widely separated along the midline; palatal rami of pterygoids expanded medially with a tendency toward emargination posteriorly; pterygoid teeth present. Postorbital bone present and relatively well developed; supratemporal arch strong and fenestra well developed; 12 to 15 maxillary teeth. External characters: Interparietal small, not touching supraocular scales; a pair of supranasals meeting behind rostral; external ear opening present; digits 4-4 or fewer, or:

2/ The genus *Typhlacontias* Bocage, 1873 is defined as follows:

Skull characters: Palatine bones only slightly longer than wide, separated medially; palatal rami of pterygoids expanded laterally, but not meeting medially, and emarginated posteriorly (*gracilis*, *rohani* and *kataviensis*) or not (the rest of the genus); pterygoid teeth absent. Postorbital and jugal bones lacking; supratemporal arch weak and fenestra obliterated by the apposition of the bones in the supratemporal arch with the parietal; five to six maxillary teeth.

External characters: Interparietal large, touching supraoculars; three median, transversely enlarged head scales between the rostral and interparietal instead of a pair of supranasals and two median, transversely enlarged head scales; no external ear opening; limbless except for *T. brevipes*, which has a rudimentary hind leg (adapted from Greer 1970). Haacke (1990) provides a more detailed diagnosis of the genus, or:

3/ The genus *Feylinia* Gray, 1845 is defined and diagnosed as follows:

Nostril pierced in the large rostral shield, which caps the tip of the snout, connected with the posterior border of that shield by a short curved suture. Scales subequal, the longitudinal series in odd number. Several small scales border the anal cleft, or:

4/ The genus *Melanoseps* Boulenger, 1887 is defined and diagnosed as follows:

Skull characters: Palatine bones separated medially; palatal rami of pterygoids expanded medially and emarginated posteriorly; pterygoid teeth absent. Postorbital bone absent; supratemporal arch weak and fenestra obliterated by apposition of bones of the arch with the parietal bone; 10 to 13 maxillary teeth. External characters: Interparietal large, touching supraoculars; a pair of supranasals meeting behind rostral; no external ear opening; limbless.

**Distribution:** Africa.

**Content:** *Feylinia* Gray, 1845; *Melanoseps* Boulenger, 1887; *Sepsina* Bocage, 1866; *Typhlacontias* Bocage, 1873.

#### **TRIBE NESSIINI TRIBE NOV.**

**(Terminal taxon: *Nessia burtonii* Gray, 1839).**

**Diagnosis:** This tribe, monotypic for the genus *Nessia* Gray, 1839 is defined and diagnosed by the following suite of characters: Palatine bones not meeting on the median line of the palate, which is toothless. Teeth conical. Eye small, with transparent lower eyelid; upper

eyelid not developed. Ear hidden or just distinguishable. Nostril pierced in the large rostral shield, with the posterior border of which it is connected by a long straight horizontal suture; no supranasals; no praefrontals or frontoparietals.

Body elongated; limbs rudimentary or absent. Several scales border the anal cleft anteriorly; posterior border of the mental shield not reaching to below the anterior border of the orbit. Interparietal broader than the frontal.

Subgeneric (or even generic) names are available for species groups with different numbers of limb digits or limbs, but are not used here pending a more detailed assessment of the genus by others.

**Distribution:** Sri Lanka.

**Content:** *Nessia* Gray, 1839 (monotypic).

#### FIRST REVISOR'S INSTRUCTIONS

Unless mandatory under the rules of zoological nomenclature of the time, no new scientific names are to have spellings altered in any way. No alteration is to be made for the purposes of gender allocation, correction or the like as all spellings and the like are intentional and designed to accommodate the rules of homonymy and the recommendations that the names be easy to use by others.

If two or more described taxa or taxon groups described herein are to be treated as one and the same and therefore in need to be merged, the name that shall take priority is that which appears first in this paper as a full description.

Unless otherwise indicated in any specific papers, these same rules are to be applied to all previous papers I have published as sole or senior author.

#### CONFLICT OF INTEREST

None is reported for this paper in any way.

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