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**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 DUMÉRIL 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*.

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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 *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.

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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 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 *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.

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 *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:** 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 *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:** 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 *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:** 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, Pylon *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 Pylon *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 *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  $2/2 \pm 2/3$ . 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 *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:** 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 *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 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. Raharivoloniaina 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. Raharivoloniaina 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 *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 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 *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 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 *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 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 *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.

*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.*, *Rubercadatus 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 *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.*, *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 *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 *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 Pylon *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:** *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; praefrontals 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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