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# Tidying up the taxonomy of the extant Booidea, including the erection and naming of two new families, the description of *Acrantophis sloppi sp. nov.*, a new species of Ground Boa from Madagascar and *Candoia aspera iansimpsoni, subsp. nov.*, a new subspecies of Boa from Papua New Guinea.

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## ABSTRACT

In the wake of numerous recent studies cited within this paper, the phylogeny of extant true boas has been significantly clarified. The six main clades within Booidea warrant being placed into named and defined families according to the Zoological Code as done herein. Two are formally named for the first time. The same applies to the two obviously divergent subfamilies, meaning in effect the creation of four subfamilies, two of which are by definition, new, although these have pre-existing and available names. For completeness, two new tribes are also formally named according to the Zoological Code.

Furthermore, the well-known but as yet unnamed species of Ground Boa from the southern half of Madagas-

car, closely related to the species Acrantophis dumerili Jan, 1860, and with which it has long been confused,

is formally described herein as a new species, namely Acrantophis sloppi.

Of note, the genus *Candoia* Gray, 1842 is herein regarded as consisting at the very lowest level, three subgenera, for which there are already available names. McDowell (1979) provided ample evidence that these three groups should in fact be treated as separate genera.

The genus *Pseudogongylophis* Tokar, 1989, originally described as a subgenus, is herein recognized as a full genus, based on further confirmation by molecular studies.

The regionally variable taxon recognized as *Candoia aspera* (Günther, 1877) has a third subspecies formally named for the first time, namely *Candoia (Erebophis) aspera iansimpsoni.* 

**Keywords:** Superfamily; Booidea; Family; Boidae; Calabariidae; Erycidae; Ungaliophiidae; New Families; Candoiidae; Acrantophidae; Subfamily; Charininae; Corallinae; New tribes; Candoidiini; Acrantophiini; Genus; *Acrantophis; Candoia; Pseudogongylophis*; resurrected subgenera; *Tropidoboa; Erebophis*; species; *dumerili; madagascariensis; aspera*; new species; *sloppi*; new subspecies; *iansimpsoni.* 

### INTRODUCTION

A recent audit of the world's Booidea revealed that several molecular studies including that of Noonan and Chippindale (2006) and Vidal and Hedges (2009) had confirmed a number of earlier studies (cited within the preceding paper) in showing that there were five well defined clades of Boas. These groups were well defined by both distribution and physical attributes with the component genera sharing key traits. Molecular studies, such as that of Noonan and Chippindale (2006) and Weins *et al.* (2012), effectively confirmed the results and conclusions of relevant key

studies on these reptiles and related or relevant fauna. These studies were based on morphology and/or other relevant factors, such as those outlined in the papers of Albino (1993, 1996, 2000), Austin (2000), Bauer (1993), Burbrink (2005), Campbell (1997), Kluge (1991, 1993a and 1993b), Underwood (1976), Underwood and Stimson (1990), Vences, *et al.* (2001), Vidal and Hedges (2002, 2004, 2009), Werner (1921) and Wilcox, *et al.* (2002).

As a result each of the clades are defined and described as families with four being named using available names. The fifth

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clade is named as new, (*Fam. nov.*) as required according to the Zoological Code (Ride *et al.* (1999) in order to bring the classification of the entire group into line with that of most other advanced snakes and in particular the Pythoninae as defined by Hoser (2012) and outlined by others at the family level, including for example Vidal and Hedges (2009), see in particular p. 135, fig 4, at top of the page.

Essentially, this paper brings the classification of the world's boas as popularly defined into line with that of the pythons as popularly defined. Three divergent groups within these boa families are further defined as subfamilies, in effect creating six new and defined subfamilies, five of which have available names and one of which is named for the first time according to the Zoological Code.

Again, I mention that this brings the classification of the Booidea at the (super) family level into line with that of the Pythonidea as defined by Hoser (2012).

This classification at the family level essentially reflects that of Vidal and Hedges (2009) and others, in recognizing the superfamily Booidea as including five well-defined families reflecting geographical clades, and then three divergent groups as subfamilies.

I should note here that three other families of uncertain status, namely, Family Aniliidae (Pipe Snakes), Family Bolyeriidae (Round Island Boas) and Family Tropidhiidae (Dwarf Boas) are ignored for the purposes of this paper. However I should note that recognition of each family is not in doubt.

While most of the world's boas are well-known to science and have been scientifically named, one species has been omitted. This is one of two well-known variants in the Madagascan species known as the Dumeril's boa. The southernmost of the two variants was described by Jan in 1860 as *Acrantophis dumerili* and this has since been the name assigned by most authors since to both forms, even though the unnamed more northern race is more prevalent in captivity.

Several recent studies including those of Vences and Glaw (2004) and Nagy *et al.* (2012) have identified that the more widespread variant is in fact an unnamed taxon, but no one has yet formally named it or announced an intention of doing so.

In view of the intense ongoing habitat destruction in Madagascar and the prominence of the taxon, it is critical that the species be formally named according to the Zoological Code. This is done in the latter part of this paper.

A similar species, namely *A. madagascariensis*, decribed as *Pelophilus Madagascariensis* by Duméril and Bibron in 1844, was later transferred to Jan's genus *Acrantophis*, with *dumerili* being the type species.

The genus *Sanzinia* Gray, 1849 is not relevant to this paper. However in passing, I mention that the taxon described by Vences and Glaw in 2004 as a subspecies of *madagascariensis*, namely, *volontany*, is in my opinion a full species, based on inspection of live specimens in the United States and my interpretation of the data presented by Vences and Glaw in 2004.

#### This gives that genus two species, not one.

Papers of relevance in relation to *Acrantophis dumerili*, including the species described herein as *A. sloppi sp. nov.* include Andersson (1910), Barbour (1918), Borer (2009), Boulenger (1893), D'Cruze *et al.* (2009), Glaw and Glaw (2004), Glaw and Vences (1994), Huff (1984), Riesenschlangen (2000), Jan (1860), Kluge (1991), McDiarmid *et al.* (1999), Philippen (2012), Van Beest (2004), Vences and Glaw (2004), Vences *et al.* (2001), Wallach and Glaw (2009) and Wengler (1996).

An unnamed clade of boas needing recognition at the family level are the Pacific Boas, genus *Candoia*. Molecular studies have confirmed their distant relationship to all other extant true boas. As a result there is no alternative but to recognize the group at the family level as done here for the first time. There are three distinct species groups within the genus *Candoia* Gray, 1842 as presently recognized, with molecular data strongly supporting the division of the genus as currently recognized three ways.

Taking the conservative position, I herein resurrect two available names to accommodate the relevant two new subgenera, for the *asper* and *bibroni* groups, with the more speciose *carinata* group retaining the *Candoia* name at the subgenus level.

For these subgenera, I provide a brief summary of content species below.

McDowell, 1979, provides a key by which one can separate the three species groups corresponding with the subgenera, copied and paraphrased as part of the diagnosis of the new subspecies of *Candoia aspera* below.

There are a number of relevant publications in terms of both *Candoia* and *Candoia aspera* in particular, including: Boulenger (1893), Colvée and Martín (2005), Colvée and Weffer (2004), de Rooij (1917), Forcart (1951), Günther (1877), Kahl *et al.* (1980), McCoy (2000, 2006), McDiarmid *et al.* (1999), McDowell (1979), Parker (2012), Stimson (1969), Stull (1932), Underwood (2002), Werner (1899a, 1899b) and sources cited therein.

The regionally variable taxon recognized as *Candoia aspera* (Günther <a href="http://en.wikipedia.org/wiki/">http://en.wikipedia.org/wiki/</a>

Albert\_C.\_L.\_G.\_G%C3%BCnther>, 1877) has been extensively surveyed throughout its known range. Two subspecies are currently recognized, being the forms from the north of New Guinea and that from New Britain. While it has been long known that those from south of the main New Guinea cordillera are different to those from elsewhere, they have not been taxonomically recognized, possibly due to the far smaller number of specimens from this region in the major North American Museums. Molecular evidence provided by Austin (2000), supports the position of these snakes being formally named at the subspecies level as done herein. In fact he even states this fact in his discussion.

Rather than redefine species and other groups previously named according to the Zoological Codes, this paper seeks to rely on these descriptions from the literature as cited herein, including for example McDowell (1979) who provides a detailed key to separate and identify all extant Booidea genera. Generic names seen within this paper, not used in McDowell's

paper of 1979, have been resurrected from synonymy by myself, the relevant data being reproduced in McDiarmid *et al.* 1999, including the original source publications citations.

Instead of and rather than to rehash McDowell's and McDiarmid *et al*'s data, this paper merely lays out the taxonomic position with formal descriptions of new taxa as required under the current Zoological Code (Ride *et al.* 1999).

### SUPERFAMILY BOOIDEA (TRUE BOAS)

### FAMILY BOIDAE GRAY, 1825

Terminal taxon: Boa constrictor Linnaeus, 1758

**Content:** Boa Linnaeus, 1758; *Chilabothrus* Dumeril and Bibron, 1844; *Corallus* Daudin 1803; *Epicrates* Wagler, 1830; *Eunectes* Wagler, 1830; *Xenoboa* Hoge, 1953.

SUBFAMILY BOINAE GRAY, 1825

### Terminal taxon: Boa constrictor Linnaeus, 1758

Content: Boa Linnaeus, 1758.

SUBFAMILY CORALLINAE McDOWELL, 1979

# Terminal taxon: *Coluber hortulanus* Linnaeus, 1758 (now known as *Corallus hortulanus*)

**Content:** *Corallus* Daudin 1803; *Chilabothrus* Dumeril and Bibron, 1844; *Epicrates* Wagler, 1830; *Eunectes* Wagler, 1830; *Xenoboa* Hoge, 1953.

#### FAMILY CALABARIIDAE GRAY, 1858

Terminal taxon: *Eryx reinhardtii* Schlegel, 1848 (Now known as *Calabaria reinhardtii*)

Diagnosis: No palatal teeth are present and, unlike other

pythons and boas, the compact skull includes a prefrontal bone. There are no visible thermoreceptive labial pits. Adapted to burrowing, the body is cylindrical with a blunt head and a blunt tail. The head is covered with enlarged shields. As mentioned, the shape of the tail closely resembles that of the head which may be a defensive adaptation, meant to confuse an attacker. The body is muscular and strong. The eyes are relatively small and usually a dark reddish-brown color. The pupil is round. Adults are less than a metre long in total length.

The color pattern consists of a dark brown or black ground color speckled with red, yellow and/or grayish spots. The tail may be ringed or have a partial ring of bright white scales. This ring of scales are assumed to exist to confuse attackers and draw attention away from its head. The smooth dorsal scales are arranged in 29 to 32 midbody rows. There are 221-239 ventrals. The anal plate is single. The subcaudals are 20-28, also all single.

Distribution: They are found in west and central Africa.

Content: Calabaria Gray, 1858

#### FAMILY ERYCIDAE BONAPARTE, 1831

Terminal Taxon: Anguis jaculus Linnaeus, 1758 (now known as Eryx jaculus)

Content: *Eryx* Daudin, 1803; *Pseudogongylophis* Tokar, 1989. FAMILY UNGALIOPHIIDAE WILCOX *ET AL.* 2002

#### Terminal taxon: Ungaliophis continentalis Müller, 1880

**Content:** *Ungaliophis* Müller, 1880; *Exilioboa* Bogert, 1968; *Lichanura* Cope, 1861; *Charina* Gray, 1849.

#### SUBFAMILY UNGALIOPHIINAE WILCOX ET AL. 2002

Terminal taxon: Ungaliophis continentalis Müller, 1880 Content: Ungaliophis Müller, 1880; Exilioboa Bogert, 1968. SUBFAMILY CHARININAE COPE, 1900

Terminal taxon: Tortrix bottae Blainville, 1835 (now known as Charina bottae).

Content: Charina Gray, 1849; Lichanura Cope, 1861.

#### NEW FAMILY CANDOIIDAE FAM. NOV.

# Terminal taxon: *Boa carinata* Merrem, 1820 (Now known as *Candoia carinata*)

Diagnosis: As for the genus Candoia.

In all Booidea the supraorbital (postfrontal bone) is absent (a ligament taking the place of the lateral edge of the supraorbital bone of Pythonoidea); the medial process of the maxilla is connected to the anterior end of the pterygoid in the relaxed position of the jaws except in the Madagascar genus *Acrantophis.* All Booidea are live-bearers, as opposed to egg laying in the pythons. The family Candoiidae is separated from all other boas by the peculiar flat rostral that gives the snout an angular profile. The folds that divide each lobe of the hemipenis into a sulcal and an

tolds that divide each lobe of the hemipenis into a suical and a absulcal field are another unique (in Booidea) feature. The overlap of the nasals upon the frontal bones separates this family from the subfamily Corallinae.

Also diagnostic of the *Candoiidae* among the Booidea are the strongly keeled dorsal scales.

McDowell (1979) gives a detailed description of the three species groups, including numerous diagnostic characters, that conform to the subgenera listed below, although he did not recognize them as subgenera or genera. The resurrection of the available names to recognize these subgenera is a conservative position. McDowell (1979) wrote: "*Candoia* contains three species, all strongly defined both internally and externally (the characters separating the species of *Candoia* are perhaps more clear-cut than those separating the genera of Pythoninae)." **Distribution:** The general region of the tropical West Pacific. **Content:** *Candoia* Gray, 1842. **Comments:** The genus *Candoia* includes the subgenera

Candoia Gray, 1842 for the carinata group of three species,

namely *Candoia carinata* (type species *Candoia*) (two subspecies recognized), *Candoia paulsoni* (Stull, 1956) (6 subspecies), *Candoia superciliosa* (Günther, 1863) (2 subspecies); *Tropidoboa* Hombron and Jaquinot, 1842 for the *bibroni* group of one species (including two subspecies) and *Erebophis* Günther, 1877 for the *aspera* group of one species and three subspecies including that formally described within this paper as *Candoia aspera iansimpsoni sp. nov.*).

#### NEW TRIBE CANDOIDIINI TRIBE NOV.

# Terminal taxon: *Boa carinata* Merrem, 1820 (Now known as *Candoia carinata*)

Diagnosis: As for the genus Candoia.

In all Booidea the supraorbital (postfrontal bone) is absent (a ligament taking the place of the lateral edge of the supraorbital bone of Pythonoidea); the medial process of the maxilla is connected to the anterior end of the pterygoid in the relaxed position of the jaws except in the Madagascar genus *Acrantophis.* All Booidea are live-bearers, as opposed to egg laying in the pythons.

The family Candoiidae and the tribe Candoidiini are separated from all other boas by the peculiar flat rostral that gives the snout an angular profile. The folds that divide each lobe of the hemipenis into a sulcal and an absulcal field are another unique (in Booidea) feature. The overlap of the nasals upon the frontal bones separates this family from the subfamily Corallinae.

Also diagnostic of the *Candoiidae* among the Booidea are the strongly keeled dorsal scales.

McDowell (1979) gives a detailed description of the three species groups, including numerous diagnostic characters, that conform to the subgenera listed below, although he did not recognize them as subgenera or genera. The resurrection of the available names to recognize these subgenera is a conservative position. McDowell (1979) wrote: "*Candoia* contains three species, all strongly defined both internally and externally (the characters separating the species of *Candoia* are perhaps more clear-cut than those separating the genera of Pythoninae).

**Distribution:** The general region of the tropical West Pacific. **Content:** *Candoia* Gray, 1842.

**Comments:** The genus *Candoia* includes the subgenera *Candoia* Gray, 1842 for the *carinata* group of three species, namely *Candoia carinata* (type species *Candoia*) (two subspecies recognized), *Candoia paulsoni* (Stull, 1956) (6 subspecies), *Candoia superciliosa* (Günther, 1863) (2 subspecies); *Tropidoboa* Hombron and Jaquinot, 1842 for the *bibroni* group of one species (including two subspecies) and *Erebophis* Günther, 1877 for the *aspera* group of one species and three subspecies including that formally described within this paper as *Candoia aspera iansimpsoni* sp. nov.).

While it may be deemed premature to erect a monotypic tribe, in the event that *Candoia* as presently recognized is ultimately split by others into three genera, the tribe designation will serve to unite them all to reflect their relationship to one another.

#### NEW FAMILY ACRANTOPHIIDAE FAM. NOV. Terminal taxon: Acrantophis dumerili Jan, 1860.

**Diagnosis:** Physically and superficially, species within this family appear much like other Booidea.

Males in this family are readily separated by their unique hemipenal morphology, not seen in other Booidea families. The hemipenis in the genus *Sanzinia* Gray, 1849 extends for 7 to 9 subcaudals, is forked for 2-3 subcaudals and has the sulcus forked for one third to half its length; the ornamentation is formed entirely of calyces, with numerous small rhombic calyces distally, but with the proximal calyces enlarged and their longitudinal wall reduced, thus forming transverse flounces. In *Acrantophis* Jan, 1860 the hemipenis is similar, but with some flap-shaped papillae adjacent to the sulcus distal to its furcation, and all the calyces are so coarse as to be flounce-like. In all species in this family, the lower jaw is constructed much as

is seen in the Pythonidae, except that is in other Booidea the Meckelian cartilage is confined to its channel in the dentary and does not extend freely onto the skin of the mental region; the angular and coronoid articulate with the posterior edge of the spenal.

Both genera within the family Acrantophiidae have a chromosome count of 34, versus 36 in all other Booidea. **Distribution:** Madagascar.

Content: Acrantophis Jan, 1860; Sanzinia Gray, 1849. TRIBE ACRANTOPHIINI TRIBE NOV.

#### Terminal taxon: Acrantophis dumerili Jan, 1860.

**Diagnosis:** The tribe diagnosis is the same as for the family. Physically and superficially, species within this family appear much like other Booidea.

Males in this tribe and family are readily separated by their unique hemipenal morphology, not seen in other Booidea families. The hemipenis in the genus *Sanzinia* Gray, 1849 extends for 7 to 9 subcaudals, is forked for 2-3 subcaudals and has the sulcus forked for one third to half its length; the ornamentation is formed entirely of calyces, with numerous small rhombic calyces distally, but with the proximal calyces enlarged and their longitudinal wall reduced, thus forming transverse flounces. In *Acrantophis* Jan, 1860 the hemipenis is similar, but with some flap-shaped papillae adjacent to the sulcus distal to its furcation, and all the calyces are so coarse as to be flounce-like.

In all species in this family, the lower jaw is constructed much as is seen in the Pythonidae, except that is in other Booidea the Meckelian cartilage is confined to its channel in the dentary and does not extend freely onto the skin of the mental region; the angular and coronoid articulate with the posterior edge of the spenal.

Both genera within the tribe Acrantophiidini have a chromosome count of 34, versus 36 in all other Booidea.

#### Distribution: Madagascar.

Content: Acrantophis Jan, 1860; Sanzinia Gray, 1849.

#### ACRANTOPHIS SLOPPI SP. NOV.

**Holotype:** A specimen at the Field Museum of Natural History (FMNH), 1400 S Lake Shore Dr Chicago, IL 60605, United States, specimen number: 109900 from Toliara (Formerly Tulear), Madagascar, 23.3500° S, 43.6667° E, collected by Harry Hoogstraal and R. Alison on 30 October 1948. This is a government owned facility that allows access to researchers.

**Diagnosis:** Formerly regarded as the more northern race of the species *Acrantophis dumerili* from which it is separated by several characteristics.

Acrantophis dumerili Jan, 1860 is separated from all other species of boa by the following suite of characters. The snout is slightly prominent. The rostral is a little broader than deep and not visible from above. Symphysial is longer than broad; upper surface of head is covered with small scales which are not larger than those on the body; 11-16 scales across the forehead, from eye to eye and usually as many around the eye; praeocular large; several slightly enlarged loreals; 17-19 upper labials. Scales in 59-65 rows. Ventrals 225-236; anal single, 20-33 subcaudals. The colour is usually a pale grey above, with two longitudinal series of black spots emitting a transverse process above, a hoop-shaped figure below; these markings may be disposed regularly in pairs and unite by their transverse processes, or alternately; two or three black streaks on each side behind the eye, the lower continued in front of the eye to the nostril; a black cross line or ring on the forehead between the eyes: lower parts whitish, uniform or spotted with brown. Never exceeds 2 metres in total length, with a tail not in excess of 110 mm.

Acrantophis sloppi sp. nov. is most readily separated from A. dumerili by the following characteristics: Acrantophis sloppi sp. nov. is considerably darker in colouration as compared to A.

*dumerili*. In *A. dumerili* the lighter regions are considerably greater than the darker along the mid dorsal line. In *A. sloppi sp. nov.* the lighter colouration is roughly equal to the dark, usually being only slightly more than half, this being due to a distinct darkening of the main parts of the lighter areas. In *A. dumerili* the lighter areas dorsally only have slight dark speckling on the scales.

A sloppi is perhaps best separated from A. dumerili (as diagnosed above) by the less distinct head markings. The distinctive thick black line, running from the tip of the snout, across the bottom of the eve and to the back of the head in A. dumerili is not seen in A. sloppi. In A. sloppi, there is no distinct line running from the snout through the eye, although there is sometimes some noticeable and patchy darkening of some scales in this general area, although not forming a line. Behind the eye, the line is thin, before thickening towards the back of the head. By contrast in A. dumerili this line is of relatively even thickness and very distinct from the eye to the back of the head. Acrantophis sloppi sp. nov. has at least some upper labials with black spots so large as to occupy the entire scale. While there may be dark spots on upper labials in A. dumerili, they do not reach the same size as in A. sloppi and do not ever cover a full labial

Acrantophis sloppi sp. nov. grows considerably larger than A. dumerili, with specimens exceeding 2.7 metres total length known, and of considerably greater bulk and mass than seen in A. dumerili. It is the largest of the Ground Boa species in Madagascar, also exceeding A. madagascariensis in adult size. The species A. madagascariensis from northern Madagascar is most readily separated from A. sloppi and A. dumerili by the presence of enlarged head shields at the front of the head (size range being small/medium and large), a trait not seen in either of the other species. Both Acrantophis sloppi sp. nov. and A. dumerili have small, often irregular head shields at the front of the head.

**Distribution:** Acrantophis sloppi is found in most of the southern half of Madagascar, except for the far south, in the general region of Ambovombe, Berenty and Taolagnaro, where it is replaced by the species *A. dumerili.* The type locality is on the south-west coast of Madagascar.

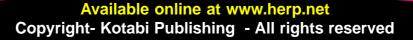
Etymology: Named in honour of the Raymond Hoser family pet Great Dane, named Slop, in recognition of his role in protecting the home and facility of Snakebusters from criminal attacks by animal hating individuals, including corrupt government wildlife officers, hiding behind a government protective umbrella to commit criminal cats for their own financial benefit. The attacks on our facility have several sources, including a desire to silence and discredit the Hoser family, after the publication of books detailing this corrupt activity over a period spanning decades. In response to troll posts from the animal hating morbidly obese Al Coritz of the United States of America and the little angry man Mark O'Shea from the UK, both being best known for attacking innocuous snakes with metal tongs, I make no apologies for being an animal lover or for naming a species of snake in honour of an animal of a different taxon, who happens to share the same delicate planet with us.

# CANDOIA (EREBOPHIS) ASPERA IANSIMPSONI SUBSP. NOV.

**Holotype:** A specimen in the Australian Museum of Sydney, NSW, Australia (AMS), specimen number R122352 from the southern highlands of New Guinea. The Australian Museum is a government owned facility that allows scientists access to their collections.

**Paratypes:** Number one: A specimen in the Australian Museum of Sydney, NSW, Australia (AMS), specimen number R122353 from the southern highlands of New Guinea. The Australian Museum is a government owned facility that allows scientists access to their collections.

Number 2: A female, specimen number 59078 from Matsika,



Central Province, New Guinea, at the American Museum of Natural History (AMNH). The American Museum of Natural History is a government owned facility that allows scientists access to their collections.

Number 3: A female, specimen number 59079 from Matsika, Central Province, New Guinea, at the American Museum of Natural History (AMNH). The American Museum of Natural History is a government owned facility that allows scientists access to their collections.

**Diagnosis:** Until now, *Candoia aspera iansimpsoni subsp. nov.* has been identified as a variant of *Candoia aspera* Günther, 1877.

*Candoia aspera* is separated from all other *Candoia* species by the following suite of characters: The tail is less than twice as long as the head (usually less than its length), and it is incapable for forming a full circle when coiled in a level plane; on at least the anterior two thirds of the body the keels of the scales form curved diagonal ridges along the sides extending backwards and downwards towards the belly; 137-150 ventrals; 11-22 subcaudals; no specially enlarged preocular; supralabials are excluded from the eye; cathus rostralis is angular.

By contrast all other *Candoia* have a tail more than twice as long as the head and capable of more than one complete circle of coiling when coiled in a level plane; keels of scales forming lengthwise ridges along the back and sides parallel to the body axis; over 160 ventrals; 35 or more subcaudals and a differentiated preocular.

In the *bibroni* species group (*Tropidoboa* Hombron and Jaquinot, 1842), the supralabials are excluded from the eye; canthus rostralis is rounded, 203-266 ventrals and 44-67 subcaudals. In the *carinata* species group (*Candoia* Gray, 1842), there are usually two, but sometimes one or three supralabials entering the eye, canthus rostralis is angulate, 160-202 ventrals and 35-60 subcaudals.

*Candoia aspera iansimpsoni subsp. nov.* is separated from other *Candoia aspera* by the following suite of characters: 12-17 infralabials, none of which reach the mental groove. A dorsal colouration consisting of one of either extreme; a series of lateral dark spots, tending to form vertical bars, which may be separated from dorsal blotches, or by the dorsal blotches fusing over all or most of the body to form dorsal cross-bands. A dark perocular streak extends forward from the side of the neck to the eye, with pale ventral edging but no dorsal edging; in darker headed specimens the perocular streak merges with the ground colour but the pale ventral edge is usually distinguishable as a white mark near the corner of the mouth. There is also an additional dark spot or stripe on the parietal region between the nuchal occipital blotch and the perocular streak. The lips usually have inconspicuous spotting.

The subspecies *Candoia aspera schmidti* (Stull, 1932) is separated from *Candoia aspera iansimpsoni subsp. nov.* by colouration with the dorsal pattern of blotches appearing as saddles in *Candoia aspera schmidti* (Stull, 1932) rather than cross-bands as seen in *Candoia aspera iansimpsoni subsp. nov.* The subspecies *Candoia aspera aspera* Günther, 1877 is separated from both other subspecies (*Candoia aspera schmidti* (Stull, 1932) and *Candoia aspera iansimpsoni subsp. nov.*) by scale counts. *Candoia aspera aspera* has 37-41 mid body rows, versus 34-37 in the other two subspecies, 149-150 ventrals versus 137-148 in the other two subspecies.

**Distribution:** The three subspecies have mutually exclusive ranges. *Candoia aspera iansimpsoni subsp. nov.* is known only from the region of Island New Guinea south of the main central cordillera in the region including the Western, Gulf and Central Provinces. *Candoia aspera schmidti* occurs in the region of island New Guinea north of the main central cordillera, while *Candoia aspera aspera* is found in New Ireland, to the north of New Guinea. The exact boundaries separating each of the subspecies is not known.

**Etymology:** Named in honour of British scientist Ian Simpson in recognition of his valuable work with venomous snakes in third world countries, and the treatment of venomous snake bites.

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#### CONFLICT OF INTEREST

The author has no conflicts of interest in terms of this paper.

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